

# webERP Manual

The webERP manual contains information about many aspects of webERP for both users and supporters of webERP system and for those developing with webERP.

The following content was taken embedded manual on 2024-11-26 and edited for consistency.

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# Introduction

## Background To webERP's Development

At the time of webERP's inception in 2002-3, the future direction of wide area networking became obvious and the capability to present graphical screens anywhere in the world communicating to a central server ... over relatively low bandwidth connections (the internet) had arrived as a tool for businesses. At the same time, competitive pressures and the speed of business required business people be able to work effectively on the road, from home or wherever they were in the world with all the critical business information at their finger-tips. Although ERP software is often slow to adapt, most ERP vendors now accept the benefits of web-based applications for business. The internet really has enabled a dramatic improvement in business productivity and the demise of the heavy client-server ERP systems.

webERP as one of the first truly web-based ERP systems, was significantly ahead of it's time when first released and unlike many legacy ERP systems where web capabilities have been retrofitted, webERP was conceived and designed from the ground up as a web application with efficiency and usability its primary objectives.

The goals for webERP's development have been, and remain:

To be as efficient as possible and able to be used even over low-bandwidth connections. This has required careful and sparing use of graphics and javascript and the result is blazingly fast response even over modest internet connections

To avoid propriety technologies and dependencies wherever possible. This allows webERP to be run entirely on open-source infrastructure with zero license costs.

To be written in a well documented verbose and consistent style which allows the code to be readable by business people. Every opportunity is taken to remove abstraction where the benefits of doing so do not compromise efficiency. Business people are empowered by the accessibility of the code, which allows them to adapt quickly, creating functionality that can provide their business with a competitive advantage.

# Requirements

## Hardware Requirements

There are many possible configurations that could run this application. The scale of the enterprise obviously will have a significant bearing on the final configuration.

Each client connection to the web server and database engine will also consume RAM so the more connections the larger the RAM requirement. Similarly disk space required is a function of the volume of customers, suppliers and transactions. Suffice it to say that due to the efficiency of the components of the system the demands on the hardware are exceptionally light by client server application standards.

As a guide, an installation for up to 50 simultaneous users could consist of the following: a Linux operating system, using nginx, lighthttpd, hiawatha or apache with even an entry level hardware server. This would provide more than adequate performance. A NAS or SAN with disk redundancy would be preferred in larger installations. With multiple servers with with SMP, load balancing, a separate database server, and large amounts of RAM the limit on database size and the number can be scaled to the most demanding enterprises.

In practise most businesses will elect to outsource the hardware to a web-hosting company where dedicated servers can be rented for minimal cost. When using the hosting facilities of a 3rd party it is important to consider the infrastructure that the host has in place:

Backups - the business should always configure its own backup in any event

Hardware redundancy - ie failover spare servers, disks etc

The security and physical protection of the hosts hardware

Backup power generation

Backup connectivity options of the host ie more than one connection to the internet is preferable

## Software Requirements

If the business elects to have their own on-site web-server there are many software bundles that will provide the necessary infrastructure of:

- PHP a versions later than 5.1
- MySQL version 4.3 or above - innodb transaction compliant tables are required

The latest binaries can be downloaded separately for both by following the above links but in a windows environment the apache2triad bundle provides all the software required and comes with a convenient installer.

In a windows/linux/unix environment the XAMPP also provides all the software required and is easy to install.

Installing either of the above two server software bundles will provide all you need to get going. To get the latest and greatest revisions of the individual components you need:

- PHP Any version greater than 5.1 will work. PHP works on all operating systems so webERP is therefore operating system independent. If transfer of EDI orders is required the ftp extensions for PHP will be needed. If using translations the gettext extension for PHP is also required. The graphing functions also require the GD extension.
- MySQL-Max with Innodb transactional tables support. Innodb was introduced in 2001 to MySQL and has Oracle like functionality – with similar speed. MySQL later than version 4 has Innodb tables in by default. Since MySQL represents such good value for money it has been used. An example configuration file my.cnf normally under /usr/local/mysql/var is available in the mysql documentation to show typical settings for the Innodb configuration. The expected size of the data is useful although additional data files can be created retrospectively as necessary. Note that only the tables that require transaction support are defined as Innodb tables.
- A web server. webERP is tested with nginx, lighthttpd, hiawatha and Apache, but most web servers are supported by PHP in various forms. PHP running in Fast CGI mode ensures that throughput and performance is optimised.
- If the web server is accessible over the Internet and not just over a LAN then encrypted communications are required. The openssl and mod-ssl modules for apache can be easily used to ensure all data is transmitted in encrypted form. Using https is strongly recommended.

The system could be used with many other database servers but it is tested and developed on MySQL. Independent benchmarks show that MySQL is one of the fastest for most common database tasks, particularly at establishing connections – since this is required for every page, MySQL is therefore ideally suited to the web environment.

## Using webERP with a Wiki

Wikis are an unfortunate name for a marvellous business tool. They are a genre of software that allow user editing of a web-site. webERP defines the names for wiki pages and provides a structure for the information held on the wiki - where users can add their experiences and information about customer, products and suppliers. webERP links to a customer page - if the page does not exist then there is a prompt to create it - it is then up to the business how they implement the wiki into their business. Possible scenarios might be that the customer page contains links to:

- Credit control History
- Customer Service Inquiries Log
- Sales call Log

If an integrated wiki is enabled using [Main Menu > Setup > General > Configuration Settings], then select the wiki application to integrate with. webERP has links from the Selection menus for Items (SelectProduct.php), Customers (SelectCustomer.php) and Suppliers (SelectSupplier.php). Clicking on the link brings up the wiki if the page does not currently exist you will be able to create it - in future it will go directly to the page created.

The webERP product link to the wiki might contain details about the development of the item, links to drawings, specification, warranty, instructions, competing products and competitor product details. Some thought about how the wiki is structured is required. The more this tool is used the more indispensable and value it will provide to the business as a single integrated business knowledge base.

The wacko wiki is very lightweight and imposes minimal additional overhead on a web-server and is possibly one of the most functional and flexible wikis available.

Simply install this on the same web server as your webERP install and provide the path to the wiki in Setup->General->Configuration Settings.

You should make the wiki only visible to registered users - see the configuration pages of the wacko wiki - in particular the setting in config.inc.php for:

- "default\_read\_acl" => "\*" - this setting determines who can read the page by default "\*" means anyone can read change this to "?" for only registered users
- "default\_comment\_acl" => "\*" - this determines who can comment on the page by default "\*" allows anyone to comment on the page - change this to "?" for just registered users
- "allow\_registration" => "1" - change this to "0" to ensure that unauthorised people need to contact the system administrator to register

# Getting Started

## Prerequisites

- PHP greater than 5.1. As PHP can be configured to run under most web-servers under all common operating systems, webERP is therefore operating system independent.
- MySQL greater than version 4 with Innodb transactional tables support. Foreign key constraints are also required. These were added to Innodb in 2003. Innodb was introduced in 2001 to MySQL and has Oracle like functionality - row level locking and database transactions with similar speed. (The system could be used with Oracle or other database systems, with minimal modification.) An example configuration file, my.cnf, normally under /usr/local/mysql/var is available in the MySQL documentation to show typical settings for the Innodb configuration. The expected size of the data is useful although Innodb can create an auto-extending data file and does so by default as of MySQL 4. All tables are defined as Innodb tables as of version 2.8.
- A web server. Apache - the software serving most web pages - is recommended but most web servers are supported by PHP in various forms. The most popular choice on Windows will likely be MS IIS. Hiawatha or Nginx are also good choices.
- If the web server is accessible over the Internet and not just over a LAN then encrypted communications are required. The openssl and mod-ssl modules for Apache can be easily used to ensure all data is transmitted in encrypted form. It is also wise to have the directories where webERP or your wiki installed as protected directories.
- For using utf-8 pdf reports in languages other than english the adobe acrobat reader with fonts installed for the necessary locales is required. PDF reports are created using the TCPDF class making use of Adobe CID fonts - this has the advantage that the pdf reports do not need to bundle with them the large utf-8 character set fonts that would otherwise be required.

Using Apache with mod\_ssl and openssl secure sockets makes sense where there is any data transmitted over the Internet and not just over a LAN. Getting PHP and MySQL installed are well covered elsewhere.

There can be issues with installation of PHP appear to be:

- Some Windows installations come with a setting for session.save\_path= /tmp this is an inappropriate directory for Windows and should be changed to session.save\_path=C:\temp or something more appropriate.
- When the system is hosted on a multi-homed web server farm, the session needs a directory to be specified as a permanent directory otherwise alternative servers serving subsequent pages depending on the load at the time will not be able to find the session cookie. There is a

config.php setting for \$SessionSavePath which should be set appropriately for the web server host.

- For a reason unknown some servers are unable to obtain the correct directory automatically using the line: \$RootPath =  
dirname(htmlspecialchars(\$\_SERVER['PHP\_SELF'], ENT\_QUOTES, 'UTF-8')); This will be evidenced by the system's inability to find the page links for the various system options. If this happens the \$RootPath variable can be set to the root path of the scripts directly.
- The php.ini setting for session.auto\_start should be set to 0. Some rpm distributions come with this set to 1 which makes it impossible to use classes within php code. Classes are used extensively in the system and the system starts sessions whenever it needs them. It is safe to set this to 0.

If integration with a company knowledge base is required then an installation of Wacko Wiki or Media Wiki is recommended. The wiki installation should be on the same web-server. This is entirely optional but is highly recommended as a way to share free form information across the business. Download Wacko Wiki

The ftp library for PHP is only required for sending order files to a Radio Beacon ftp server for remote warehouse services.

## Using the webERP Installer

A new installation of webERP requires the following to start:

- A functioning web server running a minimum of PHP version 5.1
- A MySQL database server available either on the same machine or on the network
- The web server is running under a user that is able to write to the webERP web directory
- The database user must have privileges to create a database and tables

Copy all of the downloaded webERP files to a directory under the web server's document root directory. At this point there should be no 'config.php' file in the webERP directory.

Enter the URL for the new webERP directory into your web browser, and the installer welcome screen will display:

The installer welcome screen provides information on the type of messages you might receive during installation. At this page, you must also select your preferred language from the drop down selection box. Click on Next Step to go to the next phase of installation.

The installer checks that all the pre-requisites are met for an installation. You will note from the screen shot above that this installation does not have sufficient privileges to install webERP because the web server is unable to write to the webERP directory. It is necessary to change the permissions on the directory where webERP is installed to ensure that the user that the web-server runs as is able to write a

new configuration file to the web space. Cpanel and Plesk have facilities to enable this change to the permissions. Any error messages displayed in red need to be resolved before the installation can proceed. Do not attempt to run the installer while red messages persist. Fix the error and then click on Check Again to restart from the prior step.

If your web server fulfills all requirements for the installation, clicking on Next Step will display the Database Settings screen. Many of the fields required will be populated correctly by default - but all entries should be reviewed to ensure that they are correct. The installer will not be able to determine the host (computer) where the mysql database server is installed and this must be entered. Help appears when you click into an input field.

The user name and the password to the mysql database server are also required. The mysql database user must have permission to create a database and tables. Once the required information is entered and checked, click on Next Screen to continue.

The next installer screen displays Company Settings, Options and Administrator Account settings. The name of the company entered in the installer screen will be used in the log in screen and in various reports and screens in your final webERP installation.

The Chart of Accounts will be loaded into your webERP installation as a set of starter accounts. There is a larger file but this may result in errors as your mysql server must be able to handle larger packet sizes. Leave the default selection of 'weberp-new.sql' if in any doubt as it is smaller and should load with default mysql settings.

The logo for the business used on invoices and statements, orders etc. can be uploaded to the appropriate place on the web-server by selecting it on the installer screen. The logo should be a .jpg file and just a small image no more than 170 px across and 80 pixels high.

The time-zone is important if your installation is to display the correct time on the local browsers in the country where the business is domiciled. e.g. it is possible to use a US web-server, and operate the business from France. If no entry was entered for the time-zone then the browser would display the time where the web-server was (in the USA) but it is more appropriate to display the time where the business operates from. It is possible to select from any of the PHP defined time-zones.

The Installation Option section enables you to choose to install the demo database in addition to your own Company database. This will provide you with a demo company loaded with some data to test with.

Finally the webERP user Administrator account option section enables you to input an email address and choose a new password for the default 'admin' account.

Click on the INSTALL button to finalise installation. This might take a while as the installer will create required databases, create a special directory for your webERP install in the 'companies' directory, and writes out the webERP configuration file, config.php. Wait until the login screen appears. You now have a fresh webERP installation from which to start the configuration of the company, see below.

# Manual webERP Installation

A manual installation consists of the following five steps:

- Copying all the PHP scripts and include files to a directory under the web server document root directory - as for the automatic installer option above
- Creating the database and populating it with initial data
- Editing config.php for the database connection information and any other requirements
- Logging into the system for the first time
- Setting system parameters
- Setting up company specific information in the system

## Copying the PHP Scripts

All files in the archive except the installation instructions in INSTALL.txt, weberp-demo.sql and weberp-new.sql should be copied to a directory under the web server DocumentRoot directory. This varies by distribution but:

`/srv/www/htdocs`

is the default Apache DocumentRoot directory under SuSE.

Copy the archive to this directory and then extract the archive. The webERP directory will be created here (`/srv/www/htdocs/webERP`) and all scripts and other directories will be copied to that directory.

## Creating the Database

webERP works only with MySQL or MariaDB database servers.

You need to know the user name and password for the MySQL server. If you have not set these up the default is

user root

password ""

BUT ... you should NOT use this account. You should set up another user for your MySQL installation and change the root password to something other than "".

All instructions for using MySQL refer to the command line client that comes with MySQL. To run this under Windows a DOS box must be opened. From XP or 2000 click Start, Run, enter "cmd" and click Run. The mysql.exe binary is located by default under `C:\mysql\bin\mysql.exe`. This would be the command line statement required to run the mysql client. The options discussed below should be appended as required.



From the MySQL manual (edited):

The MySQL root user is created as a superuser who can do anything. Connections must be made from the local host. NOTE: The initial root password is empty, so anyone can connect as root without a password and would have all privileges. Because your installation is initially wide open, one of the first things you should do is specify a password for the MySQL root user. You can do this as follows (note that you specify the password using the PASSWORD() function):

You can, in MySQL Version 3.22 and above, use the SET PASSWORD statement:

```
shell> mysql -u root mysql
```

```
mysql> SET PASSWORD FOR root=PASSWORD('new_password');"
```

where 'new\_password' is the new password you chose for the root user.

Also from the MySQL manual (edited):

Also, if you have changed the root user password, you must specify it for the mysql commands below. You can add new users by issuing GRANT statements:

```
shell> mysql --user=root -p 'new_password' mysql
```

```
mysql> GRANT ALL PRIVILEGES ON *.* TO weberp@localhost IDENTIFIED BY 'some_pass'  
WITH GRANT OPTION;"
```

Where 'some\_pass' is a password of your choice for the new user 'weberp'. Note that this user 'weberp' can only connect from the local machine so if the web server is on a different machine then the MySQL server you need to give privileges to connect from other computers. See the MySQL manual.

Innodb tables must be enabled in the MySQL server. These tables allow database transactions which are a critical component of ERP software. Innodb tables require some parameters to be set up in my.cnf. There are some examples in the MySQL manual under table types - Innodb tables.

If you have an account set up already in MySQL and Innodb tables enabled, then all you need to do is to run one of the sql scripts.

Two scripts are provided in the webERP/sql/mysql/country\_sql/ directory (folder):

- weberp-demo.sql This has a minimal amount of demonstration data with a bogus company set up so that transactions can be tried to see how the system works.
- weberp-new.sql This script has only the basic data necessary to start a new company. If you wish to set up your company using the webERP software, then this is the script to use. This creates a webERP database and populates it with only the very basic starting data.

The files weberp-demo.sql and web-erp-new.sql should be in the directory with all the PHP scripts. Change to the directory where the scripts are held or use the full path and enter:

```
shell > mysql --user=weberp --password='some_pass' <
path_to_web_server/webERP/sql/mysql/country_sql/weberp-demo.sql

or
```

```
shell > mysql --user=weberp --password='some_pass' <
path_to_web_server/webERP/sql/mysql/country_sql/weberp-new.sql
```

as required. Modify the user entered here as 'weberp' to the user you created in MySQL for the purpose, and modify the password stated here as 'some\_pass' to the password appropriate for the user. Also modify the path\_to\_the\_sql\_script to the appropriate path - perhaps something like /srv/www/htdocs/webERP/.

## Editing config.php

config.php contains a series of user defined variables that determine how the system behaves. Critically it contains the host (computer name), username and password of the database connection required to connect to the database server. There is also an option to chose which type of database server is to be used. Currently there are only options for mysql and mysqli. There is no going forward without this data.

The default contents of the config.php file are as follows and must be edited in an editor of choice. Then, save config.php in the web directory where the scripts are located. Note, the system is continually evolving and may well have changed since this was written.

The time-zone of the business should also be specified here using a statement like:

```
putenv('Australia/Sydney');
```

This ensures that the time-zone of the business is displayed on all browsers using the system irrespective of where the web-server is located (i.e. the timezone of the web-server)

The CompanyList array is defined at the end of the config.php file and usually added by the installer, or a webERP utility script (Z\_MakeNewCompany.php) that will create a new additional company and database setup for webERP. The CompanyList array contains a list of databases used with their associated Company Name. One of the functions is to allow Login to show the Companies available and obfuscate the database name for security reasons. This CompanyList array should be added as in the example below.

```
[config.distrib.php]
```

## Logging In For the First Time

Open a browser connected to the network upon which the web server is also connected. Enter the URL for the web server directory where webERP is installed. If the browser is on the same machine as the web server then perhaps:

`http://localhost/webERP/index.php`

enter user name 'demo'

enter password 'weberp'

The quotation marks are not required. To set up additional users go to Main Menu > Setup > User Accounts. Users can change their own passwords at any time by clicking on their user name shown at the top left of the screen. For example: "webERP Demo: administrator". Be careful not to delete the demonstration user until a new System Administrator user has been set up. If there are no users defined the next time you try to login you won't be able to! In this situation the only way then to create a user to login with is to manually edit the SQL table WWW\_Users to insert a user. If phpMyAdmin is installed on the web server as well then this can be achieved by adding a new record to WWW\_Users.

NB The importance of setting a password for the root user of MySQL, otherwise anyone could modify WWW\_Users and gain access to private company information.

## Adding New Companies

At this point having followed all the instructions above you should be able to log into the single company database you set up above. However, you may wish to add additional companies. If your system is set up such that the user account that is running your web-server is able to write to the webERP directory then it is possible to enter the URL:

`http://yourdomain/webERP/Z_MakeNewCompany.php`

This script allows you to set up any number of additional companies - a fresh database is set up as is the directory structure required under webERP/companies. Each time you get to the login prompt the list of companies shows and you must select the company you require.

This script may not work because it requires that the web-server has write permission to the scripts directory, in which case you may need to fall back to the manual method described below.

In the default install above you created a database called weberpdemo and there is a directory under webERP/companies also called weberpdemo. To make another company you need to copy this directory and all the sub-directories under it to a new directory under webERP/companies/. The name of this directory needs to be identical to the name of the new database created on the same mysql server. The utility script Z\_MakeNewCompany.php automates the process.

## Configuration Parameters

In versions prior to version 3.0, configuration parameters were stored under the config.php file which required manual editing of the system parameters. Since version 3.0 a new screen for System Parameters was developed that allows all the system wide configuration variables to be set. These are now stored in the database allowing for upgrades without then having to re-edit the config.php file. The system parameters screen is at Main Menu > Setup > System Parameters. Each of these settings should be reviewed in detail. Notes describing the function of each variable are shown along side it.

There is additional information on installation in webERP/doc/INSTALL.txt

## Themes and GUI Modification

Often what visually appeals to one does not appeal to another. Whilst accounting software is primarily about function - appearances do matter! Some flexibility is available with the colour scheme and font sizes of the GUI using cascading style sheets (css).

The user interface can be modified by adopting one of the defined themes or making up a new theme. There are a number of choices for the theme to experiment with - these will only affect the display of the screens – colors, fonts etc.

Each user can select their own preference from the user settings screen. This is revealed by clicking on their user name shown at the top left of the screen. For example: "webERP Demo: Administrator".

To create a new theme copy the directory of one of the defined themes to a new name. The themes are held under the css directory of the distribution. There is a directory under the css directory for each theme. After copying the files to a new directory, say 'New\_theme', they should be edited to reflect the look desired. New theme directories are revealed automatically on the user setting screen so users can select the customised theme.

## Setting Up Users

Having logged in as user 'demo'. A new user should be defined whom has administrative privileges and the user 'demo' should be deleted. From the menu click on the 'Setup' tab and then click 'User Maintenance'. The users defined are displayed. User names must be 5 characters or more. Passwords entered must be 5 characters or more too. The password cannot also be the user name or contain the user name. It is not necessary to enter the full name telephone and other details. The access level selected is important as this determines the pages that the user can access. In any business where the employees are not also the owners it is advisable to split the functions between staff so that no user can complete an entire transaction. There are occasions in smaller businesses where this is impractical. However, the system has great flexibility to allow the user access to be finely defined. See the security schema section.

As well as allowing the access to be restricted there is some flexibility about the links that are made available to a user. In the 'User Maintenance' screen the system administrator can define which tabs of the main menu are activated and available to the user.

There is also the facility to set up customers with their own logon. This restricts them to inquiries on their account including invoice re-prints and to entering new sales orders. Customer logins do not allow any modification to the pricing. To do this the access level must be set to customer logon and the settings for customer logon in config.php must not be modified - i.e. \$PageSecurity = 1 allowed only. In addition, the customer code and branch code applicable to the person logging on must be entered.

## Internationalization and Language Translations

As of webERP version 3.12 all translations of the user interface use utf-8 character encoding. Inspecting the character set that your browser is using (View->Character Encoding in Firefox) will show utf-8 (perhaps not the English manual). To use a language other than English the web-server must have a locale installed for that language using the utf-8 character set. For German this would be the locale called de\_DE.utf8 - most locales follow a similar naming convention e.g. en\_GB.utf8 for English - Great Britain with utf-8 characters. en\_GB.utf8 is the default locale for webERP.

Under the main webERP directory the locale directory contains the language specific data necessary for translations. By default there will only be one directory under locale for en\_GB.utf8 - the default locale. Under the language\_country.utf8 locale there is a further sub-directory for LC\_MESSAGES - it is under this directory where the messages.po lives - this file contains a list of all the strings used in the interface and their translation into the language of the locale. To use the translations the .po file needs to be "compiled" into a binary format for faster retrieval and this is what the messages.mo file is.

webERP uses the gettext library of functions for using the data under the locale files to perform the translations. The gettext libraries need to be installed on the web-server together with the locales that you wish to translate into. In addition the web-server's PHP installation must have the gettext extension configured to use the gettext library functions. Pointing the browser at <http://yourdomain/webERP/phpinfo.php> will show the details of the PHP installation on your web-server and you should see the gettext extension available from this page.

webERP distributes translations for all of the available languages bundled in the archive - which is why it is now over 20 Meg compressed.

To change the language displayed for a specific user - the user clicks on their name as shown on every screen at the top of the page. This brings up their user settings.

webERP looks at all the directories available under webERP/locale to see which languages are installed and provides a convenient way for users to select their preferred language. In addition to selecting the language it is also necessary to select the fonts required for pdf support in the selected language.

Display Dashboard after Login. Select "Yes" to show the dashboard page after Login, otherwise "No" to do not. This page shows overdue customer balances, supplier invoices due within one month, bank and credit card balances, and outstanding orders. Default: no.

Display page help. Select "Yes" to show the page help when available, otherwise "No" to hide it. This help is displayed at the top of the page in a box. Default: yes.

Display field help. Select "Yes" to show the field help when available, otherwise "No" to hide it. This help is displayed next to the input field. Default: yes.

PDFs are produced in utf-8 character set which has 4 bytes for each character. Unfortunately, the CID fonts used in PDFs only have 2 bytes so there is required to be some mapping of CID characters to utf-8 fonts to make everything work. In practise all this means is that the correct language needs also to be selected for the PDF language.

If you are interested in contributing a language pack to webERP - which is always very much appreciated! There are instructions for how to proceed at <http://www.weberp.org/wiki/HowToTranslate>

# Security Schema

The webERP security scheme consists of the following parts:

## 1. Users:

A separate account should be created for each user.

User accounts may be added or removed by an administrator at:

Main Menu > Setup > User Accounts (WWW\_Users.php)

+++

Each user is assigned a 'Security Role' by selecting a choice from the drop down list labeled 'Security Role'.

See below for a list of the default Security Roles available.

+++

## 2. Security Roles:

Security Roles may be added or removed by an administrator at:

Main Menu > Setup > Role Permissions (WWW\_Access.php)

+++

Each 'Security Role' is assigned one or more 'Security Tokens'.

The 'Security Tokens' assigned to a particular 'Security Role' can be changed at: Main Menu > Setup > Role Permissions (WWW\_Access.php)

+++

See below for a list of the default 'Security Roles' and the 'Security Tokens' assigned to each.

## 3. Security Tokens:

15 'Security Token' choices are available by default.

See below for a list of the default 'Security Tokens'.

Each 'Security Token' allows access to one or more webERP pages.

+++

There is no webERP tool to add, remove or edit 'Security Tokens'.

However, an administrator can edit the underlying table (securitytokens).

## 4. PageSecurity values:

Each webERP page is given a Page Security value from 1 to 15 in the table scripts. The system reads all the scripts and the PageSecurity value for each into a SESSION array -

\$\_SESSION['PageSecurityArray'] - the key for each element is the script name and the value is the PageSecurity value for that script. The key - the script name is retrieved from the \$\_SERVER['SCRIPT\_NAME'] variable. In this way every time a script is called, the PageSecurity is retrieved from the array. +++

There is a webERP tool to change PageSecurity values, for each script which is accessible from the Setup menu.

These parts work together as follows. The user name and password combination entered at log on enables the system to identify the 'Security Role' for the User. The User's 'Security Role' determines what 'Security Tokens' are available to the User. The User is allowed access to any page with a 'PageSecurity' value equal to the 'Security Token' values available to that User.

## Comprehensive Description

Each webERP page (script) is assigned a specific PageSecurity value. This page security value is stored in the scripts table of the database and read into a SESSION array on login (from the GetConfig.php script). At the time of writing this is a number between 1 and 15. If more levels of security are necessary then this can be expanded by an administrator or developer. The default PageSecurity values for each page can be inspected by browsing the scripts table

The user is allowed access to a page if the PageSecurity value of the page/script is a number contained in the SESSION AllowedPageSecurityTokens array as determined from the users access level (Security Role). The user access level Security Role) is an integer that represents the Security Role assigned to the user in the user set up page (WWW\_users.php).

Access authority is checked in the session.inc script for all pages (or PDF\_Starter.inc for PDF pages). The variable \$\_SESSION['AccessLevel'] is retrieved from the database when the user logs on - in session.inc. This variable refers to the Security Role of the user. The SESSION['AllowedPageSecurityTokens'] array of numbers is retrieved from the database based on the users AccessLevel - or Security Role. Any page that has a \$PageSecurity value equal to any value in this array is deemed to be an authorised page.

If you wish to add more Security Roles then you must use the Role Permissions script (WWW.Access.php). You must also specify the Security Tokens for the new Security Role. Users assigned to the new Security Role will have access to any page where the Page Security value is equal to a Security Token value assigned to the new Security Role. This mechanism allows the system administrator to control who can access what.

By changing the Security Role assigned to each users and the Security Tokens assigned to each Security Role the security access can be tailored for all users. When making these changes reference the default values in the tables below. PageSecurity values must also be known. The value of the default settings can be modified as needed from the Page Security script accessible from the Setup module

## Security Scheme Tables

Table.Field	Example Data	Comment
www_user.userid	demo	These fields are updated by WWW_Users.php.
www_user.fullaccess	8	



securityroles.secroleid securityroles.secrolename	8 System Administrator	These fields are changed when a 'Security Role' is created or deleted at WWW_Access.php.
securitygroups.secroleid securitygroups.tokenid	8 1	These fields are updated when 'Security Tokens' are assigned or removed from 'Security Roles'. at WWW_Access.php.
securitytokens.tokenid securitytokens.tokenname	1 Menu and Order Entry Only	15 default security tokens are defined. This data can not be edited using any webERP tool.
webERP page	CustomerInquiry.php \$PageSecurity = 1;	The PageSecurity value for each page is pre-defined and can not be edited using any webERP tool.

## Changes in Later Versions

Below the default security roles and page security values are set out. However, be aware that all these settings are now modifiable in the database. The roles can be defined choosing which security tokens will be allowed. Also, as of version 4.0 it is now possible to change the PageSecurity of each script to allow access to be more tightly defined. The PageSecurity value for a particular script is mapped to the security token that is either available to a particular user or not. Without the security token being in the users list of allowed security tokens then the script will not be available to that user.

### Security Roles: Defaults webERP 3.0.5

- 1 - Inquiries/Order Entry
- 2 - Manufac/Stock Admin
- 3 - Purchasing officer
- 4 - AP Clerk
- 5 - AR Clerk
- 6 - Accountant
- 7 - Customer logon only
- 8 - System Administrator

### Security Token Assignments: Defaults webERP 3.0.5

- 1 - Inquiries/Order Entry tokens = 1, 2
- 2 - Manufac/Stock Admin tokens = 1, 2, 11
- 3 - Purchasing officer tokens = 1, 2, 3, 4, 5, 11
- 4 - AP Clerk tokens = 1, 2, 5
- 5 - AR Clerk tokens = 1, 2, 5, 11
- 6 - Accountant tokens = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

7 - Customer logon only token = 1

8 - System Administrator = All the currently defined security tokens

## Security Tokens: Defaults webERP 3.0.5

1 - Menu and order entry only

2 - Inventory, AR & AP inquiries & reports

3 - AR setup customers, areas, receipts, allocations, credit notes, salesfolk, credit status

4 - PO Entry, Purchasing data & reorder levels

5 - AP Invoice, Credit, Payment entry. Supplier maintenance

6 - Not used

7 - Bank reconciliations

8 - GL Journals, COA, sales/COGS GL postings, terms, cost update, company prefs

9 - Ledger Maintenance and Manufacturing

10 - GL Journals, COA, sales/COGS GL postings, terms, cost update, company prefs

11 - Pricing & Inventory locations, categories, receiving & adjustments

12 - No Used

13 - Not Used

14 - Not Used

15 - User management, System Admin setup & utilities

## PageSecurity values: Defaults webERP

Page (script) File Name	PageSecurity value
CustomerInquiry.php	1
GetStockImage.php	1
index.php	1
Logout.php	1
MailInventoryValuation.php	1
PDFStockLocTransfer.php	1
PDFStockNegatives.php	1
PrintCustTrans.php	1
PrintCustTransPortrait.php	1
reportwriter/FormMaker.php	1
reportwriter/ReportMaker.php	1
SelectCompletedOrder.php	1
SelectOrderItems.php	1
AgedDebtors.php	2
AgedSuppliers.php	2

BOMInquiry.php	2
BOMListing.php	2
ConfirmDispatch_Invoice.php	2
CustomerTransInquiry.php	2
CustWhereAlloc.php	2
DebtorsAtPeriodEnd.php	2
EmailCustTrans.php	2
FTP_RadioBeacon.php	2
InventoryPlanning.php	2
InventoryValuation.php	2
OrderDetails.php	2
OutstandingGRNs.php	2
PDFCustomerList.php	2
PDFLowGP.php	2
PDFPriceList.php	2
PDFQuotation.php	2
PDFStockCheckComparison.php	2
PeriodsInquiry.php	2
PO_OrderDetails.php	2
PO_PDFPurchOrder.php	2
PO_SelectOSPurchOrder.php	2
PO_SelectPurchOrder.php	2
Prices.php	2
PrintCustOrder_generic.php	2
PrintCustOrder.php	2
PrintCustStatements.php	2
reportwriter/admin/ReportCreator.php	2
SalesAnalReptCols.php	2
SalesAnalRepts.php	2
SalesAnalysis_UserDefined.php	2
SelectCustomer.php	2
SelectProduct.php	2
SelectRecurringSalesOrder.php	2
SelectSalesOrder.php	2
SelectSupplier.php	2
ShiptsList.php	2
StockCheck.php	2
StockCostUpdate.php	2

StockCounts.php	2
StockLocMovements.php	2
StockLocStatus.php	2
StockMovements.php	2
StockQuantityByDate.php	2
StockSerialItems.php	2
StockStatus.php	2
StockUsage.php	2
StockUsageGraph.php	2
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# Creating a New System

## Running the Demonstration Database

The demonstration system has bogus data already entered so that the features of the system can be explored without creating data from scratch. If all that you wish to do is explore the features available then the demonstration data supplied is all you need. There is certain base Data that determines how the system works. This base information is defined from the System Setup tab of the main menu as well as the file config.php. To run the demonstration system it is not necessary to modify any of these, save for modifying the details for the mysql connection in config.php. The file config.php in the main scripts directory contains essentially the connection parameters for the database and the database type (currently only mysql and mysqli are supported - postgres was supported previously but no champion stepped forward to maintain and test it). There are also some session parameters and php warning levels that are set in this file and can be left at their defaults for most purposes.

## Setting Up A System

### The Company Logo

For the company logo to appear on the each screen, it must be saved in the format of a .jpg file and be copied to the file logo.jpg in the companies/Your Company Name/ directory. webERP allows for multiple companies to be accessed using the same scripts which each company's configuration stored in the database. The name of the company database has a directory under the directory companies under the webERP root directory. The logo needs to have read permissions for the user that the web server is running as (often the user "nobody" for apache on linux). Permissions issues are of course a none issue under windows installations.

### The Chart Of Accounts

A default chart of accounts is set up. However, in most cases the company will wish to adopt the chart of accounts it has used traditionally. Chart of accounts maintenance - deletion of accounts and adding of new accounts is done from the General Ledger tab. This would be a starting point for data input of a new system. Where the GL integration features are to be used, setting up the chart of accounts will be a necessary first step. Once a general ledger account has a posting to it then it will not be allowed to be deleted.

In the General Ledger there is a hierarchy of Account Section > Account Group > GL Account. General ledger accounts - the chart of accounts, Account Groups and Account Sections can be added or modified from General Ledger - Maintenance. It is important to get the chart of accounts right before entries are made which make it difficult to modify the chart. You can't delete accounts with postings made to them.



## System Configuration - Company Parameters

Company parameters need to be set correctly from the company set up screen. Most of these parameters are self-explanatory. Company name, company number, postal address, physical address etc. Also, telephone numbers and the default home currency of the business. If the default currency is not already set up, then from the main menu system set up tab, the link to the currency maintenance form allows new currencies to be defined and for default rates to be updated.

The company record also provides a convenient place to store default GL codes for:

- Debtors Control GL Account:
- Creditors Control GL Account:
- Payroll Net Pay Clearing GL Account:
- Goods Received Clearing GL Account:
- Retained Earning Clearing GL Account:
- Freight Re-charged GL Account:
- Exchange Variances GL Account:
- Sales Exchange Variances GL Account:
- Purchases Exchange Variances GL Account:
- Payment Discount GL Account:

The company record also records the GL integration set up:

- Create GL entries for accounts receivable transactions
- Create GL entries for accounts payable transactions:
- Create GL entries for stock transactions (at standard cost):

Notice that the stock GL integration is a separate flag. If GL integration of accounts receivable is set to yes, then GL journals are created for invoices and credits to sales and debtors but not for cost of sales and stock. For the later integration this requires that the GL entries for stock transactions be set to yes also.

For GL integration at the sales level the posting codes for sales for a specific sales type, sales area and stock category need to be defined from Setup > Sales GL Interface Postings. For Stock GL integration then the cost of sales posting codes for a specific sales type, sales area and stock category also need to be set up from Setup > COGS GL Interface Postings (COGS = Cost Of Goods Sold). If appropriate GL codes are not specified the system will automatically create a new GL account number 1 for the postings to be made to. If you have this account keep appearing then this is a good sign that default posting codes are not created.

## System Configuration - System Parameters

From the setup tab the main system configuration parameters can be set from the link "Configuration Settings". Narrative is shown alongside each parameter to give the user an idea of where the setting is used.

Parameter	Description
General Settings	
Default Date Format:	The default date format for entry of dates and display. It is for input and to appear on reports. The default date format for entry of dates and display use Y-m-d for ISO 8601, d/m/Y for England/Australia/NZ, m/d/Y for US and Canada, or else.
Default Theme:	The default theme to use for the login screen and the setup of new users. It is used for new users who have not yet defined the display colour scheme theme of their choice. The users' theme selection will override it.
Accounts Receivable/Payable Settings	
First Overdue Deadline in (days):	Customer and supplier balances are displayed as overdue by this many days. This parameter is used on customer and supplier enquiry screens and aged listings
Second Overdue Deadline in (days):	As above but the next level of overdue
Default Credit Limit:	The default used in new customer set up
Check Credit Limits:	Credit limits can be checked at order entry to warn only or to stop the order from being entered where it would take a customer account balance over their limit
Show Settled Last Month:	This setting refers to the format of customer statements. If the invoices and credit notes that have been paid and settled during the course of the current month should be shown then select Yes. Selecting No will only show currently outstanding invoices, credits and payments that have not been allocated
Romalpa	This text appears on invoices and credit notes in small print. Normally a reservation of title clause that gives the company (very limited in most authorities) rights to

Parameter	Description
Clause:	collect goods which have not been paid for - to give some protection for bad debts.
Quick Entries:	This parameter defines the layout of the sales order entry screen. The number of fields available for quick entries. Any number from 1 to 99 can be entered.
Format of Packing Slips:	Choose the format that packing notes should be printed by default
Show company details on packing slips:	Customer branches can be set by default not to print packing slips with the company logo and address. This is useful for companies that ship to customers customers and to show the source of the shipment would be inappropriate. There is an option on the setup of customer branches to ship blind, this setting is the default applied to all new customer branches
Dispatch Cut-Off Time:	Orders entered after this time will default to be dispatched the following day, this can be over-ridden at the time of sales order entry
Allow Sales Of Zero Cost Items:	If an item selected at order entry does not have a cost set up then if this parameter is set to No then the order line will not be able to be entered. In an integrated system such as webERP propagation of incorrect data can cause difficulties down the line. The cost of sales for items with zero cost is also recorded as zero in sales analysis and general ledger postings. This is a useful trap for those running full integration.
Controlled Items Must Exist For Crediting:	This parameter relates to the behaviour of the controlled items code. If a serial numbered item has not previously existed then a credit note for it will not be allowed if this is set to Yes. Some care is needed with this since if it is set to yes then it will not be possible to credit new serial numbered items back into stock where perhaps old data has been purged
Default Price List:	This price list is used as a last resort where there is no price set up for an item in the price list that the customer is set up for
Default Shipper:	This shipper is used where the best shipper for a customer branch has not been defined previously. It is critical to ensure that the shipper entered here is actually defined in the shippers table. Shippers are maintained from the setup tab Shippers maintenance
Do Freight Calculation:	If this is set to Yes then the system will attempt to calculate the freight cost of a dispatch based on the weight and cubic and the data defined for each shipper and their rates for shipping to various locations. The results of this calculation will only be meaningful if the data is entered for the item weight and volume in the stock item setup for all items and the freight costs for each shipper properly maintained.

Parameter	Description
Apply freight charges if an order is less than:	This parameter is only effective if Do Freight Calculation is set to Yes. If it is set to 0 then freight is always charged. The total order value is compared to this value in deciding whether or not to charge freight
Create Debtor Codes Automatically:	Set to Automatic - customer codes are automatically created - as a sequential number. The number of the next customer is defined in the systypes table as with all other transaction numbers.
Default Tax Category:	This is the tax category used for entry of supplier invoices and the category at which freight attracts tax
Tax Authority Reference Name:	This parameter is what is displayed on tax invoices and credits for the tax authority of the company eg. in Australian this would be A.B.N.: - in NZ it would be GST No: in the UK it would be VAT Regn. No
Country Of Operation:	This parameter is only effective if Do Freight Calculation is set to Yes. It is required for the freight calculation
Number Of Periods Of Stock Usage:	In stock usage inquiries this determines how many periods of stock usage to show. An average is calculated over this many periods
Check Quantity Charged vs Deliver Qty:	In entry of AP invoices this determines whether or not to check the quantities received into stock tie up with the quantities invoiced
Check Price Charged vs Order Price:	In entry of AP invoices this parameter determines whether or not to check invoice prices tie up to ordered prices
Allowed OverCharge Proportion:	If check price charges vs Order price is set to yes then this proportion determines the percentage by which invoices can be overcharged with respect to price
Allowed Over Receive Proportion:	If check quantity charged vs delivery quantity is set to yes then this proportion determines the percentage by which invoices can be overcharged with respect to delivery
Purchase Order Allows Same Item Multiple	If set to yes then a purchase order can have the same item on it several times - it is possible to set delivery schedules for suppliers by entering the same item with different quantities on different delivery dates.

Parameter	Description
Times:	
General Settings	
Parameter	Description
Financial Year Ends On:	Defining the month in which the financial year ends enables the system to provide useful defaults for general ledger reports. A selection of the month of the year is provided
Report Page Length:	
Default Maximum Number of Records to Show:	When pages have code to limit the number of returned records - such as select customer, select supplier and select item, then this will be the default number of records to show for a user who has not changed this for themselves in user settings.
Maximum Size in KB of uploaded images:	Picture files of items can be uploaded to the server. The system will check that files uploaded are less than this size (in KB) before they will be allowed to be uploaded. Large pictures will make the system slow (particularly over dial up) and will be difficult to view in the stock maintenance screen.
The directory where images are stored:	The directory under which all image files should be stored. Image files take the format of <i>Item Code.jpg</i> - they must all be .jpg files and the part code will be the name of the image file. This is named automatically on upload. The system will check to ensure that the image is a .jpg file
The directory where reports are stored:	The directory under which all report pdf files should be created in. A separate directory is recommended
Only allow secure socket connections:	Force connections to be only over secure sockets - ie encrypted data only. Beware of setting this to yes since the system will not allow connections over normal http protocol and will insist on https connections only. If your web-server does not support https then the config parameters will need to be edited directly from the database to get back to standard http connections.
Perform Database Maintenance At	Uses the function DB_Maintenance defined in ConnectDB_XXXX.inc to perform database maintenance tasks, to run at regular intervals - checked at each and every user login. This is most useful for those databases that require regular re-indexing

Parameter	Description
Logon:	such as postgres. Mysql/innodb is less demanding of database administration. It is recommended to use cron or scheduled jobs for database maintenance outside of normal work hours where possible as this can delay a users login on larger databases.
Enable Wiki Integration	Wiki is the generic name for web-application that allow for the creation of an interlinked free form notes system. Integration of such a system with webERP is a powerful combination. Notes against a customer, supplier or item can be made and retrieved from within webERP. The wiki application selected for integration was the "wacko wiki" - its a minimal download and has several translations. However, wacko wiki was a fork of the wakka wiki and any fork of the orginal wakka wiki should work. To make the integration work this settings must be set to "Enabled"
Wiki Path	<p>The wacko wiki install must be on the same web-server and be one directory up from the webERP tree ie not under the webERP tree but along side it - the name of the web-server directory where it is installed is required to be entered here so that links to the wiki pages can be created by webERP. The integration at the moment is limited to the supplier, product and customer menus - after one has been selected. The links only show if "Enable Wacko Wiki Integration" is enabled. If the wiki page does not currently exist then wacko wiki asks if you wish to create a new page - otherwise the page displays. New pages linked off these pages can be created - showing uploaded images or links to other files appropriate to the product/customer/supplier. The wiki would also make a good place to keep the company processes and policies documentation. Wacko wiki allows pages to be secured from alteration if necessary. An entire business knowlege base and intranet can be built up from the cumulative knowlege of the whole team. Since wacko wiki also allows creation of links to any other web pages particularly webERP pointers to specific information can be provided in the wiki that takes the reviewer of the wiki directly to the information in webERP †or the webERP manual.</p> <p>the Product "wiki" could include information such as:</p> <ul style="list-style-type: none"> <li>• Product Development Notes</li> <li>• Product Instructions</li> <li>• Product Warranty</li> <li>• Product Technical Information</li> </ul> <p>The Customer wiki:</p> <ul style="list-style-type: none"> <li>• Account contact log</li> </ul>

Parameter	Description
	<ul style="list-style-type: none"> <li>• Credit issues</li> <li>• Relationship notes</li> <li>• Key contact notes</li> <li>• Contract documents/special terms</li> </ul> <p>The supplier wiki:</p> <ul style="list-style-type: none"> <li>• Key personnel</li> <li>• Relationship notes</li> <li>• Payment issues</li> <li>• Contract documents</li> </ul> <p>Wikis are a valuable business advantage for a dispersed company. However, they make no sense for a 5 man operation all in the same office - that's why wacko wiki is not bundled with webERP - it is simply not appropriate accross all the businesses that might be using webERP.</p> <p><a href="#">Get Wacko Wiki</a></p>

## Base Data Required

Before customers can be set up the following base information is required (all this information is set up from the system setup tab):

- Currencies - the currency of the customers account
- Sales types - prices are set up at this level. The sales type combined with the currency of the customer determines the price list that is applicable to them. Each customer master record must refer to a sales type.
- Credit Status records, these are flags for recording the credit -worthiness of the customer. Each customer account refers to a credit status type. Some credit status records can be set up to prohibit invoicing.
- Payment terms. As many terms records as necessary can be defined and the customer record must refer to a payment terms record. There is some flexibility as to how these are defined. They can refer to a number of days credit or to a given day in the month following invoice. Aged balances reports produced for customers and suppliers are based on the terms.

- Tax groups - the groupings of tax authorities that are required to collect tax from customer sales. Each customer branch must refer to a tax group and sales to these branches will automatically calculate the tax based on where the sale is from and the tax category of the item being invoiced. The tax system offers great flexibility.

Once the above information is entered then customer records can be entered.

However, accounts receivable also requires that certain branch information, relating to delivery address etc must be entered against each customer. But before customer branches can be created the following base information must be entered - the links to the forms that allow all this information to be defined are available from the main menu under system set up:

- Sales areas - these are for analysing sales by area. Also, GL integration can be set up to look at the area of the customer to determine the GL account to post sales to. Each branch of a customer's account must refer to a sales area. If sales areas are not necessary in your business a single area must be defined - called say "default area"
- As many sales types as required can be set up. It should be borne in mind that prices are held against sales types (and currencies). The sales type would reflect whether the sale was a trade sale, retail, wholesale, indent, cash sale, special sale etc.
- Customer branch records also must refer to a sales person responsible for managing the relationship and who takes the credit for sales to the branch. If the sales people are not necessary for your business, then a single salesperson must still be defined who could be called default or similar.
- Locations that stocks can be held in need to be set up. Each customer branch needs to refer to the stock location that it would be most freight efficient to draw stock from.

Having got this base information set up then the business of setting up customer accounts and customer branches with delivery addresses can start.

Desktop databases, spreadsheets and comma separated variables (CSV) export files can also be used to import this information. Using MS Access, the process involves installing an ODBC driver for MySQL on the windows desktop machine that has MS Access on it and then attaching to the weberp database tables DebtorsMaster and CustBranch in a new blank Access database. The CSV file or the spreadsheet is imported into the Access database, then an append query is made to map the fields from the CSV table/spreadsheet into DebtorsMaster and or CustBranch. There are potentially many records in CustBranch each with a different branch code for one customer account in DebtorsMaster. This method is dangerous in the sense that it is imperative to ensure that no customer records or branch records refer to non-existent base data in the fields described above.

## Setting Up Inventory Items

Before stock items can be defined, again the base information is necessary.



- Inventory Categories are the broad headings under which the company's products (or services) fall. Inventories can also include service items such as labour. Held in the stock category record is all the additional information required for stock integration to the general ledger. All stock items set up referring to a particular stock category will be posted the same way. Inventory categories are defined under the system set up tab.
- All the potential units of measure appropriate to stock items can be defined from the units of measure form under the Setup tab of the main menu under Inventory setup.

Inventory Items can be created for non-physical stocks such as labour time for the purposes of invoicing and analysis, these should be set to Dummy Inventory Items - using the Make Or Buy Flag.

## **Entering Inventory Balances**

Once information about stock items is all entered and by implication the base data required first (preferably all in advance), the stock balance at each stock location must be entered as stock adjustments.

The stock/general ledger interface should be disabled in the company preferences screen until the stock balance in the general ledger (which would be set up using a manual journal in the general ledger) is reconciled to the standard cost of all stock items entered into the system, per the stock valuation report. This reconciliation requires that the standard cost for each stock item entered be correct as well as the total units held in all locations.

## **Inventory Integration to General Ledger Issues**

Once the reconciliation of the stock accounts in the financials module agrees to the stock valuation report, the stock general ledger integration flag can then be re-enabled from the company preferences form. Movements in stock will then be reflected with general ledger journals. The balance of the stock accounts should then always agree to the stock valuation report provided there are no manual journals entered to these accounts.

It is important to understand the two levels of General Ledger integration available.

Firstly, sales integration allows integration of invoices, credits and receipts to sales and debtors control accounts. This level does not produce any general ledger journals for the cost of stock sold. The system has flexible configuration allowing many ways to configure the accounts to which invoices and credits are posted to the sales accounts.

Secondly, stock integration enables the automatic creation of general ledger journals for the cost of sales and the stock accounts. Also, stock movements from purchase order arrivals and sales of stock are also documented as general ledger journals.

It is not necessary to use the stock integration to the general ledger although a fully standard costing based accounting system with full general ledger integration, will arguably provide the fastest and most informative financial reporting system for manufacturers.

## Sales Ledger - Accounts Receivable Integration to General Ledger Issues

Some flexibility is provided in how sales transactions are posted to the general ledger. Different sales accounts can be used depending on any combination of the sales area of the customer, the sales type and the stock category of the item sold. Before entering any sales it is important to define the posting schema under setup - Sales GL Interface Postings. The same flexibility is also afforded to the posting of cost of goods sold (COGS)- of course these journals are only created if the stock GL interface is activated. If it is then again it is critical to ensure the proper set up of the posting schema for COGS under the setup tab - COGS GL Interface posting

## Tax

Taxes must be setup. In Setup there are Tax Group Maintenance, Dispatch Tax Province Maintenance, Tax Categories Maintenance and Tax Authorities and Rates Maintenance. Before you set up customer branches the tax group that relates the branch must be defined - the tax group specifies the tax authorities to which taxes must be charged on sales to the branch. The system allows any number of tax authorities to be included in a tax group. The tax category must be specified on the setup of items - some items attract tax at higher rates and these must be flagged as such. As many tax categories as necessary can be defined. There is a more detailed section in the manual for further details on tax.

## Setting Up Customers

As many branches as required can be set up, it is recommended that branches be used liberally for all customer contacts even though the branch may not be invoiced. Thus all contacts can be kept against the customer they belong with. Each branch requires a sales area and a salesperson. Sales Areas are the areas defined for analysis purposes. Both Sales Areas and Salespeople are set up from the System Setup tab of the main menu.

## Entering Customer Balances

The debtors ledger is an "open item" system which needs each invoice outstanding to be entered to reconcile the account balance. This can be quite a daunting task for a business that has previously operated on balance forward debtor accounts. However, the additional information that the customer will receive together with the reduced monthly reconciliation headaches for customers who have lost track of what their balance is made up of, will more than compensate for the extra work required initially. Open item debtors also require that any money received is allocated to outstanding invoices.

Ideally, all the opening transactions should be entered immediately prior to a month end. Opening balance transactions can then be easily identified as belonging to a period when no normal business was effected. The first step is to ensure that the General ledger interface is disabled to prevent journals being created to sales and debtors control account for invoices which relate to a prior period. It is suggested that reconciliation's be prepared during the month prior to going live for all customers - if an open item system was used previously, then the statement will provide all the information necessary for input. All invoices (and credit notes) outstanding need to be entered to reconcile the balance on the

customer's account, using the same exchange rate as was used when the invoice was originally created. It is recommended that the actual date of the invoice is used as per the original invoice and a reference of the old invoice number is used so that it is easy to cross reference the new invoice number to the old one.

## **Reconciling the Debtors Ledger Control Account**

It is important to check that the balance on all customers accounts from the aged listing agrees to the control account in the old system, in both local and overseas currency. The balance in the general ledger (of all customer balances) would normally be entered as a manual journal, but the amount of this journal should agree to the amount as per the customer listing. Of course balances entered in different currencies will have a different local value depending upon the rate at which they were entered. There is a facility to value all the currency balances in local currency looking at the rate at which each transaction was entered. This is the script `Z_CurrencyDebtorBalances.php`. A similar facility is available for suppliers balances. A double check should be done account by account before going live. Once all customer accounts are reconciled and entered (and double checked) the General Ledger interface should be re-enabled from the Company preferences screen (System Setup Tab). The system will then maintain the control account in the general ledger which should always agree to the list of balances.

## **Bank Account Balances and Other General Ledger Balances**

General ledger is the accounting hub - and an understanding of the accounting concepts is important in grasping what needs to be done to setup webERP correctly. This document is not a text on general accounting but a brief introduction is necessary.

The general ledger like accounts receivable is made up of many accounts although unlike accounts receivable the balances are not related to how much customers owe you - they represent the amounts that the business has:

- in stock
- in vehicles and equipment
- in the bank
- in total customer balances
- in total amounts due to suppliers
- had contributed to it as loans or sharecapital from investors

When these accounts are all listed the report is called a "Balance Sheet" since the value of all of these items will be equal to the accumulated profits net of any drawings or dividends paid to the investors.

The general ledger also keeps track of how much is spent on expenses and is charged out to customers as sales - whether or not the amounts are actually paid to the supplier of the expense or the sale has

been paid by the customer. It is really only interesting to look at these accounts over a period to see what the income and expenses of the business have been and produce the "Profit and Loss Statement". However, in bringing a business on to webERP it is the balances that collectively represent the total worth of the business (in historical terms) that are important to record - these are called balance sheet accounts (the expense and revenue accounts are called profit and loss accounts).

## Double Entry Bookkeeping

When the balance of every account in the general ledger is added together the net result should always be zero - that's because every entry into the general ledger is made up of two parts a debit (a positive amount) and a credit (a negative amount). eg. We spend \$100 on fuel - the debit goes to vehicle expenses and the credit goes to the bank account (since the bank balance has gone down by \$100) and the accumulated costs of running the vehicle has gone up by \$100.

Literally every entry is recorded twice once with the account that increases and once with the account that is reduced. This is why when the debit balances are added together with the credit balances the result should always be zero. Historically when accountants checked their manual books to ensure that every entry was recorded correctly they listed all the balances and added them up on a report called a "Trial Balance" - to check that the general ledger did in fact balance. Today a trial balance off the computer is a list of all the general ledger balances - with a check total at the end to show that the computer has done its job recording journals correctly.

As a simple example consider a trial balance with the entries:

Account	Amount
Bank Account	1,000.00
Debtors Control	5,000.00
Creditors Control	(2,000.00)
Motor Vehicles	10,000.00
Loan	(3,000.00)
Accum Profits	(11,000.00)
Check Total	0.00

++++ The system stops the user from entering journals to general ledger accounts defined as bank accounts. The Bank Account must be defined as such first - from the setup tab - Bank Accounts.

However, under general ledger - Bank Account Receipts - it is possible to enter general ledger receipts - a button to enter "General Ledger Receipt" allows receipts to be entered without selecting a customer account. The analysis of the other side of the general ledger entries that make up the receipt can then be entered. This is how general ledger balances should be brought on.

Create a general ledger receipt for 1,000.00 to make the opening bank account balance correct. When creating this receipt the user must select the general ledger accounts that the deposit represents you can enter as many general ledger accounts with different amounts against each. In a normal situation the receipt may be for example the sale of a vehicle - where the appropriate general ledger account may be the loss on fixed asset disposals and maybe some of it may also be sales tax/GST/VAT. However in the case of entering the opening balances the \$1,000 deposit in our example is actually

Debtors Control	5,000.00
Creditors Control	(2,000.00)
Motor Vehicles	10,000.00
Loan	(3,000.00)
Accum Profits	(11,000.00)
Total bank deposit	<hr/> \$1,000 <hr/>

So entering in the receipt the analysis as above - -5,000 Debtors control, 2,000 Creditors control, -10,000 Motor vehicles, 3,000 loan and 11,000 accumulated profits will agree then to the 1,000 received into the bank account. It is important to date the receipt in the month prior to when the new webERP system will commence activity. In this way the brought forward balances for the new period will be correct.

Where there are several bank accounts each defined with different general ledger accounts, then a receipt should be entered to each bank account with a balance (or a payment if the bank account is overdrawn) - these balances can be cleared through postings to a suspense account.

It is important that the general ledger entries to the debtors control account and creditors control account tie up to the total of the functional currency balances of the AR and AP respectively.

## Finally

Once all entries are made to reconcile the customers accounts with the general ledger debtors account the system should be backed up. The mysql utility mysqldump is one method that produces an sql script that will restore the system to where it was when the script was created. With users out of the system - to avoid any locking issues - and assuming mysqldump is in the system path:

>From a command prompt, using a username and password as created when mysql was installed.

```
#mysqldump -u username -p password --opt weberp > /home/myhomedir/weberp_backup.sql postgres
```

has a similar utility

# System Conventions

## Navigating the Menu

The system is built around a main screen from which all functions can be accessed, without recourse to several layers of menus in most cases. The menu is a tabbed style, whereby the user can select the broad subject of the options they wish to use - Orders, Accounts Receivable, Accounts Payable, Purchasing, Inventory, Manufacturing, General Ledger, System Setup. The options available are then divided into Maintenance, Transactions, Inquiries and Reports. The options relevant are shown on the right. A single click on the text link of the option required immediately actions it.

In addition to the tabbed main menu links, all screens also show links to select a Customer, select an Item and select a Supplier. These links take the user directly to the selection forms and once a selection is made the options relevant to a specific customer or a specific item or a specific supplier are shown and available to be accessed directly from the short cut links from these sub-menu screens. In most cases an inquiry or transaction will require selection of at least one of the three and the links available from these selection pages allow most functions to be carried out with minimal navigation.

## Reporting

All screens and inquiries are printable directly from the browser window. The format of the printing varies depending on the browser. Most browsers offer some flexibility.

Many reports create Adobe (c) Portable Document Format (.pdf) report files. The benefit of using pdf files is that:

- The report files produced are compressed and are retrieved more easily over low bandwidth connections.
- They can be saved locally and emailed to third parties as required.
- The software to read pdf files is a free download from Adobe and available for all operating systems and platforms even PDA devices. The Adobe reader has become an excessively large piece of software and alternatives are available eg. xpdf and epdfview.
- The pdf files produced position text and graphics accurately to ensure that any pre-printed stationary is accurately aligned with printed output.
- Many Web Browsers have pdf functionality built in or as an add on module.

Some users have reported issues with reading the pdf files created. The most common issue is with navigation. Some browsers open pdf files actually within the browser. The difficulty with this is that the links to navigate the system then disappear and hitting the back button of the browser does not work with dynamic scripts so well. The preferred solution is to open the pdf documents created in a separate

window. This is achieved by opening adobe acrobat reader separately then modifying the preferences to disable the "Display pdf in browser" option. This forces a new window for Acrobat reader.



# Inventory (aka "Stock")

## Overview

In many cases due to the English background of the developer, Inventory is referred to as "stock", which can be confusing to some. The word "stock" is used interchangeably with "inventory" throughout.

Inventories fall into clear categories particular to the business. For example a toy factory might have categories for lego, rideons, board games etc . These are referred to as stock categories and are expected to be defined by the business. The name of the category (but not its code) can be altered at any time.

Note: Integration to the general ledger is at the stock category level. The posting to the general ledger is determined by reference to the stock category of the item together with the sales area and the sales type. Separate tables of general ledger codes for sales and cost of sales are maintained from the System Setup tab of the main menu.

Inventory invoiced using the invoicing option will decrease the stock on hand from the stock location specified in the invoice. Inventory credited using the credit note creation option will increase the stock held at the location selected in the credit note. Inventory adjustments to the quantity held are also possible and transfers between stock locations.

A record of each stock movement is maintained, stock movements originating from sales invoices, purchase orders received, stock adjustments, sales credit notes can all be viewed using the inquiry of stock movements. Summing the stock movements provides an easy mechanism to see the historical usage and an inquiry is also available to show usage by month.

Inventories can be valued at either standard cost (manually maintained costs) or weighted average cost (automatically maintained). If general ledger stock integration is active, general ledger postings are created for stock adjustments, standard cost amendments, cost of sales and stock movements on invoicing and crediting. When stock journals are used, provided that the balance of the stock accounts agrees to the current valuation of the stock at the time when the flag is set in the company preferences page, then the value of stock held will be maintained in the general ledger, with a full trail of general ledger journals for each stock movement. This does make for a busy, but informative general ledger in a high use environment!

Note: Inventory journals are optional. The sales ledger/accounts receivable interface is separate to the stock general ledger interface so it is possible to have sales posting to the general ledger but not the inventory and cost of sales aspect.

## Inventory System Features

- Multiple warehouses, stock quantities maintained for an unlimited number of locations.
- Prices for a stock item can be set for each sales type defined in any (and all) currency (ies) allowing great pricing flexibility.
- Automatic back ordering. Sales orders yet to be delivered can be automatically back ordered at the time of invoicing or the balance of the order cancelled as appropriate.
- History of stock movements maintained by stock item.
- Allows Dummy stock items which can be invoiced, priced, costed but with no stock record maintained for items such as labour or services.
- Kit-set parts can be defined. An order for a kit-set part explodes into the components defined for the parts at the predefined quantities as extended by the number of the kit set item ordered. These component quantities are then available on the order for modification by the user.
- Assembly parts can be defined in a similar way to kit sets. These parts exist only for ordering, invoicing and sales analysis. No stock balance is maintained, instead the quantities of the components are updated in proportion to the quantity defined in the assembly.
- Each inventory category can have an unlimited number of properties. Each item of that category can then record its value for each property. Like additional fields depending on the type of inventory.
- Inventory can be set to serialised - where each item of inventory requires its own serial number.
- Inventory can be set to batch controlled - where each batch/lot of inventory of an item must refer to a batch or lot reference
- Invoice and credit note inquiries are inked to stock movements so the detail of items sold on an invoice can be queried.
- Standard cost maintained and valuation reports
- Inventory usage by month inquiry by location and overall
- Inventory planning report
- Integration with purchasing, accounts payable, accounts receivable and general ledger.
- Any number of custom fields can be added specific to each inventory category
- Internal stock requests with departmental authorisation
- Users can be allowed access to only certain locations and will be unable to process transactions to locations where they are not authorised.
- The languages for which item descriptions are to be maintained can be configured. Invoices and credit notes can be produced in the language preferred by the customer

## Inventory Categories

All items must refer to a single inventory category. Inventory categories are defined from:

Setup->Inventory Setup->Inventory Categories Maintenance

Their purpose is to group like items together and define key information once that refers to all items of the category - to maximise the efficiency of the data storage and to minimise the inputs required. The inventory category has the following fields:

- Category code - up to 6 characters
- Description of the category - up to 20 characters
- The stock type - whether the category relates to service items, finished goods items or raw material items
- The general ledger code for the cost of stock of this category - each category can be maintained in a separate general ledger account if required - this of course is only useful if inventory is linked to the general ledger in the company preferences
- The general ledger code where the cost of stock adjustments - both quantity and cost adjustments - are posted for all items of this category
- The general ledger code where price variances are posted to. Price variances are the differences between purchase cost of items and the inventory cost of an item of the category
- The general ledger code where material usage variances are posted to. These are the difference between what the bill of material expected the material cost of the item to be compared to the actual issued cost of materials. Material usage variances are realised and posted when manufacturing work orders are closed.
- The general ledger code where work in progress for the items of this category are coded to. This account is used only in manufacturing when there is a work order for an item of this category

The category then determines how inventory transactions are posted to the general ledger - all items in the same category are posted the same way.

In addition to the fields above, any number of "properties" can be defined for an inventory category. These can be considered like user defined fields for items setup to be part of the category. e.g. In the demo data we have a category for air-conditioners - we are interested in maintaining certain additional information about air conditioners such as:

- Output cooling
- Output heating
- Noise dB inside unit
- etc .....

These fields are not relevant to other inventory categories. When category properties are defined - there are options to define the inputs of the fields - they can be simply a text box, a check box or a combo box with the values pre-defined as a comma separated list. When a user comes to define an item these new fields (properties) will display on the item entry page.

To enter new properties for a specific inventory category it is necessary to click on edit for the category - the new properties form will show below the usual information relevant to the category.

# Adding Inventory Items

Entry of new items requires the input of certain base information:

- Base information about the Code and description together with the category and item type.
- Cost information
- Supplier purchasing data
- Selling prices

Entry of the base information is done from the menu, select the inventory tab and click "Add a New Inventory Item".

## Item Code

A stock code is required for each stock item, this can be any combination of characters up to 20 characters long. The coding structure of stock items should be considered, to ensure that like stock items appear together. Internally the system looks at the code to order stock items in the various look up tables. A systematic approach to naming stock items can save a lot of time later. However, good facilities are available to search. Under supplier purchasing data it is also possible to record the supplier's part number against an item.

There is a script that allows for stock codes to be modified retrospectively, the script goes through all the tables necessary, location stocks, bills of material, order details, purchase order details, sales analysis etc to ensure that all history for the new part code follows the change. The script together with all utility scripts is available from Z\_index.php (there are no links to this utility menu - due to the dangerous nature of some of the utilities) The stock code change script itself is named, Z\_ChangeStockCode.php.

## Part Descriptions

A description of the stock item - can be up to 50 characters long. A description is required for each stock item. This description is used in the look up boxes provided each time the stock item is invoiced, credited or adjusted. There is also the facility to enter long descriptions for each part which show on the screens that customers could access to place orders. This field allows very long descriptions or even features and benefits to be described for the item. The intention for this field is that it could be used for producing a company catalogue or for online ordering by customers who may need more information about a product. It is only the description (short) that displays on invoices and credit notes.

The description translations can be maintained within the same parameters above. The translations that can be maintained are set in the system configuration screen. Any number of translations can be maintained. These translations are used to print on customer invoices if the customer is set up to use one of the languages for which translations are maintained. If not translation is available then the fall back is to the default description.

## Image File

Picture files of items can be uploaded to the server. The system will check that files uploaded are less than defined maximum size (in KB) before they will be allowed to be uploaded. Large pictures will make the system slow and will be difficult to view in the stock maintenance screen.

Maximum Size in KB of uploaded images are defined by system administrators in [\*Main Menu\*](#) > [\*Setup\*](#) > [\*General Setup Options\*](#) > [\*System Parameters\*](#) > [\*General Settings\*](#).

## Category

These categories need to be set up first - from the System Setup tab of the menu. In selecting the stock category, be aware that the system uses the category information for analysis and summary reporting as well as identifying accounts for standard cost general ledger integration, if this option is enabled. There is a link to create new stock categories from the stock item entry page.

A stock category is required for all stock items. The stock category is a text field which groups like stock items together. In selecting stock it is often useful to restrict the search to just the category required. A stock category select box shows on the Select Product screen for this purpose.

## Economic Order Quantity

This is the quantity that new orders are made or purchased in by default. Currently this is purely for memorandum - in future this will be a critical part of the MRP calculations.

## Packaged Volume

Also called the gross volume. This field is required for freight calculations. It records the volume of the one of the item as packaged for dispatch. The freight calculation takes the higher of the freight costs based on the total weight of the order and the total volume of the order. Most freight companies use a conversion and charge the higher of the two. See the section on freight calculations.

## Packaged Weight

Also called the gross weight. This field is required for freight calculations. It records the weight of the one of the item as packaged for dispatch. The freight calculation takes the higher of the freight costs based on the total weight of the order and the total volume of the order. Most freight companies use a conversion and charge the higher of the two. See the section on freight calculations.

## Net Weight

The weight of the one of the item without the weight of its packaging.

## Units of Measure

This field describes how the stock is to be maintained and is self-explanatory. It is a compulsory field, and as such, some values are defined at the time of installation. System administrators may define

additional values or modify existing ones via the 'Units of Measure' link found under 'Inventory Setup' on the main 'Setup' page.

The selection list is maintained in config.php as an array variable. To add or delete other units of measurement the array variable called \$InventoryUnits defined in config.php must be edited by the system administrator.

## **Make Or Buy**

This field is compulsory and indicates whether the stock item is:

**Manufactured** - if the item is defined as manufactured it can have a bill of material - there are no traps that prevent a manufactured item from being purchased.

**Purchased from an external supplier.** Since the item is purchased it cannot also be manufactured and have a bill of material.

**An assembly of other stock items.** An assembly item does not have a physical stock holding itself, nor has it a cost. An invoice for an assembly item creates the stock movements for all the components of the item and the stock of each of the components in proportion to the requirements specified in the bill of material are decremented. The cost of sales entries in the general ledger journals created by an invoice (if the link is active) is created at the sum of the costs of all the items in the bill of material for the assembly as at the time of invoicing.

**A kit set of other stock items that should be exploded into its components when ordered.** A kit set is not a physical item itself it is just a short cut to entering a number of parts onto an order. Unlike an assembly, the kit set part does not appear on invoices or orders, but "explodes" into its component parts for modification. It follows that kit sets do not have any cost or physical stock quantities associated with them.

**A service item that has no physical stock associated with it.** This is for use with service companies that are not interested in retaining stock quantities by location. However, the same sales analysis and movement history is retained - showing the amounts of the service sold/credited.

This field is relevant for MRP and production scheduling. This field can also be set to **Service Inventory Item** - which then disables stock quantity tracking at the locations and in total. Service stock items are used for invoicing services and labour or even physical items which do not require tracking. The stock movement records are still created and are available to recall on invoicing and credit note inquiries. Inventory adjustments are not allowed for Service Inventory Items. Assembly items can have sales analysis records created for them, but no stock quantity is maintained and stock movement records are created for the components. Assemblies would normally be used where the warehouse keeps the components of the item for several different purposes and only assembles the items as they are picked for dispatch.

## Setting Up Assembly Items

Using the example of toilet suites, where the business wishes to keep track of how many sold - i.e. The sales analysis - but only wishes to track the quantities of stock held of the toilet pans and toilet cisterns that make up the suite.

The business will never want to hold stock of made up suites, when stock is counted only cisterns and pans are counted not suites. If there are any made up suites these would need to be broken down into their components and the components included in the stock counts.

Such parts are called "Assembly" items by the system.

When an assembly item is invoiced, the stock of the components of the assembly are decreased by the quantity in its bill of material multiplied the number of the assembly item sold.

eg. A suite that has 2 screws in it to screw the pan to the floor might have a bill of material:

- 1 x cistern
- 1 x White S trap pan
- 2 x Pan screws
- 1 x pan pac carton

If the sale was for 10 of these - the stock of the cistern, pan and pan-pac cartons would be reduced by 10 and the stock of the pan screws would be reduced by 20. The stock movement inquiry shows this movement and the reference to the assembly item that it came from and the invoice number it was sent out on.

It is important to remember that when an assembly item is credited this process happens in reverse - stock is booked back into the components in exactly the same way as it is invoiced out. The credit note must be entered against the correct stocking location otherwise the pan and cistern stocks in the location where the stock did get returned to and the location where the credit note was entered to will be wrong. There is facility to write the stock off at the time of credit note entry also - in this case the stock location is not important.

This next point is a little confusing. The system also shows the movement of assembly items in the movement inquiry for the assembly item itself. This does have the advantage of showing to whom the assembly items have been sold at a glance. However, there are no stock status inquiries for assembly items since they are not stocking items (only the components are held and picked to make up the assembly item at the time of dispatch).

When parts are first set up - the description and stock category needs to be defined and it is at this point that the type of item is defined - from the heading on that screen titled - "Make, Buy, Kit, Assembly or Dummy Part". The choices are "purchased" - the default, "manufactured", "assembly", "kit-set" or "dummy".

Considering the treatment of assembly items:

If there is stock of an item as shown on the stock status screen - then it is NOT possible to convert the item to an assembly by changing this flag - the stock must first be adjusted back to nil and the corresponding component stock adjusted up. Also, if there are purchase orders for the item - it cannot be converted to an assembly. Remember the assembly part does not exist as a separate part only as an assembly of real stock items for the purposes of selling.

Having set the part to be an assembly, then the part will show an option on the "Select Item" menu to show the costed bill of material. This inquiry shows the current Bill Of Material (BOM) for the assembly together with the cost of each of the components and the total of the costs that is used in the sales analysis and general ledger postings.

Setting up an assembly part requires setting up A Bill Of Material - BOM for the item.

## **BOM Maintenance**

From the manufacturing tab of the main menu - under the Maintenance section - click the link "Bill Of Material Maintenance". The item search fields show with the option to enter either an extract from the item description or the item code. Having entered the selection click on the "Search Now" button. Not all items will show - only those items that can have a BOM - assembly items, manufactured parts and kit-sets. If the part is not defined as an assembly item - it won't show up!

Clicking the part code button will then show a screen for entering components to make up the BOM. If a BOM already exists for the item it will show the components already set up. There are two links next to each item shown in the current BOM to enable the line to be edited or deleted.

To enter a new component into the BOM for an assembly, all that is required is to select the component code from the list - the location and work centre are not used for assembly items so the default can be accepted as is. (The location specified in the sales order is used for all the assembly components stock entries.) The quantity required of the component for each assembly item is required to be entered - it defaults to 1 (and maybe 1 in most cases).

The effectivity dates - effective to and effective after (also known as engineering change control dates) are the dates between which the component is used in the assembly. If the BOM is due to change and customers have been advised that a new part will be used in suites effective from 1 Jan 05 then the new part could be entered as a component from that date. The existing part effective to would have to be changed to be effective to 31 December 04. The alternative is to change all the BOMs on the day when the change is made.

Once the component fields have been entered hitting the enter information button adds the component to the BOM there and then. When the BOM is complete just navigate to the main menu or other link to the next task. Be careful not to click enter information button on the default component by mistake - the component must be selected from the list first.



## **Current or Obsolete**

If this field is set to obsolete, this indicates that the stock item is no longer used. However, there may be a stock history on invoices and credit notes which are required. The stock item master record is therefore still required. (Deletion is not allowed while stock movements or Sales analysis records exist for the part) However, it will not appear on searches for invoicing, stock items, in addition the item will be flagged as discontinued in stock reports.

## **Controlled**

This field denotes whether the item is to have lot control on it. Lot control is known by several terms including, batch control, bundle control, roll control. In short it allows a reference for each batch of the item to be entered at the time of delivery, transfer, stock check, invoicing etc. When booking in controlled items the batch references and the quantities in each batch must be entered. Many quality control systems that require traceability of raw materials need this functionality to establish what batch of raw material was used in a given work order. Or what roll of cloth was sold to a given customer. Other industries call their lots of product by different names a melt, a cut, a run etc. Every time a transaction involving a controlled item is created, the system will accumulate the quantity from a separate form for selecting the batches (Lot/roll/melt/work order/serial numbers).

## **Serialised**

Serialised is a special case of controlled where the batch size is always one. The system will prompt for the serial number of each item of stock being received and stock records will be maintained for all serial numbers separately. Serialised does not have any effect if controlled is not set.

## **Decimal Places for display Quantity**

Some items of stock require a number of decimal places to be retained and displayed, others do not require any. This field is used throughout the system for invoices, orders and all places where the item quantity is displayed.

## **Bar Code**

This field is the unique identifying bar code for this item, typically containing the EAN bar code for the item. This field is used in identifying the item in EANCOM edi messages.

## **Discount Category**

Is used in the discount matrix of discount categories and sales types. When an order is for an item with a discount category code and a customer of a sales type that has a discount matrix entry and the order is for a quantity more than the matrix quantity break figure, the system automatically enters the discount into the order lines for all items in that discount category. This allows quantity break discounts across a range of similar products.

The discount category is a 2 character field and there is no error checking on entries.

## Tax Category

Tax categories are defined by system administrators in [\*Main Menu\*](#) > [\*Setup\*](#) > [\*General Setup Options\*](#) > [\*Tax Category Maintenance\*](#).

## Pan Size

This modifier is sometimes called the order multiple. It is the minimum packing quantity. It allows you to create planned orders in multiples of that value. This is especially useful if you are required by your suppliers to place orders in specific lot sizes. It is also a useful modifier if you have established your own production run sizes. This modifier causes MRP to inflate the required order quantity to an even increment of the pansize value. As with all modifiers you do need to be careful with this modifier as its use could lead to excess inventories.

In other words if it is most efficient to manufacture an item in batches of 10 then the pan size would be 10, and MRP would calculate demand in batches of 10, so would inflate a demand of 17 to 20. For instance, we purchase some chemical materials which is 25 kg/pack. The pansize means you have to purchase at least one pack each time.

## Shrinkage Factor

Amount by which an output falls short of the estimated or planned output.

## Item Properties

## Review Translated Descriptions

This script shows items descriptions marked for review and allows to edit the translations.

You can review and edit the translated short description (*stockdescriptiontranslations.descriptiontranslation* field) and the translated long description (*stockdescriptiontranslations.longdescriptiontranslation* field) that have the review flag turned on (*stockdescriptiontranslations.needsrevision=1*).

See also: In [\*Special Utilities\*](#), [\*Translate Item Descriptions\*](#).

## Inventory Costing

There are two schema's for costing in webERP.

- Standard Costing
- Weighted Average Costing

To choose the costing mode the System Parameter must be changed from the Main Menu -> Setup tab  
-> System Parameters

Inventory Costing Method:	Standard Costing ▼
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## Standard Costing

Standard costing is used in situations where costs do vary and a middle ground standard is adopted - variances away from the standard are reported as price variances. Standard costing is particularly relevant to importers and manufacturers where exchange rate, freight and manufacturing costs and volumes vary making each item have different costs.

With standard costing - costs need to be maintained manually - where a permanent shift in an exchange rate of volumes of production dictate that the cost has permanently altered. Variances would consistently be the same direction and modification to the standard is required.

## Weighted Average Costing

Weighted average costing updates costs automatically based on the quantities purchased and the cost of these but taking into account the existing quantity of the item in inventory.

The process is best described with an example - consider an item with 100 currently on hand with a value of \$1 each has an influx of 10 more. When the 10 arrive and are booked into stock the system creates the goods received record for 10 at the inventory cost of \$1 (the new cost is not yet known - we must wait for purchase invoices to be entered). If the general ledger is integrated to inventory, the stock account (from the stock category record) is increased by 10 units @ \$1 = \$10 and the goods received suspense account (from the company preferences) is credited with \$10.

Now the purchase invoice is posted against the goods received record - and the items actually cost \$1.50 each  $10 \text{ units} \times \$1.50 = \$15$  so a variance of \$10 cost recorded on arrival of the good - \$15 actual invoice cost = \$5 is recorded. With weighted average costing (and GL integration of stock enabled) this variance is posted to the value of stock and the cost of the stock item is increased such that the \$5 variance is apportioned across the whole quantity of stock on hand - 100 already in stock plus the 10 = 110. The value of  $\$5/110 = \$0.04545$  is added to the existing stock value of \$1 - new item cost is updated to \$1.04545 as the new weighted average cost.

Similarly when shipments are closed the cost of items on the shipment are updated in the same way.

Even with weighted average costing it is still possible to update costs where there has been a significant change in the cost of an item that is required to be reflected immediately. However, in normal circumstances it should not be necessary to modify costs manually.

## Manufactured and Assembly Item Costs

These items require a Bill Of Material (BOM) to be defined. All items with a bill of material have their costs updated by the system automatically (and any necessary general ledger postings are created) based on the sum of the component costs as defined in the BOM. Whilst it is also possible to update these item costs independently, any change to the BOM will over-ride modifications made and the cost will once again be the sum of all the component costs. However, changes to component costs are not automatically rolled into the cost of manufactured items at the time of a change to the component's cost, but each time a work order is created for a manufactured item the cost is rolled up and updated. Each time an assembly item is sold the cost is rolled up at the time the sale is invoiced.

## Inventory Item Costs

From the menu select the inventory tab and Modify Standard Costs. The item code can be entered directly to show the current cost structure, modifications to costs in this screen are reflected in standard cost journals in the general ledger if the link is active in the Company Preferences page - (menu - System Setup tab). Alternatively, to select the stock item to modify the costs for the costing page can be called from the Select Item page - once an item has been selected - a link to the Select Item page is shown on the title bar of all pages. Maintenance and initial entry of cost data is a critical part of the system set up. Simply defining the item header is not sufficient on its own. The cost information entered here is used for both inventory valuation reports and for the general ledger integration stock journals created for the cost of sales, the cost value of stock adjustments, the value of stock received and so on. It can be omitted only if the user is not interested in the value of stock and no general ledger - stock integration is required. It will only be required to be entered on the initial set up of the system if weighted average costing option is enabled from the configuration settings then the cost will be maintained automatically from then on.

## Material Cost

If the item is bought in, this field should be the average or expected cost of the item. If the item is manufactured in house, it should be the cost of externally sourced materials plus the total cost of in house manufactured components, from lower levels in the bill. In future this will link to the Bill Of Materials cost roll up. Alterations to this figure affect the value of all stocks of this item held. The system is a standard costing system. When items are purchased the actual purchase cost is compared to this figure and a variance reported to the general ledger account set up in the stock categories record applicable to the item.

## Labour Cost

This field should be the total standard cost of labour included in the cost of this stock item. The labour cost is the labour applicable only to this part not to the manufacture of components at a lower level in the bill of materials. The labour cost of componentry would be included in the material cost. Alterations

to this figure affect the stock value of all stock held. See comments for Material Cost. In future, this field will be altered automatically on roll ups of cost.

## **Overhead Cost**

This field should be the total overhead to be recovered on the sale of 1 unit of the stock item. Its value affects the value of all stock held of this item, as for labor cost and material cost above. Labor cost, Material cost and Overhead cost are all added together to get the total cost standard cost of a stock item. This total is the value applied to stock valuations. In future, the cost roll up will automatically update this field based on the work center overhead rates and the quantity of labor at each work center.

## **Standard Costing Considerations**

Each time a stock item is sold, the cost of sales account (specified by the COGS GL Postings table by reference to the stock category and sales area of the branch) is updated with the total of material cost, labor cost and overhead cost, and the stock value (the account specified in the stock category record) is decreased by the total standard cost.

## **Actual Cost**

The actual cost is the last purchased cost as updated by the system on a purchase. For a manufactured item this is the actual cost as calculated including only efficiency variances (price variances are excluded)

## **Alterations To Labor Cost, Material Cost or Overhead Cost**

Since the system only maintains the one standard cost of items, this is the cost that stocks are valued at. In altering this cost all stock held of the stock item under review will be re-valued or devalued accordingly. If stock journals are being created (the option is set in the company preferences from the System Setup tab) then a system generated journal will be created for the effect on stock value using the general ledger accounts set up for the stock category currently defined for the stock item being changed.

Only transactions entered after the change will be created at the new cost. Sales analysis will refer to the costs as at the time when the transactions are created.

There is a utility available from the Z\_index.php page that allows the sales analysis for a specified period to be updated with the current costs. This utility takes the quantity sold and multiplies the current standard cost by the quantity to re-calculate the cost of each sales analysis record in the period selected - the sales analysis data is updated. This will mean that the general ledger costs will then differ to the sales analysis cost for the period since the general ledger postings are created at the time of invoicing/crediting.

## Selecting Inventory Items

From all pages in the system the main title bar has links to select from the critical tables in the system. Customers, inventory and suppliers. Clicking on the "Select Item" link takes the user directly to the inventory item selection page. In addition, from the menu, the Inventory tab has a link to "Modify or Delete an Inventory Item Or Maintain Pricing". Using either method, the select item or product page will show.

The search for a particular item can be narrowed by selection of a specific stock Category - a select box allows selection of the category. Also if some element of the code is known this can be entered, alternatively if some element of the description is known this can be entered - the description keywords are used if both a code and description fields are used. Note that the text entered into these fields does not have to be the start of the code or the description. All items with the text anywhere in either the code or the description respectively will be displayed, together with the total stock on hand and the unit of measure for the item. Assemblies, kit-sets and dummy parts will all show zero stock on hand.

The maximum number of resultant items can be defined by a parameter in config.php - this limits the number of records returned so that users over a lower bandwidth connection are not penalised for making too wide a selection. Downloads of significant amounts of data over a slower dial up connection would result in serious degradation in performance. By default this is set at 100 items.

Clicking on the button of the code of the item that is required will select it and links to the options applicable to the item will be displayed.

Having selected an item it is possible to modify:

- Item master information
- Costs
- Pricing
- Reorder levels
- Purchasing data

It is also possible to inquire on:

- Inventory Movements
- Status - showing quantity on hand, on order with suppliers and on sales orders for customers by location
- Historical usage by month
- Outstanding sales orders
- Outstanding purchase orders
- Completed sales orders
- Bill of Material

Further it is possible to initiate transactions to:

- Transfer stock between locations

- Adjust stock quantities on hand.

At the bottom of this page, there is also a link to perform a fresh search for a different item.

## **Amending Inventory Items**

The master information is available for amendment. The only field that cannot be altered on the main stock item page, is the code. The code is used in many tables throughout the system and modification of the stock code would require data in many other tables of information to make corresponding changes. A special utility is available that allows stock code changes to be made. The changes to the database are extensive and it is recommended that this facility be run out of normal operating hours since the load on the server for the changes could be substantial in a large database. See special utilities. The following points should be considered when altering data fields:

## **Changing a Category**

The Category of a stock item can be altered at any time.

However, if the stock journals option is active (in the company preferences set up), it should be remembered that the general ledger coding set up for that category can not be amended retrospectively. In other words, general ledger journals created for invoices, credit notes and stock adjustments created using the old category general ledger codes cannot be altered. The general ledger coding could be amended with a manual journal if necessary.

Note: Sales analysis done by Inventory Category is performed with the stock categories as they were when the invoice/credit was created. Inventory Category information is stored in the sales analysis table and cannot be changed retrospectively.

## **Alterations to the Make or Buy Flag**

A stock item that currently has stock cannot be changed to a Dummy stock item, an Assembly item or a kit set item. The system does not maintain stock quantities for these items and it is therefore inappropriate to have an initial stock quantity. The stock must be either invoiced, credited or adjusted to zero for all locations before this can be changed. Similarly, the system will only allow a Bill of Material to be set up for manufactured, assembly or kit set items. Altering a manufactured item (or assembly or kit set) which currently has a Bill Of Material to a purchased item is also disallowed, the BOM must be deleted first.

## **Inventory Categories**

Inventory Categories are the natural groupings which apply to certain types of stock. A business will normally have several distinct categories. E. g. A manufacturing jeweller might have stock categories for gold chain, silver chain, diamonds, rubies etc.

## **Inventory Category Code**

This is a six character text field which is the reference used internally by the system. The category code must be unique between different categories. It cannot be changed retrospectively and cannot be deleted where stock items are set up to use the category, or sales analysis records exist using the category. The category code is stored against sales analysis records for reporting. All stock items must be defined as belonging to a category and has the appropriate category code stored against it in the StockMaster table.

## **Inventory Category Description**

This description is used in searches for stock items and in sales analysis reports to describe the category of stock referred to. Up to 20 characters of text can be entered, although on some reports less than the full description will appear.

## **Balance Sheet Inventory GL Account**

Stock is an asset to the business - that according to GAAP should be valued at the lower of its original cost or what it could be sold for net of selling costs (net realisable value). To integrate stock values fully into the accounts every time stock is received it must include the value of assets in the accounts. For each category of stock it is possible to specify different asset accounts in the general ledger where the postings are made to. The selection under this field is the general ledger asset account that should record the value of stock held of this category. Put in accounting terms this is the general ledger account where system-created standard costing journals will post the balance sheet entry. It is possible to set up a GL account for each stock category or to post all raw material stock categories to a raw material general ledger account and similarly for finished goods stock categories. The select box lists all the available balance sheet accounts - profit and loss accounts will not show (because it is not appropriate to record stock values in the profit and loss account). If a new general ledger account needs to be set up this should be done first. This field will not be used if the company preferences flag for "Create GL entries for stock transactions (at standard cost)" is not enabled.

## **Inventory Adjustments GL Posting Account**

When stock is adjusted - ie stock quantities are increased this has the effect of increasing the value of stock holdings. In an integrated system the value of the increase in stock gets posted to the "Balance Sheet Inventory GL Account". The double entry here is to reflect the value of the stock found in the profit and loss account. There is a profit made for the value of the stock found and adjusted up. The reverse applies for stock adjusted down. The entry in this field is the general ledger account - a profit and loss account where the profit on stock finds (and loss on stock losses) is posted to. In accounting terms, this is the general ledger account where the system created standard costing journals will post the profit and loss entry to for stock adjustments. It can be different for any or all stock categories. The select box lists all available profit and loss accounts. This field will not be used if the company preferences flag for "Create GL entries for stock transactions (at standard cost)" is not enabled.



## Purchase Price Variance Account

When purchase invoices are entered at a determined exchange rate for an item, the local currency cost is compared against the standard cost and the difference is taken as a profit or a loss. The difference is known as a purchase price variance. Purchase price variances must be posted to a profit and loss account. The entry in this field is the general ledger account used by accounts payable invoice entry to post variances between standard cost and the standard cost of stock items of this category. Price variances are calculated when the purchase invoice is entered, unless the purchase order item is on a shipment. Shipment purchase price variances are calculated when the shipment is closed. This field will not be used if the company preferences flag for "Create GL entries for stock transactions (at standard cost)" is not enabled.

## Material Usage Variance Account

This account is used when a work order is closed and the quantity of material of this category issued to the work order is different to the requirements from the bill of materials of the item(s) being made on this work order. The difference is evaluated at the standard cost of the component item.

This general ledger account is used by the works orders to post the variances between the actual material issued to a work order and the standard requirements of the work order based on the number of finished items resulting from the work order. This field will not be used if the company preferences flag for "Create GL entries for stock transactions (at standard cost)" is not enabled.

## Type of Resource

The type can be finished goods, raw materials, dummy or labour. Finished goods and labour are purely for reporting. Labour type items will alter the display of the data input form to allow selection of labour recovery accounts - these are profit and loss accounts as opposed to normal stock accounts that are balance sheet accounts.

This field declares the type of resource that the stock category represents and is one of Finished Goods, Raw Materials, Labour or Dummy Inventory. This field is used to distinguish labour type stock items from other components for the purposes of calculating work centre overhead in the cost roll up. It is also used for ordering stock reports to ensure raw materials and finished goods are grouped together.

## Inventory Locations Maintenance

A table of locations is maintained which contains a location code of 5 characters and the location description (up to 20 characters).

Inventory locations are the factories or warehouses where inventory is stored. When a sales order is created the location from which the inventory is to be picked is specified. Also, when a work order is created it is created on a specific location - in this case a manufacturing facility. Every transaction involving inventory must specify the location.

To create or modify inventory locations go to the Main Menu -> Setup -> Inventory Setup tab and select Inventory Location Maintenance

## 🚚 Location Maintenance

Location Code▲	Location Name	Tax Province	GL Account Code▲	Allow Invoicing▲		
AN	Anaheim	Default Tax Province		Yes	<a href="#">Edit</a>	<a href="#">Delete</a>
CONSI	Maxim's Stores	Default Tax Province	1107091	Yes	<a href="#">Edit</a>	<a href="#">Delete</a>
MEL	Melbourne	Default Tax Province		Yes	<a href="#">Edit</a>	<a href="#">Delete</a>
PLEDG	DSC Pledges over inventory	Default Tax Province	1107101	No	<a href="#">Edit</a>	<a href="#">Delete</a>
TOR	Toronto	Default Tax Province		Yes	<a href="#">Edit</a>	<a href="#">Delete</a>

### New Location details

Location Code:	<input style="width: 60%;" type="text"/>
Location Name:	<input style="width: 60%;" type="text"/>
Contact for deliveries:	<input style="width: 60%;" type="text"/>
Delivery Address 1 (Building):	<input style="width: 60%;" type="text"/>
Delivery Address 2 (Street):	<input style="width: 60%;" type="text"/>
Delivery Address 3 (Suburb):	<input style="width: 60%;" type="text"/>
Delivery Address 4 (City):	<input style="width: 60%;" type="text"/>
Delivery Address 5 (Zip Code):	<input style="width: 60%;" type="text"/>
Country:	<input style="width: 60%;" type="text" value="▼"/>
Telephone No:	<input style="width: 60%;" type="text"/>
Facsimile No:	<input style="width: 60%;" type="text"/>
Email:	<input style="width: 60%;" type="text"/>
Tax Province:	<input style="width: 60%;" type="text" value="▼"/>
Default Counter Sales Customer Code:	<input style="width: 60%;" type="text"/>
Counter Sales Branch Code:	<input style="width: 60%;" type="text"/>
Allow internal requests?:	<input style="width: 60%;" type="text" value="▼"/>
Use for Work Order Productions?:	<input style="width: 60%;" type="text" value="▼"/>
GL Account Code:	<input style="width: 60%;" type="text"/>
Allow Invoicing:	<input style="width: 60%;" type="text" value="▼"/>

Enter Information

The description is the field used in lookups on invoicing and crediting. To keep the database as compact as possible it is the code which is stored against stock movement transactions. As many locations as required can be set up. When a new location is defined, location records for all items in the database are created. When a location is deleted, so too are all the item location records. However, a location record cannot be deleted if there are stock movements or stock held for any part in the location.

When creating a purchase order, the inventory location that it is required for is specified. The inventory location address and contact details defined here are used as the default addresses available for delivery of goods ordered on purchase orders.

#### Location Code

Enter up to five characters for the inventory location code.

#### Location Name

The inventory location name could be either a warehouse or a factory.

#### Contact for deliveries

This field is for the name of the responsible person to contact for this inventory location.

#### Telephone No

The phone number should consist of numbers, spaces, parentheses, or the + character.

#### Facsimile No

The fax number should consist of numbers, spaces, parentheses, or the + character.

#### Email

The email address should be an email format such as adm@weberp.org.

#### Tax Province

Since the location represents the physical location from where goods/services are supplied it is important for determining the tax applicable on a sale. The governing tax authority must be specified with the location record. It is used in the calculation of the applicable rate of tax in conjunction with the tax authority of the customer branch being delivered to and the tax level of the item being sold.

#### Default Counter Sales Customer Code

The counter sales functionality looks at the default inventory location for a user and when that user enters a counter sale it uses the customer account and customer branch defined against the inventory location record. Consider a business with locations in Melbourne Australia and one in Anaheim USA - it is unlikely that a user based in Anaheim would be making a counter sale in Melbourne! Each location can have a customer account (and branch) defined for its counter sales. These customers are expected to be cash only customers as the counter sales functionality expects the cash to be taken at the time of the sale. Not a substitute for proper Point of Sale - but suitable for occasional Counter Sales.

If counter sales are being used for this location then an existing customer account code needs to

be entered here. All sales created from the counter sales will be recorded against this customer account.

#### Counter Sales Branch Code

If counter sales are being used for this location then an existing customer branch code for the customer account code entered above needs to be entered here. All sales created from the counter sales will be recorded against this branch.

See [Default Counter Sales Customer Code](#).

#### Use for Work Order Productions?

Some inventory locations are never going to be used as manufacturing facilities and to reduce the scope for errors it is possible to specify those inventory locations which can be used for work orders.

#### Account Code

Sometimes it is needed to have general ledger transactions of inventory transfers to or from a location. For example, a location that is used for pledged inventory or a place with goods on consignment. In this case, the location should be related to a ledger account. To do this, enter the general ledger account code for this location in this field. This account code overwrites the account codes of [inventory categories](#) when a general ledger transaction related with this location is created. Each time you do an inventory transfer from or to a location with a non blank account code, the system will generate a general ledger transaction (a SysType 16 --Location Transfer-- transaction).

If you do not need accounting entries for inventory transfers, nor locations with his own GL account, leave this field in blank.

#### Allow Invoicing

This parameter is to allow or deny the invoicing of items in this location. For items on consignment, depending on the agreement, you can not sell or can sell them (if you notify the consignee). Also, for pledged items, depending on the agreement, you can not sell or can sell them (if you replace them with items with equal or greater value). For these cases, use this parameter to indicate whether these inventory locations allow or deny such transactions.

This parameters hides locations from [Draw Stock From](#) in *Customer Branches* and in [Deliver from the warehouse at](#) in *Delivery Details*.

For standard locations, leave this option in "Yes" (allow invoicing).

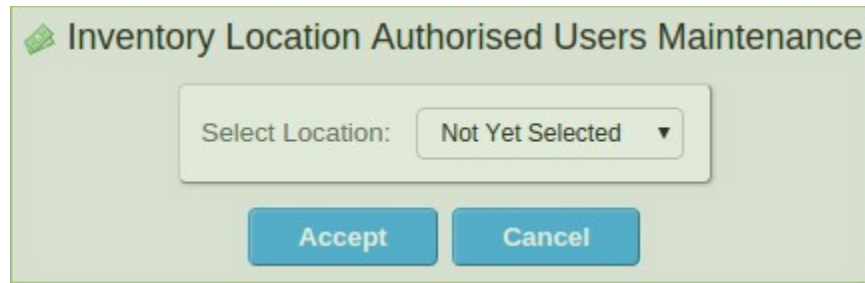
Note: Location codes cannot be modified retrospectively. Neither can they be deleted if there are stock movements, users (default location) or customer branch records set up to receive stock from the location.

## Inventory Location Authorized Users Maintenance

With the release of 4.11.3 only users with appropriate permissions can process transactions involving a location. This requires that users are specifically given access to individual locations.

Normally to modify the users that have access to a location requires system administrator access.

From the Main Menu -> Inventory Setup Tab -> Inventory Location Authorized Users Maintenance

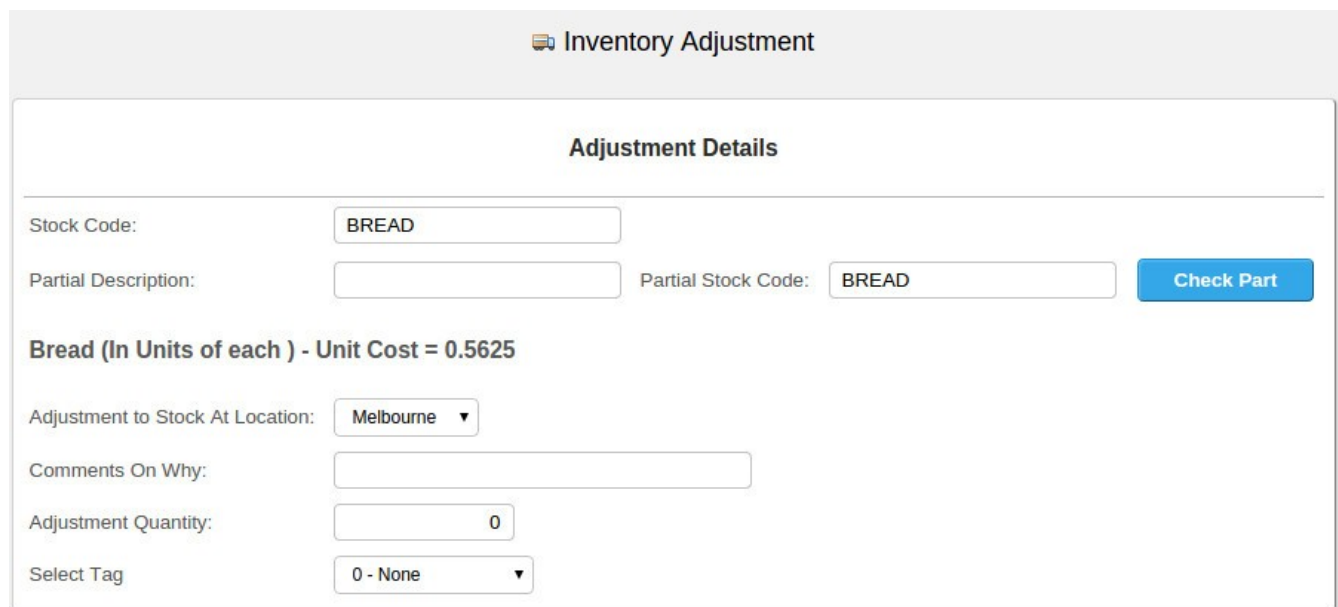


The dialog box has a light green background. At the top left is a small green icon of a document with a checkmark. To its right is the title "Inventory Location Authorised Users Maintenance" in bold black text. Below the title is a label "Select Location:" followed by a dropdown menu showing "Not Yet Selected" with a downward arrow. At the bottom are two blue buttons: "Accept" and "Cancel".

This screen allows you to select a location and see the users that are authorized to access and create transactions. You can add users are required.

## Inventory Adjustments

Inventory can be written on or off for individual stock items using this option. Corrections to physical stocks and deliveries of stock can be entered using this option. Adjustments can be entered by selecting the link on the SelectProduct.php page.



The form has a light gray header bar with the title "Inventory Adjustment" and a small icon of a clipboard. Below the header is a section titled "Adjustment Details" in bold black text. The form contains several input fields and buttons:

- Stock Code:** A text box containing "BREAD".
- Partial Description:** An empty text box.
- Partial Stock Code:** A text box containing "BREAD".
- Check Part:** A blue button.
- Bread (In Units of each ) - Unit Cost = 0.5625**: A bold label.
- Adjustment to Stock At Location:** A dropdown menu showing "Melbourne".
- Comments On Why:** An empty text box.
- Adjustment Quantity:** A text box containing "0".
- Select Tag:** A dropdown menu showing "0 - None".

Adjustments can also be created directly from the main menu under transactions. Using the second link, the item code must be known and entered, there is no facility to select an item code from this page.

If Stock GL integration is enabled from the company preferences page (under the setup tab), then the system creates the necessary journals in the general ledger to update the stock account and the profit and loss account stock adjustment account specified in the stock category record. (see Inventory Categories above and also see General Ledger Integration later)

Note: Inventory Adjustments are not possible with kit set, assembly or dummy stock items since no stock record is maintained for these items.

Inventory adjustments for controlled items must select the batches/serial numbers being adjusted.

## **Internal Stock Requests**

Internal departments of an organization to make requests for consumable items from a particular stock location.

Departments are created via the Inventory section of the setup module. The name of the department must be entered, and the userid of the person who will be responsible for authorizing the requests from that department must be selected here.

Each user can be given permission to create internal stock requests for a particular department, or they can have permission to create requests for all departments.

Individual stock locations have a flag that can be set to allow or disallow internal stock requests to be fulfilled from that location.

Also each user role, can have specific stock categories assigned to it for which internal stock requests can be created. These are created in the Maintain Internal Stock Categories to User Roles section of the setup module.

### **Create a New Internal Stock Request**

An internal stock request is created in two parts. Firstly the header, which contains the Department that requires the items, the location that you wish the request to be fulfilled from, the date by which you require the items, and any narrative you wish to add to the request.

Secondly the items required are selected and the quantities required are entered.

Once you are happy that you have all the items and quantities entered, submit the request for authorization.

### **Authorize Internal Stock Requests**

When a user chooses this option they will see all unauthorized stock requests that they are allowed to authorize. No other requests will appear. By ticking the authorize checkbox, and clicking on the update button they will authorize this request to be fulfilled.

## Fulfil Internal Stock Requests

When the warehouse open this option for their own warehouse, they will see any internal stock requests that are awaiting fulfillment. They can either fulfil all or part of a request. If not all of the request is fulfilled, but the rest will not be, the request can be marked as completed. Also a GL tag can be chosen to tag that entry against.

## Inventory Location Transfers

Transfers of inventory between locations need to take stock off the sending location and increase the stock in the receiving location. This is effected in one transaction by entering a stock transfer. In the same way as adjustments these can be accessed either from the SelectProduct.php page which is linked to from every page on the top header banner or directly from the menu - inventory tab under the transactions section. All that is required is the location from and to, the date and the quantity being sent. If the business wishes to record inventory in transit an additional in transit location needs to be established and a transfer to the transit location performed when the stock is dispatched and a further location transfer from the transit location to the receiving location when the stock is received. Stock location transfers are shown on stock movement inquiries.

Note: Inventory Location Transfers are not possible with kit set, assembly or dummy stock items since no stock record is maintained for these items.

Bulk inventory transfers consisting of many parts can be set up. These allow a docket to be produced to be sent with the dispatch of the goods. The transfer is not actually effected until the transfer is received in by the receiving stock location.

## Inventory Reports and Inquiries

Three types of inquiries are possible:

- Inventory Status.
- Inventory Movements.
- Inventory Usage

All stock inquiries are performed from the product selection form. Once a product has been selected the links to the various relevant inquiries will show.

### Inventory Status Inquiries

Shows the detail of how much stock is held and where the stock is (i.e. how much at each location) together with the total quantity of sales orders for the part outstanding and the quantity of the item on outstanding purchase orders can also be viewed from this inquiry. Not only are outstanding sales orders for this part accumulated but all the demand for parent assembly parts as extended by the quantity required per unit of the parent. This ensures that all demand for the part is shown.



This - and all stock inquiries are called from the SelectProduct.php page - this page is linked to from every page in the system from the header links "Select Item". Once an item is selected the relevant inquiry options are displayed. As with all web pages produced by the system most browsers have good facilities to print them.

If the item selected is a controlled item then the status inquiry will also show a link to show the batches. If the item is serialised, the link will refer to the serial numbers rather than batches.

## **Inventory Movement Inquiries**

Inventory movements for the item show with the most recent movements at the top of the screen in descending order of date.

This inquiry shows the movements of the stock item for a specified location with further links to the transaction detail that created the movements such as the invoice or credit note. By default only the last 3 months stock movements show but the date from which stock movements are displayed can be modified from the inquiry page.

Note: Inventory movement inquiries are possible on dummy and assembly stock items. However, since dummy items are not physical stock items, no record of the amount of stock and the location of where held (there is none held) are maintained. The location inquiry will always be zero for a dummy/assembly and kit set items. When a dummy stock item, or an assembly or kit set item is selected the link to the stock status inquiry is not available.

If the stock movement was an invoice or a credit the customer and the price in the currency invoiced or credited will show.

## **Inventory Usage inquiries**

This inquiry shows the quantity of the stock item that has been consumed either in sales net of credit notes and adjustments by month from each location. Transfers between locations are ignored as are deliveries. Usage of an item adds all the stock movement quantities for the part so that stock movements related to the sale of assembly items requiring the part under review as a component are included. Usage can be seen by location and also the total usage from all locations.

There is a user modifiable flag which determines how many months of stock usage should be maintained for the item.

## **Inventory Valuation Report**

This report shows the stock on hand at the time the report is run as extended at the current standard cost. Both reports show the total quantity of stock held by Location and by Inventory Category. The detail report lists the individual stock items and value of each. Inventory items with no stock on hand are not printed out. This report can be run with only a selected inventory category and location, to reconcile the stock general ledger accounts.

A separate script is included in the distribution that can be set to run the stock listing report and email it to predetermined email addresses. To take advantage of this facility, the script must be called by wget under a Linux distribution from a crontab entry on the last day of each month. The script is called MailInventoryValuation.php. This script will need to be edited with the email address of the user to receive the report and any parameters necessary to run the report. By default it produces a detailed report for stock at all locations. The entry in crontab in a linux installation that would send the report at 0:0 on the first day of each month (assuming wget is installed in /usr/bin/wget and that the web server is on the same machine) would be:

```
# Scheduled email of monthly Inventory Valuation report
-0 0 1 * * root /usr/bin/wget http://localhost/web-erp/MailInventoryValuation.php
```

since the page has no output - it would be pointless running it in a web browser although it would initiate another email to the defined recipients.

## Inventory Planning Report

This report shows the usage of stock items over the previous four months together with the current stock, outstanding sales orders and outstanding purchase orders. It suggests a re-order quantity based on a selectable number of months stock to have in the supply chain multiplied by the maximum of the previous four months monthly stock usage (from all stock locations), less the on hand stock and purchase orders. It will not suit all purposes but certainly does provide good information from which to base purchasing decisions.

Another inventory planning report - title Inventory Planning based on preferred suppliers uses the data in the purchasing data table specifically the data for the supplier selected as the preferred supplier for the item. The lead time in days for the item is used is divided by 30 to get the monthly lead time and this is added to the user selectable buffer stock holding period. The lead time plus the buffer stock holding period is added together to calculate the total supply chain stock holding period. This stock holding period is then multiplied by the average of the last 4 months stock to get the quantity required in the supply chain. The report suggests a quantity to reorder if applicable by using the calculated quantity then deducting quantities already on order and in stock and adding outstanding sales order demand. This report shows in supplier code order then in order of the item code for each preferred supplier. This report shows:

- The average quantity of the items for the last 4 months
- The maximum quantity sold in any of the last 4 months
- The standard deviation of the quantities sold over the last 4 months. This is meant to give a guide to the variability of demand relative to the average. If the standard deviation is 0 then it means the same amount was sold each month and the average is the same as actual sales over the last 4 months. The standard deviation is the average of differences between actual month usage over the last 4 months and the average over the 4 months and the actual quantity in future

months could reasonably be expected to be (on average) the average over the 4 months +/- the standard deviation quantity.

The Inventory Planning Reports are run from the Inventory tab of the main menu under the Inquiries and Reports section.

## **Aged Control Inventory Report**

A report detailing controlled batches by age is available from the reports menu. This helps users to always select the oldest batch

## **Inventory Checks**

Scripts are available to automate the stock check adjustments necessary following a stock check. However, this feature does not work with controlled items .... yet. The procedure for there use and for stock checks in general is as follows:

### **Step 1**

Ensure invoicing is complete for all product dispatched. Ensure that goods received are entered against purchase orders. All other goods should be excluded from the counts.

### **Step 2**

From the main menu - inventory tab, click on the link to print out the stock check sheets.

This page allows selection of the stock location to be checked and a range of stock categories to check. Note there is a new field called:

Action for stock check freeze.

By default this is set to list the items to be counted. Before a stock starts this must be run selecting "make a new stock check data file". This copies the quantities on hand as at the time the report is run. If the stock check sheets are run for another location and it is set again to make a new stock check data file, then the previous stock check data file is over-written and lost. If there is a stock check in progress in one location and another location wishes to initiate one too, then the second person to run the stock check sheets needs to print them with the Action for Stock Check Freeze field set to Add/update existing stock check file. Similarly if another stock category is to be added to the stock check then - Add/update existing stock check file is the correct option.

### **Step 3**

Once the stock check data file is created - the stock should be counted immediately. Note that any movements - sales or goods received should be stopped so that an accurate count can be obtained as at the moment the stock check data file is created.

## **Step 4**

The counts should be entered - the system will only accept count entries for parts that were included in the categories selected for stock taking in step 2. The system allows many counts for each item and totals all counts to work out the required adjustment. Also, the initial of the counter or reference to the count sheet can be entered to provide a trail of where the stock was that is entered. As soon as there are counts to enter - the counters should pass on the count sheets to the data entry team so that the data entry can be completed as soon as possible after the counting is complete. Note that the data entry can happen at leisure since the adjustments that will be created are against the quantity that was on hand when the stock check file was created. Subsequent movements of stock are ignored for the purposes of determining the stock check difference.

## **Step 5**

Having completed the entry of the counts the Comparison report can be run.

This is run from the Inventory tab of the main menu:

Compare Counts Vs Stock Check Data

There are number of options for running this report. The default is to run the report without making any adjustments. It should be run in this mode initially so that a review of the proposed adjustments is undertaken. Any adjustments that seem incorrect can now be double checked (i.e. counted again) as necessary.

## **Step 6**

Once happy that the adjustments to be made are correct the report can be run again with the option to Report and Close the Inventory Comparison File and Process Adjustments as Necessary.

There is no going back on this process - if you didn't mean to process these adjustments they must all be reversed manually. Be very sure when running the comparison in this mode.

## **Additional Notes on Stock Checks**

The data can be scanned in - using a portable data terminal or keyed in at the time of counting using a wireless tablet. Scanning presupposes all the stock is barcode labelled up which requires a discipline at the time of receiving. In deciding the structure of the stock check entry screens the choice was either to enter the part code or search for the part code to enter the quantity against. In practise simply entering the code is much quicker than searching through long lists - especially as the list gets longer. Populating a selection box where there are millions of items is of course a non starter over a low bandwidth connection.

It doesn't matter how many times you enter the same item code all entries are added together for the same stock item to accumulate to a total and the comparison report shows each entry - and you can reference to an aisle/row etc and/or the count sheet/counter if you want to go back and double check a count and/or the input. There is no need to manually add stock of the same part counted in for example

12 different places throughout the warehouse (although such a warehouse might need a bit of reorganisation) as the system does this for you.

When you create the stock check it looks at the system quantity at the location being counted and stores that quantity - subsequent movements are ignored. If you carry on selling then these will not be taken into account - you need to count at the time when you create the stock check. All deliveries should be entered in - selling must stop (there is just no other way to ensure an accurate count). Ideally stock checks should be done after hours. Once the count is complete for all the quantities, selling can resume. There is no panic with the data entry as the stock take adjustments created are derived based on the stock at the time the stock check was created (and the stock counted). You can only count one location at a time.

Creating a new stock check will over-write an existing stock check - so if you have entered counts and then create a new stock check it is possible to wipe out a lot of work - only create a new stock check once the previous one has been updated. You can run the comparison report without updating to see what adjustments would be created - and do any necessary double counts if need be. If need be additional quantities can be entered for items that were missed or negative quantities for errors where stock was over counted. The comparison can then be rerun. Finally when happy run the comparison report in update mode to complete the stock check.

The only problem with doing the data input at your leisure subsequently is that any recheck will potentially be after the stock has moved by additional sales or arrivals of new stock. However, the stock check can be run again for those items that need a recount

# Accounts Receivable

## Overview

A primary function of the system is to track the amounts owed to the business by customers in both local and foreign currency. The system shows, invoice-by-invoice, the balance on the account and does not lose the detail of what makes the account up in a balance brought forward - it is an "open item" system. When payments received from customers are entered and allocated to invoices, the differences on exchange are calculated and posted to the general ledger - that is only if integration to the general ledger is enabled from the company preferences page under the setup tab.

## Features

- Overdues inquiry that takes into account delivery days to the customer's branch and the actual terms applicable to the customer, supported by detailed inquiry of actual invoices overdue.
- Full on-screen inquiry on a customer's account, complete with invoice details and narrative which appeared on the invoice. Inquiries on payments received will show how a payment was allocated to invoices and the difference on exchange attributable to each invoice.
- Full integration with stock records and general ledger - a full trail of journals for each transaction is maintained - a drill down to the general ledger transactions for each transaction on a customers account is available from the customer inquiry page.
- Open item - full analysis of the outstanding balance is maintained and printed on statements for maximum information to the customer.
- Flexible user definable sales analysis reports to pdf or spreadsheet (csv - comma separated values).
- Retrospective - de-allocation and re-allocation of receipts or credit notes against charges with re-calculation of differences on exchange and corresponding general ledger journals
- Any number of branch - delivery addresses can be added serviced by different sales people with different tax authorities and different areas for sales analysis purposes.
- Unlimited free form notes can be maintained for each customer and an unlimited number of contacts can be stored against each customer>
- Email of customer statements to multiple customer contacts

## Entering New Customers

From the menu Receivables tab, click on "Add A New Customer". The customer record is the actual charge account, any number of branches can be defined for each customer account. At least one branch must be defined for each customer. It is the branch details that record the local information about delivery address, tax authority, sales area and sales person.

## Customer Code

This field is used as a unique identifier for the customer which is small (maximum of 10 characters of text - letters or numbers). This allows faster searches for customers and keeps the size of the database at a minimum.

Note: A customer code can be altered retrospectively but because of the large scale of the changes required to the system to update stock movement transactions, sales analysis records and sales orders it could present a significant drain on resources. The option to change a customer code is in the utility menu Z\_index.php - which must be entered as a manual URL and is only accessible by the system administrator. Such changes should only be undertaken when there are no other users on the system.

## Customer Name

The name of the customer is used extensively in lookups and appears on invoices and statements exactly as typed (searches are independent of case). Proper capitalisation and use of the full name of the customer is recommended. The maximum length of the name is 40 characters.

## Address Line 1, 2, 3 and 4

This is the address of where invoices and statements are to be posted. A post office box should be entered if applicable. These fields will allow a maximum of 40 characters and are optional. If left out invoices will not show the customer's address which is a requirement for a valid GST or VAT invoice in some administrations.

## Currency

This is a compulsory field that identifies the currency in which the customer is to be invoiced. All invoices created for the customer will use this currency and the rate will be used as set up in the currency master - accessible from the General Ledger module. The currency rates need to be maintained at least monthly.

Note: that the rate is recorded in the transaction not the currency. If a customer changes the currency in which they are invoiced it is possible to allocate a new currency receipt against invoices (invoiced in the old currency) in which case the system will calculate large differences on exchange. Note: There is no error check on this and care should be taken, should this occur, to ensure invoices are matched off in the currency in which they were originally created - the cross rate between the new and old currency will provide an equivalent amount of the old currency for entry and allocation.

## Invoice Discount

Customers can be set up with a general level of discount which applies to all sales. The percentage entered is used by default on all invoices to the customer. The discount rate can be manually overridden at the time of invoicing, which the system will use to calculate discount. The discount percentage used at invoice time will not be stored as the future default unless the customer details are amended. This

field checks to ensure that the percentage is less than 100% and greater or equal to zero. This feature is not currently used/implemented.

## **Prompt Payment Discount**

Customers can be set up with individual prompt payment discount percentages. This field is for memorandum purposes only and shows on screen when customer receipts are entered. If the receipt is on time the discount can be calculated and input with the receipt.

## **Customer Since**

The default is the current date. This field is only used on certain reports where it can be used to restrict the customers shown, and also for credit reference inquiries. The system will only accept a date in this field. The date can be altered at any time. There is no error checking on this field.

## **Payment Terms**

A select box is provided showing the predefined payment terms. New ones can be created as necessary from the Setup tab of the menu. The terms are used to determine whether an account is overdue or not and a description of the terms prints out on invoices, and statements.

There are no restrictions on altering payment terms for a customer at any time. The next statement or invoice produced will show the new terms. The system will only look at the new terms in deciding whether or not invoices are overdue, no record of the terms is held in the transaction itself.

## **Credit Status or Rating**

A lookup is available for this field and a button is available for creation of new credit status categories. Credit status's can be defined to stop any new invoices or indeed orders to the customer - irrespective of his/her credit limit.

A customers Credit Status can be altered at any time.

Note: This will never show on any reports invoices, credits or statement intended for the customers eyes.

## **Credit Limit**

This is a required field which accepts any positive value. It is currently only for memorandum purposes.

## **Invoice Addressing**

This field is a flag that has two choices:

- To address invoices to the head office postal address. This is the postal address from the customer record as entered above. This is the default option.



- To address invoices to the branch postal address. This addresses invoices charged to the customer to the branch of the customer, some customers may wish for the branch to authorise invoices before sending on to head office for payment. The branch postal address entered will be used for printing invoices.

## Entering Customer Branches

A customer code entered on its own is insufficient to enter sales orders against. All customers must have at least one branch. The branch records contain the information about the delivery address, the sales area, the tax code, the sales representative and other regional information. New branches can be set up at any time. The first step will always be to select the customer, then to Add/Edit/Delete Customer Branch Records from the Customer menu. There is no limit to the number of branches that can be referenced against a single charge account (customer record). However, branches cannot be transferred between different customers. Only one statement will print per customer, but each invoice will be referenced to the branch it was delivered to.

### Branch Name

The branch name can be up to 40 characters long. The branch name is used on packing slips to identify the name to where delivery should be made. It is also used in lookups in sales order entry as it is to the branch that the sale is ordered against. By selecting the branch from this lookup, the customer code and branch code is returned to the system for storing against the order.

### Branch Code

The branch code is stored in transactions. It can be up to 10 characters long and should uniquely identify the branch. Two branches cannot have the same code for the same customer. Branch codes (and other codes) cannot contain spaces, commas, & or - . There are checks in place to ensure no new codes are created containing these characters. However, if data is imported it is important to change any codes which contravene these rules.

Branch codes are not available for modification retrospectively. They exist in many tables throughout the database - sales analysis, orders, DebtorTrans and CustTrans and all data in these tables would need to be modified.

### Branch Contact / Phone / Fax / Address

The branch contact is the name of the purchasing manager to whom goods and inquiries would be addressed at the branch. A head office branch could be created to identify contact names for account inquiries. It doesn't matter that such a branch may not be invoiced to.

The address is the physical address of the branch for deliveries. As much detail as is required on labels to get the goods to the desired destination should be entered.

## Sales Person

A select box is available to enter the salesperson who services this branch.

## Draw Stock From

Branches local to a particular warehouse can be associated with the local warehouse by setting this field to the preferred stocking location (see [Inventory Locations Maintenance](#)). This affects the entry of sales orders that default to the stock location entered here. It can be overridden at the time of order entry.

## Forward Date From A Day In The Month

This field is not currently used.

## Delivery Days

This field is not currently used.

## Phone/Fax/Email

These are the contact details applicable to the branch.

## Tax Authority

The tax authority of the branch determines the regime for tax calculations at invoice and credit time.

Tax Authorities are the authority that collects the taxes. Different authorities in different countries mainly or different states in the USA. Say sales tax in New York is 10% and sales to customers in Michigan attract sales tax at a different rate payable to a different state tax authority.

In the UK, Australia and NZ, the Inland Revenue, Australian Tax Office and the IRD are the relevant tax authorities. Sales to customers that fall under the ATO from a company in NZ do not attract any tax - ie exempt export. However, the same customer who has a branch in Auckland NZ will fall under a different tax authority the NZ IRD - attracting GST @ 12.5% for the same item delivered there.

So the tax authority is the factor relevant based on where the branch of the customer is who is receiving the supply.

The tax authorities are maintained in a separate table (available from the Setup tab) and the tax rate applicable to invoices and credits and the general ledger posting of tax is determined from the Tax Authority setting of the branch together with the applicable level of tax specified in the item (stock) master.

A select box allows the appropriate tax authority for the branch to be selected.

## Disable Transactions

This flag - either enabled or disabled - either includes the branch as available for new sales orders or not. If it is set to disabled then the branch will not appear on the order entry branch lookup.

## Default Freight Company

A select box allows the selection of the freight company that is most cost/service effective for deliveries to this branch. The entry in this field serves as the default for future sales orders. If it is changed at order entry stage, the overridden entry become the new entry for this field.

## Postal Address 1, 2, 3 and 4

This is the postal address of the branch. There is no checking done to ensure this is entered. The only place this would be used is if the customer record required that invoices and credits be addressed to the branch.

## Amending Customer Details

The customer details can be modified at any time and any modifications made will be effective for all future transactions. First select the customer from the link provided on all pages, then select the link for Modify Customer Details.

Points to note:

- Customer codes can be modified retrospectively using the facility in the utilities menu Z\_index.php - this should be used only when all other users are off the system.
- Changing the payment terms impacts immediately on the aged analysis since this is recalculated each time it is run or a statement is produced.
- Changing the currency of the customer needs care since the exchange rate is recorded against each transaction. Allocations of one currency against another at different rates will produce differences on exchange. The system will not be able to distinguish at the transactions level which was in what currency only the rate against the functional currency.

## Customer Statements

Customer statements can either be printed or emailed directly to all the customers in the selected range, that have a contact defined as receiving a statement. If there are no contacts defined for the customer that have the statement flag set to yes then their statement will not be emailed to them. If the customer has many contacts with several of them having the statement flag set to yes then all those contacts will receive a copy of the pdf statement.

If the customer has any contacts that have the statement flag set then it will not be possible to print their statement so as to avoid sending both a printed statement and an email statement

## Customer Notes

Customer notes containing any text - a web-link if required and a date can be entered from the Select Customer screen - for the selected customer. The notes are displayed in sequence of priority - so pressing issues appear at the top of the list. These notes might contain information about recent contact with the customer or disputes. There is no checking on the content of the notes and no limit to either the number of notes nor the number of characters that can be used.

## Customer Type Notes

As well as unlimited notes on individual customers, webERP has the functionality to store an unlimited number of notes on groups of customers based on the debtor type field. As with the notes on individual customers, these notes are displayed in order of priority, and can contain a URL as well as the free form note.

## Shippers

This table is only used as a reference to the method of transportation that the invoice delivery was effected by. The shippers name is what is used in the look ups and the code is a system maintained counter which is stored in the database to reference the freight company used. The consignment note reference can be stored against the transaction in the reference field. In this way a full proof of delivery trail can be maintained.

Shipment cost calculations can be automated and the result automatically added to invoices. The least cost shipper is calculated and modified on the order. This system requires active maintenance of the shipment costs tables for each shipper. The shipper costs table shows the cost per kg and metre cubed for freight to destination cities. A substantial amount of data is required. For the system to calculate freight, it also requires that each part have a defined volume and weight set up from which the total order weight and volume is determined for use in the freight calculations.

If freight cost calculations are to be performed at order entry stage, the data must be entered and the options in config.php enabled - see the config.php section.

# Creating Credit Notes

## Overview

Credit notes are used to either reverse an invoice or to credit damages, warranty, promotional goods to a customer's account

There are 2 Methods:

### Option 1 - Credit an Invoice

1. From a customer inquiry select the invoice you wish to credit and click on the "credit invoice" icon (more usually used for undo in word/excel etc)

The screenshot shows a webERP Customer Inquiry page for Customer ID 13. The page displays customer details, terms (28 Days from Invoice date), credit limit (8,000), and credit status (Good History). A summary table shows the following values:

Total Balance	Current	Now Due	30-60 Days Overdue	Over 60 Days Overdue
435.42	435.42	0.00	0.00	0.00

Below the summary table, there is a table of transactions. The 'Credit' button for the last transaction (Sales Invoice 8) is circled in red.

Type	Number	Date	Branch	Reference	Comments	Order	Total	Allocated	Balance	More Info	More Info	More Info	More Info
Sales Invoice	3	03/06/2013	13			4	439.67	439.67	0.00	Credit	HTML	PDF	Email
Credit Note	1	03/06/2013	13	Inv-3		4	-439.67	-439.67	0.00	HTML	PDF	Email	Allocatio
Sales Invoice	7	03/06/2013	13			4	439.67	439.67	0.00	Credit	HTML	PDF	Email
Credit Note	2	03/06/2013	13	Inv-7		4	-439.67	-439.67	0.00	HTML	PDF	Email	Allocatio
Sales Invoice	8	03/06/2013	13			4	435.42	0.00	435.42	Credit	HTML	PDF	Email

At the bottom right, there is a button labeled "Click to credit the invoice".

2. Delete the lines you **DON'T** want to credit....

**Credit An Invoice**

**Credit Invoice 8 -** XXXXXXXXXX Credit Note amounts stated in AUD

Item Code	Item Description	Invoiced	Units	Credit Quantity	Price	Discount %	Total Excl Tax	Tax Authority	Tax %	Tax Amount	Total Incl Tax		
<span style="background-color: black; color: black;">XXXXXX</span>	<span style="background-color: black; color: black;">XXXXXXXXXX</span>	1.0000	375ML	<input type="text" value="1"/>	<input type="text" value="107.4800"/>	<input type="text" value="0"/>	107.48	WET GST	<input type="text" value="29"/> <input type="text" value="10"/>	45.03	152.51	<a href="#">Delete</a>	
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>													
<span style="background-color: black; color: black;">XXXXXX</span>	<span style="background-color: black; color: black;">XXXXXXXXXX</span>	3.0000	700ML	<input type="text" value="3"/>	<input type="text" value="33.9500"/>	<input type="text" value="0"/>	101.85	WET GST	<input type="text" value="0"/> <input type="text" value="10"/>	10.19	111.04	<a href="#">Delete</a>	
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>													
FREIGHT	FREIGHT	1	N/A	<input type="text" value="1"/>	<input type="text" value="3.1400"/>	<input type="text" value="0"/>	3.14	WET GST	<input type="text" value="0"/> <input type="text" value="10"/>	0.31	3.45	<a href="#">Delete</a>	
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>													
FINANCE	Finance Charge	1	N/A	<input type="text" value="1"/>	<input type="text" value="5.3400"/>	<input type="text" value="0"/>	5.34	WET GST	<input type="text" value="0"/> <input type="text" value="0"/>	0.00	5.34	<a href="#">Delete</a>	
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>													
Freight cost charged on invoice    0.00    Credit Freight Cost <input type="text" value="0"/>												WET GST <input type="text" value="0"/> <input type="text" value="10"/>	0.00    0.00
Credit Totals <b>217.81</b>												<b>55.53</b>	<b>273.34</b>

ntifier=1370759685&Delete=3

3. Change the prices/quantities to the values you wish to credit....

**Credit An Invoice**

**Credit Invoice 8 - [REDACTED]** Credit Note amounts stated in AUD

Item Code	Item Description	Invoiced	Units	Credit Quantity	Price	Discount %	Total Excl Tax	Tax Authority	Tax %	Tax Amount	Total Incl Tax	
[REDACTED]	[REDACTED]	1.0000	375ML	1	107.4800	0	107.48	WET GST	29/10	45.03	152.51	<a href="#">Delete</a>
[REDACTED]	[REDACTED]	3.0000	700ML	3	33.9500	0	101.85	WET GST	0/10	10.19	112.04	<a href="#">Delete</a>
FREIGHT	FREIGHT	1	N/A	1	3.1400	0	3.14	WET GST	0/10	0.31	3.45	<a href="#">Delete</a>
FINANCE	Finance Charge	1	N/A	1	5.3400	0	5.34	WET GST	0/0	0.00	5.34	<a href="#">Delete</a>
Freight cost charged on invoice		0.00		Credit Freight Cost		0		WET GST		0/10		0.00 0.00
Credit Totals							217.81			55.53	273.34	

ntifier=1370759685&Delete=3

4. Select the type of credit note. A credit note write off is used if you wish to write off the cost of some products which are not returned into stock. This then allows you to select a general ledger account after you click on update - say for breakages or a promo giveaway prize. The general ledger selection will only show once you clicked update selecting the "Goods Written Off" option. If you wish to reverse an overcharge, then this has no impact on the cost of sales in relation to the stock returned - no stock movement is created for a return of goods but the actual charge to sales is reduced by the amount of the credit note. A normal credit note is where the goods are "Returned to Stock".

There are no prices set up for FREIGHT

Item Code	Item Description	Quantity	Unit	Price	Gross	Discount	Total Excl Tax	Tax Authority	Tax Rate	Tax Amount	Total Incl Tax	
FREIGHT	FREIGHT	1	N/A	.5	<input type="checkbox"/>	0 %	0.00	WET GST	0 10	0.00	0.00	Delete

Credit Freight 0.00 WET GST 0  
10 0.00 0.00

Credit Totals 0.00 0.00 0.00

Credit Note Type : **Reverse an Overcharge**

Goods Returned to Location : Goods returned to store  
Goods written off  
Reverse an Overcharge

Sales person:

Credit Note Text :

The advantage of option 1 above is that the allocation to the invoice is done automatically and items come up at the prices/discounts given on the invoice if you have a long invoice to credit then this is a huge time-saver.

## Option 2 - Create Credit Note Manually

1. Create the credit note manually from the main menu.

Phil Daintree

**Main Menu**

- Sales
- Receivables
- Payables
- Purchases
- Inventory
- Manufacturing

**Transactions**

- Select Order to Invoice
- Create A Credit Note**
- Enter Receipts
- Allocate Receipts or Credit Notes

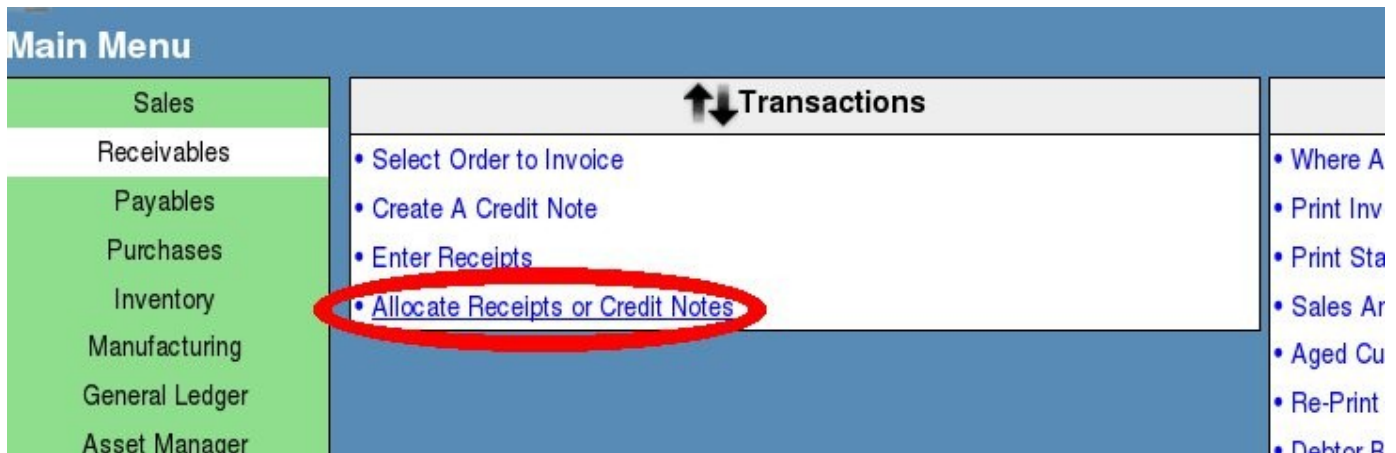


2. Select the customer, then either enter the item code and quantity directly in the quick entry form or search for the item using the search parts facility.
3. Enter the value/quantity - and select the credit note type as per option 1 above.
4. (optional) Click update to recalculate the value (not necessary as recalculating it happens automatically on processing the credit note).

## Allocation of Credits

If you used option 2 to create the credit note then you need to now allocate the credit note to invoices again there are 2 methods

### Option 1:



This shows all receipts or credit notes that are outstanding to be allocated against invoices. Select the credit note, the system then shows all the outstanding invoices against the customer account and you choose which invoices to allocate it to.

### Option 2:

From the customer inquiry you can look at the transactions and click on the allocate link against any of the credits (or receipts) any existing allocation will show and these can be modified at any time.

Customer XXXXXXXXXX (All amounts stated in Australian Dollars)

Terms : 28 Days from Invoice date  
Credit Limit: 8,000 Credit Status: Good History

Total Balance	Current	Now Due	30-60 Days Overdue	Over 60 Days Overdue
434.87	434.87	0.00	0.00	0.00

Show all transactions after: 09/12/2012 Refresh Inquiry

Type	Number	Date	Branch	Reference	Comments	Order	Total	Allocated	Balance	More Info	More Info	More Info	More Info	More Info
Sales Invoice	3	03/06/2013	13			4	439.67	439.67	0.00	Credit	HTML	PDF	Email	View GL Entries
Credit Note	1	03/06/2013	13	Inv-3		4	-439.67	-439.67	0.00	HTML	PDF	Email	Allocation	View GL Entries
Sales Invoice	7	03/06/2013	13			4	439.67	439.67	0.00	Credit	HTML	PDF	Email	View GL Entries
Credit Note	2	03/06/2013	13	Inv-7		4	-439.67	-439.67	0.00	HTML	PDF	Email	Allocation	View GL Entries
Sales Invoice	8	03/06/2013	13			4	435.42	0.55	434.87	Credit	HTML	PDF	Email	View GL Entries
Credit Note	3	09/06/2013	13	Inv-8		4	-0.55	-0.55	0.00	HTML	PDF	Email	Allocation	View GL Entries

In this example - because the credit note was created from the credit invoice link - the allocation has already been done (see the balance of the transaction is 0), but if it weren't you would just select allocation link and choose which invoices to allocate to.

# Accounts Payable

## Overview

A primary function of the system is to track the amounts owed by the business to suppliers in both local and foreign currency. The system shows, invoice-by-invoice, the balance on the account and does not lose the detail of what makes the account up in a balance brought forward - it is an "open item" system. When payments made to suppliers are entered and allocated to invoices, the differences on exchange are calculated and posted to the general ledger - that is only if integration to the general ledger is enabled from the company preferences page under the setup tab.

Note that in some countries the word "Vendor" is used instead of "Supplier" - please make allowances for this.

## Features

- Suppliers aging report that takes into account the actual terms applicable to the supplier, and is supported by detailed inquiry of actual invoices due.
- Full on-screen inquiry on a supplier's account, complete with a general ledger breakdown of how each invoice and debit note (Supplier credit note) was posted. Inquiries on payments made will show how a payment was allocated to invoices and the difference on exchange attributable to each invoice.
- Open item - full analysis of the outstanding balance is maintained
- Retrospective - de-allocation and re-allocation of payments and/or debit notes with re-calculation of differences on exchange and corresponding general ledger journals
- Any number of supplier contacts can be maintained against the supplier
- Fully integrated to stock - whereby purchase order receipts of stock can be selected for entry against a supplier invoice.
- Full standard costing price variances between standard cost of stock received against the invoiced actual cost at invoiced exchange rate is recorded and posted to the general ledger
- Purchase invoices and debit notes can be entered directly to multiple general ledger accounts with charges divided up at invoice entry time
- Purchase invoices and debit notes can be entered as shipment costs - to accumulate against the cost of a shipment for costing of the stock items on the shipment
- Nominal purchase order items received can be selected for invoicing in the same way as stock items. Purchase price variance from the order cost are taken to the general ledger account that the order item was coded to
- Supplier payment run will create system entries to record payments for all suppliers with due amounts. Facilities allow for holding disputed invoices from being included in the payment run, but still recording costs in the general ledger.



## Entering Supplier (Vendors)

From the menu Payables tab, under Maintenance, click on "Add A New Supplier". The new details entered are only committed to the database as a new supplier once the user clicks on the button to "Insert New Supplier". If the user moves to another screen without clicking this button any entries are lost.

### Supplier Code

This field is used as a unique identifier for the supplier (maximum of 10 characters of text - letters or numbers). This allows faster searches for suppliers - rather than the full text of the supplier name - and keeps the size of the database at a minimum since it is referenced on all supplier transactions, purchase orders, shipments and supplier contacts. It is also used in the narrative of purchase order receipts. The system will force this code to be in capitals and will not allow the use of spaces, the ampersand (&), \* or hyphen - or inverted commas (").

Note: A supplier code can be altered retrospectively but because of the large scale of the changes required to the system to update stock movement transactions, purchase orders, supplier contacts and supplier transactions it could present a significant drain on resources. The option to change a supplier code is therefore in the utility menu Z\_index.php - which must be entered as a manual URL and is only accessible by the system administrator. Such changes should only be undertaken when there are no other users on the system.

### Supplier Name

The name of the supplier is used extensively in lookups. Proper capitalization and use of the full name of the supplier is recommended. The maximum length of the name is 40 characters.

## **Address Line 1, 2, 3 and 4**

This is the address of where invoices and statements are to be billed from. These fields will allow a maximum of 40 characters and are optional.

## **Supplier Since**

This defaults to the current date - at the location of the web-server. This is purely a memo field for use in externally generated reports. Any valid date of the format defined in config.php for DefaultDateFormat can be entered.

## **Bank Particulars, Bank Reference**

These fields are used in the export of a payments file to a bank software payments system - these are the fields that a supplier will see as references on direct credits into their bank accounts. These fields accept up to 12 characters.

## **Bank Account Number**

This is used in the export of a payments file to a bank software payments system. The bank account number is the account number where the funds will be transferred to when a payment run is processed. Bank Account Number accepts up to 16 characters.

## **Payment Terms**

The payment terms are the terms under which trade with the supplier takes place. The appropriate payment terms can be selected from the drop down list. If necessary, new payment terms can be defined separately from Setup tab of the main menu under the receivables/payables section.

There are no restrictions on altering payment terms for a supplier at any time. The system records the due date for an invoice at the time of entry - the due date is defaulted based on the terms defined for the supplier at the time of entry. The due date can be overridden manually should a special arrangement on any particular invoice be required.

## **Supplier's Currency**

This is a compulsory field that identifies the currency in which the supplier invoices. All invoices and debit notes entered for the supplier will use this currency and the rate will be defaulted in transaction entry from the rates set up in the currency table - accessible from the Setup tab under General. The currency rates should be maintained at least monthly.

Note: that the rate is recorded in the transaction not the currency. If a supplier changes the currency in which they are invoiced it is possible to allocate a new currency receipt against invoices (invoiced in the old currency) in which case the system will calculate large differences on exchange. Note: There is no error check on this and care should be taken, should this occur, to ensure invoices are matched off in

the currency in which they were originally created - the cross rate between the new and old currency will provide an equivalent amount of the old currency for entry and allocation.

## **Remittance Advice**

If the supplier is flagged as requiring a remittance advice the payment run will create a report showing the make up of the invoices and debit notes being paid by the payment.

This feature is not currently implemented.

## **Tax Group**

The tax group determines the tax authorities to which the supplier reports and must collect taxes for. It is this field in conjunction with the inventory location record that determines the rates of tax used in the automatic calculation of tax on suppliers invoices and credits. These rates can be over-ridden at invoice entry time.

## **Selecting Suppliers (Vendors)**

With most operations to operate on a specific supplier, the supplier must first be selected. This applies to any supplier inquiry as well as entry of purchase orders or purchase invoices or debit notes. It is the convention of webERP to select the customer, item or supplier required before performing any function in these areas. For this reason the shortcut menu accross the top of every screen has links to each of these selection screens.

To select a supplier then - from any screen - click on Select Supplier, or press the ALT key and the number 4 key - in Internet Explorer one must press the Enter key also.

In common with the other selection screens the focus automatically goes to the supplier code where any character or series of characters of the supplier code can be entered. Having entered as much of the supplier code as is known click the "Search Now" button - this will then retrieve all the suppliers with this extract of text that occurs anywhere in the supplier code field.

If only one supplier is returned it is automatically selected for operating on. However if several suppliers exist with the same extract within their code they will be listed with their full name, currency and address. A button showing the code for each of the suppliers allows selection of the supplier required.

Instead of using the supplier code - if some of the supplier name is known this can be entered in the first field - labelled "Text in the NAME:" - the same procedure is followed as for entry of an extract of the supplier code.

## **Supplier Contacts**

Any number of supplier contacts can be defined. This facility allows for ready access to phone numbers and email addresses of all company suppliers. Purchase orders created can be emailed directly to any of the defined contacts email addresses.

As with most operations to operate on a specific supplier, the supplier must first be selected. Once a supplier is selected the suppliers menu shows all the options available for operating on the supplier. Under maintenance click Modify/Delete Supplier Contact Details. The screen shows all the existing contacts already set up - any of these can be deleted by clicking the delete link to the right of their details. Existing details can be modified by clicking the edit link. The fields will be populated by the selected contacts details and available for modification. This screen allows entry of:

- Contact Name - up to 30 characters
- Position - up to 30 characters
- Telephone Number - up to 30 characters
- Facsimile Number - up to 30 characters
- Mobile Number - up to 30 characters
- Email Address - up to 55 characters

Supplier contacts entry provides a convenient place to store the key personnel at a supplier so others in the business know the functions of the individuals at the supplier. The email addresses are also used when sending supplier purchase orders - the actual contact to use is selectable from a list of supplier contacts.

It is not actually necessary to enter any details into the supplier contacts screen but advisable.

## Entering Supplier Invoices

As with all transactions in webERP the entity to be transacted with must first be selected i.e. a customer, item or supplier. Entering accounts payable transactions then requires the selection of a supplier first. Once a supplier is selected, the menu of options shows for the supplier among them "Enter an Invoice". The process below applies equally to entry of supplier credit notes as it does to entry of purchase invoices. In every case, entry of invoices and supplier credit notes (debit notes) requires entry of:

- Invoice Date
- Invoice Reference
- Invoice exchange rate

### Invoice Date

This is the date from which webERP determines the accounting period to create the general ledger postings for the transaction - should AP general ledger interface be activated. It is also the date from which, in conjunction with the supplier's payment terms the due date of the invoice is determined. This is used by the payment run to get all amounts due to a supplier for payment collated and listed. The system will use the information in the payment run to prepare a listing for producing a file of direct credits or printing cheques.

## Invoice Reference

This is the supplier's invoice number or alpha reference uniquely identifying the invoice for the supplier. webERP checks that the same supplier invoice reference is not entered previously and reports an error if it has - this is to prevent the duplicate entry of purchase invoices and potentially paying the supplier twice.

## Invoice Exchange rate

This rate is used to convert the currency amounts entered on the invoice to the local currency and for the purposes of posting the invoice to the general ledger (in local currency) should the GL interface be active. This rate is recorded with the invoice and forms the basis of the calculation of differences on exchange against the rates entered against payments to the supplier. Note that differences on exchange are only calculated when the payments are allocated to the invoices. General ledger journals are created for differences on exchange also (if the AP->GL interface is active).

## Comments

Comments are entirely optional. They appear in the supplier inquiry screen against the invoice.

## Different Types Of Charges On A Purchase Invoice

Depending on the nature of the supplier's charge and the items purchased there are several choices as to how the amount of the invoice is entered.

- Charges for stock items on purchase order items received - Entered against purchase orders
- Charges for other expenses coded to different GL accounts
- Charges for Shipments where the cost is to be split between all items on the shipment
- Charges for contracts - where the amounts are charged out against a contract
- Charges for the purchase of fixed assets

Supplier invoices (and credit notes) can be entered for any or all of the choices together.

## Creditors GL Interface

If the GL interface to creditors is not set to yes in the company preferences screen then the total amount of the invoice can be entered directly. There is a check though to ensure that the total of the charges entered against purchase orders, shipments, contracts and gl is less than the total invoice amount entered directly. If the amount entered is less than the sum of the charges then a warning shows. However, if the GL interface is active the total of the charges against purchase orders, contracts, fixed assets, gl and shipments is accumulated into the main invoice entry screen amount of the invoice.

## Entry of Charges for Stock/Inventory Items

All stock items must be received into stock against a purchase order. In the process a GRN (goods received note) entry created. Goods received will be evidenced in webERP by the stock movements



inquiry showing the receipt of stock and also by the creation of a GRN against the supplier. If the general ledger interface is active a liability is posted to the GRN suspense account (defined in the company record) and the stock value is increased by the standard cost of the item at the time it is entered as received. The purchase order inquiry will also show the quantity received of the item (against the order). Entering a purchase invoice for stock items requires that the GRN records created for each item being charged for be matched off against the invoice. A special screen is available to search the GRNs outstanding for the supplier. This screen can be accessed directly from the invoice entry screen by clicking the button to enter against stock items.

The list of all the outstanding GRNs is shown together with any quantity already invoiced (on other invoices) and the price at which the purchase order was entered. The actual (currency) price that the supplier charged should be entered and the number of the items being invoiced on this invoice should be entered against the GRN too. This allows the actual charge for the item to be recorded against the GRN. Ultimately when the invoice is posted the actual cost (as converted at the invoice exchange rate) is recorded against the stock movement inquiry. When the invoice is entered, any for all GRNs matched to invoice charges, the purchase price variance calculated and posted to the general ledger (if the GL interface is active).

## **Entry of Invoices for Shipment Charges**

Shipment charges for freight, duty and cartage that the business wishes to cost into the purchase price of stock items must be entered against shipments. Shipments accumulate all these costs together before apportioning them to the items in the shipment and calculating the appropriate purchase price variance. The button "Enter Against Shipments" shows a new screen that allows existing shipments to be selected and amounts (in currency of the supplier) entered against each shipment. If the shipment reference is already known it can be entered directly.

If there are some charges that relate to stock items and some charges that relate to shipments then the total of both is accumulated into the invoice total.

## **Entry of General Ledger Charges**

Purchase invoice entry looks a little different depending on whether the GL link to Account Payable is enabled or not (See Setup tab -> Company Preferences). If the GL interface is NOT enabled then there is simply a field to enter the total amount of the invoice into. If the GL interface is enabled then a third button shows "Enter General Ledger Analysis" - the total of all the general ledger analysis, the shipment costs and the entries against GRNs is accumulated into the total invoice charge and there is no opportunity to enter an invoice total amount anywhere - it is derived as the total of all the defined charges on the invoice.

Clicking on the button to "Enter General Ledger Analysis" opens a further screen that allows a general ledger code to be specified and an amount to be posted to this code and any narrative that is to appear in the GL against this charge. The general ledger code to charge can be selected from either the drop down box or entered directly. It is possible to enter negative amounts that would credit the general

ledger account specified where there may be some rebate perhaps for returned pallets or part-exchange amount on the invoice. There is no limit to the number of general ledger accounts that the charge can be analysed against.

## **Purchase Invoice Tax**

The tax due to a supplier on the entry of a supplier's invoice is (by default) calculated automatically according to the following rules:

- The tax group of the supplier is determined from the supplier record. This tells the system the tax authority (ies) to which the supplier must collect tax (es) for.
- The default location of the user entering the invoice tells the system the sort of taxes that are relevant for the location where the invoice is being keyed.
- The system holds a table that holds the rates of tax due where the company is operating from the location of the user and the tax authorities relevant to the supplier
- The rates determined from the above rules are applied against the invoice total. The order in which the taxes are calculated and calculations of tax on top of previous taxes are also determined based on the supplier's tax group.

If the automatic calculations above do not work out the tax amounts can be entered manually for each of the tax authorities relevant to the supplier. To enter tax manually, there is a selection box with a choice to calculate tax manually or automatically, select manual, then click on the "Change Tax Calculation Method" button - now the rates from the automatic calculation disappear and input box(es) for the percentage(s) are available for each tax authority.

## **Committing A Purchase Invoice**

Clicking on "Enter Invoice" immediately processes the invoice against the supplier's account, creates the necessary general ledger transactions, updates the GRNs and the purchase orders for quantities invoiced and creates shipment charges records as required. Zero charge purchase invoices cannot be entered - the system checks to ensure there are at least some charges on the invoice. It also checks to ensure a reference and date is entered. As with all transaction entry in webERP there is no subsequent processing required for all the information to be fully up to date it is all done at the time of clicking this button.

## **General Ledger Postings On Purchase Invoices**

This section might be a little complex. However, understanding what is happening in the general ledger and implications of purchase invoice entries in the general ledger is necessary in order to understand how to reconcile the various accounts.

Each of the three types of entries in a purchase invoice are posted to the general ledger in different ways:

- General Ledger Charges - starting with the easiest - the net amounts of these entries are posted to the debit of the general ledger account selected
- Shipment Charges - these are posted to the debit of the goods received clearing account as defined in the company record. The rationale for this is that the shipment charges relate to the cost of the stock coming in on shipments and they will be apportioned between the various items on the shipment. As such they together with the invoices cost of the stock make up the total cost of the item for comparison to the standard or weighted average cost of the item. When shipments are closed the system calculates the total purchase price variances using shipment charges posted here - together with the invoices entered for the goods.
- Entry of invoices against stock/inventory received. webERP insists on matching purchase invoices against goods received notes (GRNs) created at the time the stock is received against purchase orders. The reason is to ensure suppliers do not over-deliver and that invoices can only be entered against goods received and the business does not pay for items not received! The general ledger treatment is slightly different depending on whether the goods are on a shipment or not.
  - If NO shipment costing is involved then the purchase price at the currency/rate entered in the invoice is compared against the standard or average cost of the item at the time it was received. When the goods were received - the system enters a debit to stock at the standard/average cost and a credit to the goods received clearing account defined in the company record. So the entry of the invoice needs to clear this entry - by crediting the goods received clearing account at the standard/average cost at the time of receiving the item. The difference between this and the cost of the item as invoiced and converted at the days (or covered) exchange rate as entered on the invoice is taken to either the purchase price variance account - as defined in the stock category record under standard costing OR in the event that weighted average standard costing is used the variance is written back to the stock account - again from the stock category record. If weighted average costing is used this also triggers a stock cost update based on this variance divided by the total quantity still in stock. If there is less than the quantity being invoiced in stock still -perhaps some were sold before the purchase invoice was entered - then the variance relating to the quantity left is taken to the stock account and the balance is written off to the purchase price variance account - hey I told you it was complex!
  - With Shipment costing - the total amount of the charge is posted to the debit of the goods received clearing account - variances are taken up only once all shipment charges are in and the user explicitly "closes" the shipment

## Inventory Costing and GL Postings

The Outstanding Goods Received report shows the calculation of the cost of goods received but not yet invoiced. This calculation is done using the standard cost as it is this figure that is used for the posting to the GL at the time the goods are received. Note that the "standard cost" field is actually the weighted average cost if you are using the weighted average cost method. The standard cost should be reflective

of the purchase cost in FX as converted to local currency plus all landing costs. The FX cost as converted to local currency will of course exclude any landing costs and obviously it will be different each time the currency rates of exchange are updated.

Variances are only taken to the GL based on the comparison of the standard cost (at the time the goods were received) compared to what the purchase invoice at the rate used during the purchase invoice entry. If weighted average costing is used then actually the variance is taken to the value of inventory and the unit weighted average cost is updated to reflect the new value.

Exchange differences subsequent i.e. when the purchase invoice is paid is taken to exchange differences and not against the cost of the items that were purchased.

## Supplier Payments

Entering accounts payable transactions requires the selection of a supplier first. Once a supplier is selected, the menu of options shows for the supplier among them "Enter A Payment To The Supplier". The currency of the payment is deemed to be in the currency of the supplier - from the supplier record. This currency will show on the payment entry screen.

In every case, entry of a supplier payment requires entry of:

- Bank Account from which the payment is made
- Date of the payment
- Any Reference
- Exchange rate at which the currency of the supplier is purchased
- The amount of the payment - in the supplier's currency
- The amount of the discount taken by the supplier (in the supplier's currency)

## Bank Account Selection

The choice of bank accounts from which the payment is being made is shown in a select box. webERP does not support multi-currency bank accounts so the exchange rate will always be the rate to purchase the currency of the supplier against the business's functional currency. The bank account selected will have a record created for the payment and if the general ledger link is enabled the postings will be made from the general ledger code stored against this bank account. Bank accounts are defined from the Setup tab -> Bank Accounts - under the General column of options.

## Payment Date

This is the date from which webERP determines the accounting period to create the general ledger postings for the transaction - should AP general ledger interface be activated. This is the date that will show on supplier transaction inquiries and the bank account transaction listings.

## Reference

Any text up to 50 characters long

## Exchange rate

This rate is used to purchase the currency amount being paid to the supplier. This rate is recorded with the payment and forms the basis of the calculation of differences on exchange against the rates entered against invoices to the supplier. Note that differences on exchange are only calculated when payments are allocated to invoices.

## Supplier Narrative

The supplier narrative in general ledger transactions. If blank, it uses the bank narrative. This information is to be displayed in a general ledger transactions inquiry. The maximum number of characters allowed in the this element is 200.

## Supplier Reference

The supplier reference in supplier transactions. If blank, it uses the payment type. This information is to be displayed in a supplier transactions inquiry. The maximum number of characters allowed in the this element is 20.

## Transaction Text

The transaction text in supplier transactions. If blank, it uses the narrative. This information is to be displayed in a supplier transactions inquiry. The maximum number of characters allowed in the this element is 200.

## Amount of Payment

The amount in foreign currency being paid to the supplier. The general ledger entries made (if the link is enabled) debit the suppliers control account - specified in the company preferences record (Setup tab -> Company Preferences) and credit the bank account selected above.

## Amount of Discount

The amount in foreign currency being allowed to the supplier as payment discount. General ledger entries are created (if the link is enabled) to the account specified for "Prompt Payment Discount" in the Company Preferences record. If discount is to be posted some other way then it is better to create a dummy item for the discount given and enter credit notes for the dummy item with posting as defined in the Sales GL Interface setup.

## Aged Creditors Balance Listing

From the main menu select Payables, Reports, "Aged Supplier Report".

This report calculates the balances of the suppliers accounts according to the parameters specified in the system parameters ("First Overdue Deadline in (days)" and "Second Overdue Deadline in (days)"). The report is generated in the currency of the supplier. The currency of the report must first be selected and the range of suppliers accounts to print.

The report can be printed at two levels:

- The full detail of the all outstanding amounts on the account, transaction by transaction analysed into current, Due, \$PastDueDays1 and PastDueDays2. The detailed report also shows the terms applicable to each supplier.
- A summary of the account balances split in the same aged groupings.

This report recalculates the balance on the supplier's account from the outstanding transactions and analyses each outstanding transaction based on the date of invoice.

The Aged Supplier Balances can also be restricted to show just the accounts where there is some balance overdue. The same detail and summary reports are available. The resultant reports create pdf files that can be either saved or printed.

# Sales People

## Salesperson Records

Salesperson details can be entered or amended from the setup tab of the main menu.

### Salespeople Code

This field can accept any text or numbers up to a maximum of 3 characters - normally the initials of the salesperson or some reference to the area NW1,SW2 would suffice. These salespeople codes are stored against each branch to identify who services them. actual

Note: The salesperson code is not held against individual transactions. This means that if there is any change to a salesperson for an area and you wish to calculate commissions up to the change and after for the new salespeople, the dates of transactions must be used. However, sales analysis records created at the time of invoicing and crediting are created including a copy of the salesperson code applicable at the time of invoicing. Sales analysis reports will thus show who made sales based on the historical representative settings.

### Salesperson Name, Telephone and Fax Numbers

The salesperson name is what appears in the look-ups on the customers' branch maintenance page. It is also used for inquiries and reports. By default it shows on invoices and statements, to remind customers where they can contact their local agent for sales inquiries.

The name can be any character to a maximum of 30 characters. The phone number and fax number fields can be a maximum of 20 characters long.

### Salesperson Commission Rates and Breakpoint

The system allows for input of these items as the basis of commission calculations. Most businesses have different ways of calculating commissions. For this reason it is left to the business to write a report which will use these fields (and/or additional ones) to calculate commission according to traditional company policy.

## Salespeople Edit

Click this link is to edit the above information.

You can change the Salesperson Name, Telephone No, Facsimile No, Commission Rate 1, Breakpoint, Commission Rate 2, and Current state (Yes/No).

You can not change the Salesperson code.

## Salespeople Delete

Click this link is to delete the salesperson of that line.

This script do some verification before delete the salesperson:

1. **custbranch.salesman.** Looks for a customer's branch assigned to this saleperson.
2. **salesanalysis.salesperson.** Looks for a sales analysis records that refer to this sales person.
3. **www\_users.salesman.** Looks for a user that refer to this sales person.



# Sales Commission

## Overview

A sales commission system which expands the current minimal commission functionality. The system allows for multiple breakpoints with varying rates, to allow for multiple commission records by stock category, area, length of time being a customer, and currency. It automatically creates sales commission accruals, provide reports of sales commissions outstanding, and statements for each sales person, finally creating an invoice to the sales person. The system is easily extensible to allow different methods of commission calculation to be added.

# Sales Types and Price Lists

Sales types are the broad categories which sales fall under, they should not be confused with stock categories. They are arbitrary headings for the different pricing arrangements applicable to each type of customer. For example the fashion house might have sales types for:

- Indented sales - ordered in advance.
- Stock sales - sold from stock.
- Made to Measure - sales made up especially for a customer.

Inventory categories by contrast refer to the type of garment sold. Each customer is defined as belonging to a specific sales type. A sales type could also be used for groupings of customers. Price lists are held against sales types so all customers defined as belonging to the sales type will be on the same pricing.

Pricing can be set up for each stock item by sales type (and currency), e.g. stock sales would attract a premium for the cost of the increased working capital required or perhaps a discount reflecting the scale of purchasing allowed on volume lines. Sales types for retail, wholesale, trade, special may also be appropriate in other types of business.

New sales types/price lists can be added and existing ones amended from setup tab, "Sales Type Maintenance"

## Sales Type Code

This is a 2 character code which is stored against the customer to define the sales type applicable to the customer. It must be unique across all sales types. When entering orders the customer sales type is the key, together with the customer's currency that determines the price list to use.

## Sales Type Description

20 characters of text are allowed to describe the sales type. This field is used to describe the sales type / price list applicable to the customer.

## Print a price list by inventory category

This script helps you by printing prices of inventory items by inventory categories.

Report parameters:

- **Inventory categories.** Just click on an option over the scroll menu. To select multiple options, hold down the control [Ctrl] button to select multiple options (for Mac: hold down the command button to select multiple options). Or, if you want to select a block of options, click the first option and then press the shift button and click over the last option of the block. The

inventory categories are set up by system administrators in [Main Menu](#) > [Setup](#) > Inventory Setup > [Inventory Categories Maintenance](#) (See: [Inventory](#), [Inventory Categories](#)).

- **Sales type/Price list.** A pull down menu with the types of price lists. The sales types are set up by system administrators in [Main Menu](#) > [Setup](#) > Receivables/Payables Setup > [Sales Types](#) (See: [Sales types/price lists](#), [Sales Types/Price Lists](#)).
- **Currency.** A pull down menu with the currencies used by the company. The currencies are set up by system administrators in [Main Menu](#) > [Setup](#) > General Setup Options > [Currencies Maintenance](#) (See: [Currencies](#), [Currencies](#)).
- **Show gross profit.** A pull down menu to select between price by item or price and gross profit by item. The gross profit value is calculated as **gross profit over price** - it is NOT a gross profit over cost-, that is:  $(\text{prices.price} - \text{stockmaster.materialcost} - \text{stockmaster.labourcost} - \text{stockmaster.overheadcost}) / \text{prices.price} * 100$ .
- **Price listing type.** A pull down menu to select between "*Default Sales Type Prices*" (item's price only), "*Customer Special Prices Only*" or "*Full Description*" (item's price and long-description).
- **Effective date.** Date for which prices must be defined. The start and end dates for a item price are set up in each *Item Prices*.
- **Show obsolete.** Click this checkbox to show the obsolete items in the report. Default: off.
- **Sort items by.** Option to select the order of the items in the report. You can select between "*currency, item stock category, and item code*" and "*currency, item stock category, and item description*". Default: currency, category and code.

After clicking the "Print PDF" button, the report is generated with prices of selected items sorted by:

- Currency code (ISO 4217 Codes for the representation of currencies and funds, was set up by developers),
- Inventory category code, and
- Item code (set up in each *Item Maintenance*) or item description (set up in each *Item Maintenance*).

The paper size of the report is taken from user's default settings (set up in *User Settings*). If you want to change this set up, after saving, logout and login for the changes to take place.

For "*Customer Special Prices Only*" (*Price Listing Type* option), the portrait orientation has an insufficient width. You should use the landscape orientation.

# Payment Terms

For each customer the payment terms which the business deals with them under must be specified. This provides the information required to monitor whether the account is due or not - ie for Overdue inquiries and reports. Also, the invoices, credit notes and statements, contain reference to these terms so he/she is continually reminded of these terms with every transaction as a matter of course.

Payment terms can take one of two forms:

- Due after a specified number of days after invoice.
- Due on a day in the month following invoice

The system allows the definition of a payment terms record either way.

Note: The overdue report and inquiries use the estimated number of days to deliver in the branch record to determine when the customer received the goods, the payment terms are added to the day when delivery was effected.

## Payment Terms Code

This is the code which is used by the system internally to reference the payment terms applicable to a customer. Alterations to this code will cascade through all the customers set up with the code being amended. If there are a lot of customers set up with this code it could take a moment to update all customers.

It is a 2 character text field.

## Payment Terms Description

This field (40 characters of text) shows on customers statements, invoices and lookups in the inquiries and selection forms. It should describe as succinctly as possible the payment terms.

## Days Before Due / Day In Following Month When Due

Only one of these fields needs to be entered depending on the selection in the bullet options. If the terms are after a number of days, then the field expects the number of days after which the invoice becomes due. Alternatively, the day in the following month when the invoice will fall due (greater than or equal to 0 and less than or equal to 30). These figures are used to calculate whether or not an invoice is overdue for the overdue reports and inquiries.

These fields expect a number - other characters are not accepted.

# Credit status

Each customer can be given a credit status that describes the risk as assessed by the credit controller, attached to invoices to the customer. This will never appear on any reports to customers. The customer selection screen allows customers to be restricted by their credit status so it is easy to perform inquiries on all the customers with a similar credit status. In addition the system will not allow invoices to customers whose credit status has a check in the field to prohibit invoicing. This is another credit control tool to the credit limit.

Credit Status Ratings can be amended and created from the main menu set up tab from the link labelled Credit Status Maintenance.

## Status Code

This is any number from 1 to 100. A rating code is required to be held against every customer to identify the credit status of each. The code cannot be changed retrospectively.

## Status Description

This field is used in look ups both in the customers amendment/entry and also in the customer selection screen. This is a text field up to 30 characters long.

## Disallow Invoices

For all credit ratings set up, this field indicates whether or not the rating is serious enough to prohibit future invoicing to customers set up with this credit rating.

# Prices and Discounts

## Overview

Prices are held by Sales Type and Currency. When setting up a customer account the sales type applicable to the customer is defined as is the currency applicable to invoices to the customer. There is no limit to the number of sales types that can be defined and therefore no limit to the number of different price lists that can be maintained. Further flexibility is available in that where necessary prices specific to a customer can also be defined, normally pricing will be specific to a customer but the system also has the capability of making prices specific to a particular branch of a customer. If a price is flagged as specific to a branch it will not be used for all other sales of the item to the customer, the default price of the item will be used. Further flexibility in discounting is available through the discount matrix (see below). If an item has an additional discount this can be entered at the time of order. The user also has the ability to change the price manually at the time of order. Sales analysis records allow reporting on sales types, so the analysis will report the volume of business done under each set of special pricing arrangements.

## Logic Outline

The sequence of the search for the price follows the logic below. If a price is returned from any of the checks then subsequent checks are not performed.

- Check if there is a current (i.e. within the current date range using the effectivity dates of the price) special price for the customer and branch for the item in the currency of the customer
- Check if there is a current special price for the customer (ignoring the customer branch selling to) for the item in the currency of the customer
- Check if there is a current price set up against the customer's sales type (price list) - for the item in the currency of the customer
- Check if there is a current price set up against the default sales type (price list) for the item in the currency of the customer
- If no success getting a price from any of the above then report no prices set up for the item

## Prices Effectivity Dates

In many businesses a change in price has to come into effect at some later date and be published to customers in advance of the price being effective. This functionality was introduced in 2010. The date that a price is to be effective from must be specified at the time of entry. If the price is expected to continue indefinitely then it is not necessary to specify an end date. Any subsequent prices entered without an end date will supersede previous entries with starting dates prior.

If a price is entered with an end date then this takes precedence over prices with no end date - where the date of entry of an order falls within the date range for the price. It is the current server date that is used to compare against the date range in determining the price to use.

## Maintaining Prices

To maintain pricing, first an item must be selected. This can be done from the link "Select an Item " on any page or from the inventory tab of the menu the link "Modify Or Delete An Inventory Item Or Item Pricing" allows for a part to be selected. Once selected the options available to work with the item are shown, there is a link to "Maintain Pricing". The pricing page displays, the sales type and the currency of all prices defined for the item. The existing prices can be deleted or modified from this screen and new prices can be entered. It is possible to enter many prices for a given sales type and currency with different effective from and to dates. Normally the date that the price should be effective to can be left blank. Subsequent entries of prices with no end date can be entered and these will be used after the start date of these prices. When entering prices for a fixed date range - this price will take precedence over the default price with no end date. The system automatically adjusts the end date of prices where a new price with a fixed date range is entered with an overlapping period to a previously entered price. The end date of the previous price is adjusted to be the day prior to the start date of the new price. This ensures that there can only be one price returned in a given date range.

To enter prices for a specific customer and branch, the customer must first be selected. (See selecting customers). Going to the select an item page after having selected an item now shows an additional link to maintain the special pricing "Special Prices for customer - customer code". Clicking this link shows, the normal price for the sales type and currency of the customer selected and any special prices defined for this item/customer combination. If no special pricing is defined then the page shows only the normal price with a note that no special pricing is defined for this item and allows entry of the new special price. If a special price exists then it can be deleted or changed. A customer with many branches can have a special price for each branch or just a single branch having a special price beyond the special customer price. A special price applicable to only one branch will not apply to any of the other branches. Also, a special price set up for the customer account but with a blank branch field will apply to all branches unless there is a specific price set up for the branch.

Prices can be amended at any time. However, changes to a price do not automatically cascade into sales orders for the item that are yet to be delivered, these orders would have to be changed manually as necessary.

## Price Maintenance Utilities

There is a utility script that has some options for making bulk changes to pricing avoiding extensive re-keying. This script is accessed from the main menu under "Inventory->Add Or Update Prices Based On Cost". Great care should be taken with this facilities since bulk updates and inserts of new prices are performed as a result. System administrator permission is required to access this page accordingly. The

script named PricesBasedOnMarkUp.php is quite flexible and can update/insert new default prices for a particular price list/currency based on any of:

- another price list plus a markup
- the supplier purchasing cost data plus a markup
- the system cost plus a markup

If using another price list the price used as the base for the new price will be the latest default price i.e. no customer specific prices will be used - nor updated - and the price with the most recent start date will be chosen as the basis for the calculation of the new price.

The script allows you to specify when the new prices will be effective from and to - if the field for effective to is left blank then the new price is assumed to be effective until a later price is entered. If you have run this script once and wish to change the parameters to use say a different markup - the prices previously entered by the script can be updated rather than creating a lot of new prices, provided that the same start and end dates are specified. You can only specify price effective from dates for days after the current day.

## Printing Price Lists

Flexible options exist for printing price lists from the main menu under the sales tab under inquiries and reports ->Print Price Lists. Price lists for a particular price list and specific category or range of categories can be printed to pdf. It is also possible to print the price list with the current gross profitability of those prices displayed for internal use. Prices specific to particular customers can also be printed having selected the customer first.

## Reviewing Prices Based on Cost

It is possible to review prices based on the proportion of cost that they represent - e.g. you may wish to review costs that are less than 100% of cost (or 1 times the cost) - i.e. prices that would result in a gross loss - a wise idea indeed! The prices meeting the criteria are displayed and available to be modified. You can specify any number of times the cost for the criteria - to look at the prices where the margin is less than 50% on cost the multiple would be 1.5 times cost. You can also look at prices where the price is more than a multiple of the cost. The prices returned can then be updated all in place without having to select them individually this is much more convenient than identifying the errant prices manually and then going in and selecting them individually in the normal price maintenance screen.

From the main menu Inventory -> View Or Update Prices Based On Costs. You can select the Inventory category you wish to review or leave the default - to view all categories. Initially it is assumed you wish to review prices less than cost - but you can elect to look at prices less than 2 x cost or greater than a multiple of the cost. You can select the price list to review and the currency of prices to review. On clicking submit the system identifies all the prices that meet the criteria specified and allows these prices to be edited directly.



## Discount Matrix

The discount matrix allows discounts to be set for quantity breaks across a range of products. Eg a business selling pens may have red, blue, black etc but offer a discount for orders greater than 100 irrespective of colour - even though these are separate items.

Items to have such discounting must be specified in the stock item details screen as belonging to the same Discount Category - this is a 2 character field in the stock master table. In the example above the item codes for blue, red and black pens should all be set to the same 2 character code. Be warned that if an item is set up as belonging to a discount category then any discounts calculated by the matrix will over-ride manually entered discounts.

Customers to whom the discount structure should apply are specified by the sales type (the price list) field. The entry in the Discount Matrix table should refer to the sales type and the 2 character DiscountCategory of parts, the quantity above which the discount is to apply and the rate of discount applicable. Several entries in the discount matrix can be made at increasing discounts and volumes, for the same Discount Category and Sales Type.

When an order is entered the system automatically reads the Discount Category of the parts and accumulates the quantities of like Discount Category parts to see if the order lines qualify for the discount. If special discount has been entered exceeding the discount matrix calculated rate - the higher manual entry over-rides the calculation. However, discount manually entered which is below the discount matrix calculation will be uplifted to the discount matrix rate.

To set up the discount matrix there are two elements:

1. The discount categories - need to be defined. Individual stock items can be modified in the stock details form or a special facility is available under the set up tab of the main menu - under the inventory set up section. This screen allows stock codes to be entered and verified before changing to the selected discount category.
2. The discount matrix itself. This is modified from a link on the set up tab under accounts receivable set up. For each sales type/price list the quantity break and discount applicable must be entered.

## Sell Through Support

This is support from a supplier on selling through some of their products. The supplier (a manufacturer or wholesaler) agrees to provide a discount to the business for each unit that the business sells - either as a percentage or as an amount for each sale. The support typically lasts for only a set period so that the business can advertise to it's customers the availability of the discount and the business margin will be unaffected - as the discount is effectively passed on to the end customer. The discount may also be available only to some customers the supplier specifies.

To administer this is tricky as it requires sales analysis reports to be written to extract the information and for customer services people to apply the discount only to those customers it applies to and only

over the period for which it applies to. It could be set up with special pricing. However, this could make for very messy and busy prices table.

webERP allows that sell through support be specified up front by entry of:

- 1. The supplier providing the support
- 2. The item for which the support applies to and
- 3. The customers for which the support applies and
- 4. The date range over which the support should apply.

Having specified the sell through support webERP then automatically discounts the sales of the items for the customer/date range/item and a claim report can be generated for the sales of the item arriving at a total claim for the period of the report - listing all invoices/credits that the item was sold on.

The webERP form allows a supplier to be selected, once a supplier is selected the current sell through support offered by this supplier is listed. Any one of the items that the supplier supplies to the business (from the purchasing data table) can then be selected, also the customer for which the support is provided is also available for selection - alternatively if the customer field is left blank then all customers is assumed. A date range over which the sell through support is to be provided can also be entered. It is possible to copy existing entries at a single click to modify a date range or the customer or the amount/percent of the support from the list of support currently offered by the supplier.

For the sell through support to be calculated on sales the supplier purchasing data must be set up and the supplier must be the preferred one for the item being sold, for the support discount to be applied.

# Accounts Receivable Transactions

## Invoicing An Order

### Selecting an Order To Invoice

All invoices require a sales order to be entered first.

From the main menu select the receivables tab. Choose 'Select Order to Invoice' from the transactions menu. This page shows all the orders outstanding. If the order number is known it can be entered on this screen to select the order to invoice. Hit search orders and the order should show below, together with links to modify the order, print the packing slip and to invoice. Click the link to invoice the order.

### Producing An Invoice From A Selected Order

Having selected an order to invoice the order line comes up for confirming the quantities of the order that were dispatched. If the quantity dispatched differs from the order the difference is recorded in the table OrderDeliveryDifferencesLog - and a report is available to show the orders that were not able to be delivered with the first dispatch. There is also opportunity to enter the freight charge and if necessary enter the tax charge - which will normally be calculated automatically based on the tax authority of the customer branch being invoiced. The date of the invoice is defaulted based on the time of day and the settings in config.php. If the hour (in 24 hour format) is after the setting of \$DispatchCutOffTime in config.php, then the following day is deemed to be the invoice date, alternatively the invoice date will default to today. Where not all lines on the order are being invoiced there are two choices with how to deal with the balance.

- Put the balance on back order
- Cancel the line on the order

Finally there is also a field for entry of any text on the invoice. Hitting the process invoice button updates the order as instructed and produces all the entries including general ledger postings (if integration is enabled in the company preferences screen - see setup) to record the invoice. Until the process invoice button is hit, no entries have been saved to the database and it is safe to leave the page at any stage without having changed anything - the invoicing process can be cancelled at any time simply by following a link to another page. The processing that takes place once the Process Invoice button is hit includes:

- Creation of the stock movements for each line item on the order - or for the assemblies components - from the location entered at the time of the order, at the price as per the order.
- Creation of the DebtorTrans record that records the invoice against the customer's account.
- Creation of the general ledger journals to record the sale and debtor etc.
- Updating the order for amounts dispatched, and the invoice number.
- Creating/updating the sales analysis records of the items being sold.

- Updating the stock quantities for all lines of the invoice and the components of all assemblies included on the order.

If the order is not to be invoiced to the customer or branch specified in the order, or pricing is to be changed then the order must be changed. These elements cannot be altered at the time of invoice, they must be altered in the order before it is confirmed for invoicing. Once an invoice is created it cannot be deleted or modified. The order is also updated with the invoice number that it was dispatched on.

Fields:

- **Invoice Text:** This is the comment text of the invoice. It goes after the items lines and before the footer (Subtotal, Freight, Tax, Total invoice). Later, it will be shown in the "*Customer Inquiry*" on the "*Comments*" column. Database field: debtortrans.invtext.

## Credit Notes

Credit notes can be created in one of two ways:

- From a customer inquiry screen if the user has the necessary permissions ( \$PageSecurity=3 - see Security Schema) a link shows to allow an entire invoice to be credited. Having clicked this link there is opportunity to de-select some items from being credited so that only the part of the invoice that needs to be credited can be, with only minimal keying. The same credit note creation page as used in manual creation of credit notes will appear but with all the items from the original invoice already entered into the credit note.
- Using the link on the main menu under the receivables tab, select the link to create a credit note.

### **Important Note:**

It is important to use credit notes to correct incorrect invoices correctly. Crediting a small price against a part implies that the goods were returned and the customer only credited a fraction of their worth. This is not the correct way to credit an overcharge. By default credit notes return the stock to the location specified, so the stock records will be overstated by the goods returned to stock by the credit note. To correct a pricing error a credit note for the invoice line at the incorrect charge must be done and a new invoice at the correct charge must be made up. This ensures that sales analysis records are not corrupted for the quantities sold and that stock records are maintained correctly. A special pricing adjustment type of credit note is available that does not have any cost implications for the sales analysis and has no stock physical movement record associated with it.

The process for creating a credit note manually is:

- Select the customer to be credited, there are the usual selection options (a box to enter an extract of the customer's name and a box to enter an extract of the customer's code)
- Select the items to be credited and the prices to be used in crediting the customer - the same quick entry option is available as is used in order entry. - where the part code and quantity to be credited is entered directly. Pricing is automatically determined by reference to the customer's

sales type, currency with regard to any special pricing for the customer (and branch) being credited. If the search for a part functions are used, then after each part is selected the quantity can be updated after the item is selected.

- Having selected all the items it is possible to edit the items to be credited by clicking the button of the code of the item on the summary, then editing the price and quantity.
- Amounts to be credited for freight can be entered directly (this would be entered directly from the original invoice if the credit an invoice option was used from the customer inquiry screen).
- The tax amount to credit is calculated automatically by default based on the tax authority of the branch being credited and the total of the line items and freight to be credited. It is also possible to select the manual option. Once having selected manual, the user should hit update to allow free entry of any amount in the tax field.
- By default it is assumed that the goods in the credit note are being returned to stock. The location to where the goods are being returned must be selected from the selection box.
- If the goods are not being returned to stock, they are to be written off perhaps as samples or showroom display, damaged goods or whatever, the credit note type option should be changed to goods written off. After changing the credit note type and hitting the update button, a new select box will allow a general ledger code to be selected (assuming the general ledger interface to accounts receivable is active - it will not show if there is no integration). The appropriate general ledger code should be selected from this box. The location to return the stock to select box will disappear since it is no longer relevant. A third option is to credit a pricing adjustment - this type does not create any stock movements and the sales analysis updates only affect the value no cost of sales updates take place.
- Any text describing the reasons for the credit note should be entered in the narrative box provided.
- After completing all the inputs required, hit the Process Credit Note button to create the credit note. The created credit note number will be reported confirming that it has been processed.

## Entry Of Receipts

This system tracks the invoices and credits which are outstanding (a so called open item system) in contrast to systems which use a balance brought forward from the previous month to add and subtract current month transactions. Experience has shown balance forward systems whilst intuitive, often result in queries for more information with the inevitable question from customers "what was this balance made up of ?" . The statements produced by this system show a full reconciliation of the amounts outstanding against invoices and credits that are yet to be settled totalling the amount of the customer's account. In order to provide the necessary information to track outstanding amounts, invoice by invoice, the detail of the make up of payments must be entered.

Payments received from customers are therefore entered in a two-stage process:

- The amount of the payment received is entered in foreign currency together with the exchange rate at which this has been banked into local currency. Any details pertinent to the receipt such

as the date, method of payment and any details (which can be recalled from inquiries later) are entered at this stage.

- The foreign currency received is allocated to the invoices (and debit journals) on the customer's account. Put another way, the invoices that the payment is meant to be settling are matched off against the payment.

If the details of the make up of a payment received are not available at the time of banking, the receipt can still be entered to stage 1. However, the allocation must be done before the statement is produced if the account is to make sense.

Note: Differences on exchange are only calculated once the receipt is matched against the invoices it is paying.

Receipts relating to general ledger transactions can also be entered in the same batch as customer receipts.

The process of entering receipts is initiated from the main menu under the receivables tab - another link is also available from the general ledger tab.

Firstly, the receipt header information is required, the bank account - one of the previously defined bank accounts (see setup), the date the batch of receipts are banked, the currency and exchange rate of the banking and the type of receipt together with any narrative. The currency can be selected from the defined currencies (see setup). The receipt types can also be selected - they are defined in config.php. Once this information is entered it must be accepted before the receipts in the batch can be entered.

## **Receipt - Customer**

By default once the a customer has been selected the following information is displayed:

- The payment terms applicable, so amounts overdue can be easily noted from the allocation screen without having to go back and do an inquiry.
- The payment discount percentage applicable. The user can then use this rate if applicable to calculate the discount applicable, depending on how much of the payment relates to "on time" invoices.
- The currency that the currency is paying in.

## **Receipt - Date**

The date that the receipt was received and banked. If a receipt is being entered retrospectively - or several days bankings are being done together, the default date (i.e. the current date) should be over written with the date the receipt was originally received. This date is used on the statement and the customer may not be able to tie up the receipt if an incorrect date is entered.

Customer account inquiries are shown in date order so the account will not show correctly if the date entered is not the date the money was received. The date is also used in the general ledger transaction created.

## Receipts - Currency and Exchange Rate

Selection of the customer automatically tells the system which currency to expect the receipt in. The customer's account is maintained in the currency selected in the customer maintenance screen.

The correct rate at which the bank has converted the foreign currency to local currency must be input, the system shows the calculation of the local currency banked at the bottom of the screen. The receipt cannot (therefore) be entered until the amount in local currency is known. The exact rate to enter in this field will be the foreign currency figure divided by the local currency figure.

Eg banked 1212 local, in customer's currency this was 400.

Rate is  $400/1212 = 0.330033$

The local currency calculated by the system should confirm that the rate entered is correct. The general ledger integration - if enabled - will produce a bank deposit for the local currency amount shown at the bottom of the screen, and reduce (credit) the Debtors Control account by the same amount. The system defaults the exchange rate to that set up against the currency in the currencies table.

When the receipt is matched to invoices, any differences between the local currency amounts banked against the local currency invoiced are recorded against the invoices and written off the general ledger Debtors Control Account and written into the profit and loss account - (specified in the company record of the customer concerned) if the general ledger integration is enabled from the module options screen.

## Receipts - Payment Method

The payment method is stored against the receipt and shows on the customer's statement. A banking report can also be run off based on the payment method to summarise the day's bankings, to automate the task of collating the different vouchers and summarising for the bank.

## Receipts - Amount

The amount of the receipt in foreign currency is entered here. This cannot be 0. Although, negative receipts are allowed (to reverse incorrect receipts).

Note: Care should be taken when allocating negative receipts to ensure that only previous allocations are reversed, strange results could occur if allocations are made to invoices not previously allocated to positive receipts - although system integrity will be maintained.

## Receipts - Discount

The amount of discount on a receipt can be entered at this point and allocated together with the receipt as one amount. This is useful, where a customer pays an amount net of discount - quite correctly according to his terms and conditions, and the amount naturally will not tie up to invoices on its own without the addition of the discount. The system calculates the gross amount of the payment including discount to set off the customer's account.

## Receipts - Allocating to Invoices

Once all the details necessary have been entered for the receipt - the customer, the exchange rate and the amount in foreign currency, the receipt is ready to be allocated to the invoices which is to settle.

This concept can seem strange to businesses that have previously operated customer accounts where they are only interested in the current months' transactions and the balance brought forward from last month. The aim of this system is to remove the question from the customer's lips ... "What is that figure, balance brought forward made up of?". Under the "Balance Forward" system this question can be a tough one to answer, since there is no record of which invoices were paid by which payment. However, this system needs explicit instructions for each receipt on which transactions should be settled as a result.

From the menu under the Accounts Receivable tab - Click on the link to Allocate Receipts or Credits.

This page shows all outstanding receipts and credits that are yet to be allocated. Clicking on the links against these receipts and credits takes the user to the outstanding transactions on the customers account that are available for allocation. This screen shows all unallocated transactions but only invoices are available to allocate the receipt or credit note to.

Note that allocations of a receipt are not allowed to another receipt. If necessary, negative receipts can be used to reverse allocation against invoices and debit journals (although this is undesirable). Once entered, receipts cannot be deleted - (obviously this would be undesirable from the standpoint of proper internal controls).

If the whole of the receipt is not matched off against (allocated to) invoices and debit journals the system will prompt to ensure that this is what was intended. Unlike many systems, allocations can always be completed or amended later.

## Differences on Exchange

The process of allocating receipts to invoices gives the system the information necessary to calculate the difference on exchange since the receipt converted at the rate specified in the receipt screen will equate to a different amount to the local currency equivalent of the invoices it is matched to, unless both the receipt and the invoices it is allocated to are converted at the same rate.

The difference calculated at the time of allocation can be seen on the receipt screen once the allocations are done and the screen closed and is itemised against the invoices to which it is allocated against. Unlike many systems the difference on exchange can be fully itemised transaction by transaction. Inquiries on the detail of receipts show the difference on exchange that the receipt is responsible for. Further the inquiry on where the receipt was allocated to will show the analysis of where the difference on exchange for the receipt under review came from.

Alterations to the allocations naturally alter the difference on exchange. The general ledger interface produces a journal for only the movement of the difference on exchange for a given receipt each time its allocations are altered.



## Receipts Processing

Many customer receipts can be entered at a time and mixed together with receipts for nominal items i.e. receipts from vending machine or sales of fixed assets reimbursement for private use of company assets etc. Once all receipts have been entered the processing can take place. The system only stores the data entered in a server side cookie called a session until such time as the Process button is clicked.

The processing will give the batch of receipts a number and insert new receipt transactions against customer accounts and update the customer's record with the amount of and the date of the last payment. In addition if the general ledger interface is enabled, the journals to put the receipt into the bank account specified and to decrease the Debtors control account - specified in the company record are created. General Ledger journals are also created for the discount - if any, with the corresponding entry to the Debtors Control account. All the necessary account codes must be set up in the company preferences page under the setup tab and the bank account set up page.

## Deposits Listing

After processing has completed a link to print the deposit listing for the batch of receipts just entered is shown. The batch number is also reported. The listing shows the information required by banks in processing a batch of cheques. This deposit listing can be reprinted at any time from a link under the accounts receivable tab - reports and inquiries.

## Allocate Credits To A Customer's Account

This option allows any credit amount - be it a receipt or a credit notes to be allocated to debit amounts - invoices . Receipts or credits that have previously been allocated are available for alteration of their allocations if necessary. There are two ways to perform this function:

- From the menu select the accounts receivable tab and click the link to "Allocate Credits To Customer's Account".
- From the customer account inquiry - there is a link to allocate any customer receipt or credit where the user has appropriate privileges.

Using the first method, by default the screen opens with only the receipts, credit notes and credit journals which have an amount outstanding left to allocate. If there are many receipts which have amounts outstanding and are not fully allocated to invoices and debit journals then this is an indication that there are allocations which need to be done. For the customer's statements to make sense, the allocations must be done.

Double clicking the receipt to allocate will then open the form that allows the allocations to be made. This screen brings up all the invoices and journals that are outstanding on this customer's account. Invoices that have already been paid off will not show. However, existing allocations made from the selected receipt or credit will show. Clicking a receipt or credit note from the customer inquiry screen brings up this same page.

If a mistake was made with previous allocations these can be rectified by selecting the previous receipt which was wrongly allocated, all the invoices which the receipt was allocated to will show (together with other invoices which are yet to be allocated to). The amounts allocated against them can be amended at will.

Note: This is a complex area behind the scenes, to handle the changes that may result to the difference on exchange. The system calculates the alteration to the exchange difference which results from allocating the receipt to different invoices (or not being allocated at all) and creates the necessary journal in the general ledger - if the integration option is used - to ensure the debtors control account stays in balance with the list of balances.

**It is recommended that help be sought if alterations in the program are required in this area.**

# Accounts Receivable Inquiries

## Customer Inquiries

Complete "drill down" inquiries are available to extract the full detail of transactions. The system maintains more data than many systems, preferring to minimise the use of consolidated or batch entries, in favour of the full detail of each transaction. The enquires can show the account history for a customer and from this inquiry it is possible to look at the details behind each transaction, from the detail of the transaction it is possible to look at the line items on the original invoice and which receipts paid the invoice. The original invoice or credit can be viewed directly from customer inquiries and the general ledger transactions that were created by the invoice, credit or receipt may also be inspected.

## Customer Account Inquiries

From any page, click the "select customer" link. Having selected the customer all links applicable to the customer show. Among them the customer transactions inquiry.

By default the inquiry screen shows only those transactions after a date six months ago. The default period can be modified by simple editing of the script CustomerInquiry.php. If transactions further back are required only occasionally and not by default - the date after which all transactions will show can be altered at will. When the screen opens the customer's account is shown in the currency of the customer. The aged analysis based on the customer's terms is displayed.

If the transaction is an invoice or a credit note a magnifying glass icon shows on the same line as the transaction. A click on this magnifying glass then opens a new window showing the detail of the invoice or credit note.

If the integration to the general ledger from accounts receivable - see the option to "Create GL entries for accounts receivable transactions" from the Company Preferences page under setup - then another link with the letters GL will show. This link shows a new page with the detail of the general ledger postings created by this transaction.

If the transaction is a receipt or a credit note and the user has appropriate access privileges, a book icon shows. Clicking this icon takes the user to the page for allocating receipts and credits - if the receipt or credit is already allocated then the detail of how the receipt/credit was allocated is shown together with other invoices that could be used for allocating against. Invoices that have previously been allocated will not show.

More (or less) history can be shown by changing the "Show all transactions after:

" date - then clicking the refresh button. The balance on the customer's account should balance to the sum of the amounts outstanding. The amount outstanding is used to represent:

- For Invoices, the amount which has not yet been settled by receipts or credit notes

- For Receipts, the amount which has yet to be allocated (or matched off) against invoices.

## Transaction Detail inquiries

The detail of transactions can be inspected via one of two avenues:

- From the Customer's Account inquiry - click on the magnifying glass or the GL link against the transaction required.
- From the Transaction Enquires - from the Accounts Receivable tab, click on the magnifying glass to see the actual invoice or credit note.

## Customer Transaction Listing Options

This is accessed from the main menu, accounts receivable tab under the link "Transaction Inquiries".

This inquiry allows transactions to be listed based on the selection of criteria on screen. The page allows listing of receipts, invoices or credit notes within any specified date range.

This listing is shown on the screen and can of course be printed from the browser if necessary.

## Where Allocated Inquiry

To see how a particular transaction has been allocated, you should use the 'Where Allocated Inquiry' available from the Inquiry section of the Receivables module. The type of transaction can be selected, and then you should enter the number of the transaction you are interested in. This number can be found in the Customer Account inquiries screen. The resulting inquiry will show the details of any allocations made against this transaction. To print this inquiry, just click on the printer icon in the top right of the table. This inquiry is typically run directly from the customer account inquiry when looking into the allocations by clicking on the link to see how a transaction was paid.

## Sales Report Graph

You can produce graphs (aka charts) of the companies sales data over different periods, and by sales area, sales person, and by stock category. You can create 10 different types of graph:

- Bar Graph
- Stacked Bar Graph
- Line Graph
- Line Point Graph
- Are Graph
- Points Graph
- Pie Graph
- Thin Bar Line Graph
- Squared Graph

- Stacked Area Graph

# Accounts Receivable Reports

The system is designed for flexibility and to provide the framework of core functionality required to administer a debtors ledger system. The basic accounts receivable reports are available as standard since they are used by all businesses. However, since the database is open it is envisaged that the business will make use of ODBC drivers for database used and use Crystal Reports or Microsoft Access or some other analysis software, where the user is on the same LAN as the server for specialised reports.

## Aged Customer Balance Listing

From the main menu select Customers, Reports, "Aged Customer Balances/Overdues Report".

This report calculates the balances of the customers' accounts according to the parameters specified in system parameters ("First Overdue Deadline in (days)" and "Second Overdue Deadline in (days)"). The report is generated in the currency of the customer. The currency of the report must first be selected and the range of customers accounts to print.

The report can be printed at two levels:

- The full detail of the all outstanding amounts on the account, transaction by transaction analyzed into current, Due, \$PastDueDays1 and PastDueDays2. The detailed report also shows the terms applicable to each customer.
- A summary of the account balances split in the same aged groupings.

This report recalculates the balance on the customer's account from the outstanding transactions and analyses each outstanding transaction based on the date of invoice plus the expected time to deliver to the branch invoiced.

The Aged Customer Balances can also be restricted to show just the accounts where there is some balance overdue. The same detail and summary reports are available. The resultant reports create pdf files that can be either saved or printed.

## Customer Statements

The customer statement shows the outstanding transactions on the account. There is an option in config.php that allows transactions that have been settled at some time within the last month to be shown in a settled transactions section of the statement. The parameter, \$Show\_Settled\_LastMonth should be set equal to 1 for this. If it is set to 0, then any settled transactions will not be shown on the statements. This saves printing zero balance statements and there is argument both ways as to which is best.

When transactions are created, the date of the transaction determines the period into which it is posted in the general ledger. The date of the transaction is also used in the aging calculations used on the

statement. All transactions to the date of the statement are included. It is not possible to print a statement as at some prior date. It may be necessary to delay the start of invoicing for the new month until all receipts are entered and allocated and the statements printed before processing new invoices that should appear on the following month's statement.

Procedure - All receipts must be allocated for the aged analysis to be calculated correctly. Then from the main menu Accounts Receivable tab select from the reports and inquiries section, "Print Statements". The link will allow selection of a range of customers. A single customer's statement can be printed by selecting the same starting and finishing customer code. Statements will be printed in sequence of the Customer code set up in the customer details screen. A pdf file is created this can be saved or printed.

## **Customer Transaction Listing Options**

This is accessed from the main menu, accounts receivable tab under the link "Transaction Inquiries".

This inquiry allows transactions to be listed based on the selection of criteria on screen. The page allows listing of receipts, invoices or credit notes within any specified date range.

This listing is shown on the screen and can of course be printed from the browser if necessary.

## **Printing Invoices Or Credit Notes**

From the Main Menu select the Accounts Receivable tab, under Inquiries and Reports, "Print Invoices or Credit Notes".

This page shows the last invoice and credit note created and some brief instructions on how to use the page. By default the page assumes that invoices are required. However, if credit notes are required, they can be selected from the list field.

If only one transaction is required then the number of the transaction should be entered in the field "Start invoice/credit note number to print". If a range of transactions is required then both fields are necessary to be completed.

There is also an option to print EDI invoices/credit notes. By default these are not printed as they will normally be dispatched electronically to the customer. However, some businesses and tax authorities require hard copy invoices and credit notes to be produced in any event.

Two options are available - Print, produces a html page of the invoice (or credit note), the resulting page can then be printed using the browser print functionality. The print PDF produces a PDF invoice (or credit note).

## **Re-print a summary of a batch of receipts**

This report which is available from the Reports/Inquiry menu on the Receivables module, will re-print a batch summary of any receipt batches that have previously been done. It is also available as a link directly after the creation of a batch of receipts, for printing a summary for preparation of a banking.

## **Debtor Balances At A Prior Month End**

This report produces a back dated aged debtor reports for any previous month end. This is available from the Inquiries/Reports menu on the receivables module. Just select the month end that you require, and the debtor range, and the report will be produced.

## **Customer Details Listing**

This report which is located in the Inquiries/Reports menu on the receivables module, produces a list of customers, complete with contact details, address, phone numbers, etc. The report can be filtered by sales area, sales person, and by sales activity.

## **List Daily Transactions**

The daily transactions report lists all account receivables for a particular day, and can be filtered by invoices, credit notes, or by receipts. It is located in the Inquiries/Reports menu on the receivables module



# Sales Analysis

There are several ways to analyze sales history. If a quick analysis is required there is some flexibility in the sales graph script that allows a pictorial representation of the sales against budget. It depends of course the level to which sales budgets are recorded as to whether the comparison against budgets will show anything useful. If a report of the actual numbers is required webERP has a sales report writer that allows sales reports to be created - the resulting report templates can be re-run or modified. These reports can output either a pdf or a csv file for reading into most spreadsheet applications.

From the main menu under Accounts Receivable Reports and Inquiries options, "Sales Analysis Reports". A list of all previously defined sales reports shows with links to:

- Modify the design of the report - the header
- Modify the columns of the report
- Run the report and create a PDF file
- Run the report to create CSV - comma separated values report that can be read by any spreadsheet application.

Also from the bottom of this page it is possible to make up new reports to show most combinations of sales data. A separate table of sales data is maintained by the system to enable these reports to be run as quickly as possible.

A sales analysis report is made up of:

- the report header definition and
- the report column definitions

## Sales Analysis Report Headers

The first step in creating a report is to enter the report header information. This includes:

- Report Heading - any combination of characters to describe the report.
- Up to 4 levels of grouping and the criteria for each grouping.

Each grouping consists of a selection of one of:

- Sales Area
- Product Code
- Customer code - the actual charge account
- Sales type (or price list)
- Product type (or stock/inventory category)
- Customer branch
- Sales person

The report groups on each level in sequence eg. A report with Group By 1 set to Product Code and Group By 2 set to Sales Area, would show the product code, then the areas underneath the product code where the item has been sold. Most often the more logical sequence might be to show the sales area as Group By 1 and the Product Code under the Group By 2 so that the sales of the product codes for each area appear together.

Each Group By section requires a range to be specified. All criteria specified must refer to the coding as specified in the setup section of the relevant Grouping. Eg Sales Areas criteria must be entered as the area code - not the area description. The criteria from should be less than the criteria to otherwise the report will have no output.

## Sales Analysis Report Columns

Having created a header for the report the columns can then be defined. Columns for existing reports can be modified at any time. From the main Sales Analysis Reports page - (Accounts Receivable tab - Sales Analysis Reports) - there is a link on each report to "Define Columns". From this link the columns for the report selected are shown, together with a form to allow input of new columns. The following input is required for each column defined:

- A column number between 1 and 10. This number determines where abouts across the page the column is printed -1 is the closest to the left of the page and 10 is the closest to the right of the page.
- Two fields are available for line 1 and 2 of the column heading. Any text can be input to a maximum of 15 characters in each.
- Whether the column is a calculation or not. The input required for calculated columns is different from normal data columns.
- For normal data columns -a range of periods to show the data for is required. The period from and to must be specified as the period number. Since periods are maintained almost invisibly by the system, there is a link provided from this screen to show the periods defined. If a single month is required then the period from will be the same as the period to.
- The data to show in the column can then be selected from: Quantity, Gross Value, Net Value (after discounts), Gross Profit, Cost and Discount.
- Budgeted sales or actual sales.

If the column is defined as being a calculation the range of periods are not required, neither is the selection of the type of data to show and the budget or actual. Changing the Calculation field to yes then hitting the enter information button, show the fields required for a calculation:

- Numerator field - this the column number of the first parameter to the calculation- the numerator field is always required in a calculation.
- Denominator field - this is the column number of the second parameter to the calculation if the calculation is to performed on two columns. If the operator of the calculation is to divide - then this column total will be on the bottom of the division calculation. If the calculation is to be done using a constant then this field can be left blank.

- Calculation operator can be one of:
  1. Numerator column divided by Denominator column
  2. Numerator column divided by the constant
  3. Numerator column multiplied by the constant
  4. Numerator column plus the denominator column
  5. Numerator column minus the denominator column
- Constant can be any number for use in the calculations
- Format type allows the output of the calculation to be expressed as either a percentage or a number.

Hitting the Enter Information button adds the column to the report definition. It should then show in the list of defined columns and a blank form for entering a new column definition. If a column is no longer required the list of column definitions shown has a link that allows it to be deleted.

The column number itself is a link to modify the definition of the column. The definition shows in the input form for alternation as necessary.

Clicking the link to maintain report headers shows the list of defined reports for modification or running. To run the report simply click on the Make PDF Report link.

These sales analysis reports have to look at a lot of information (and the reports are generated dynamically) as a result, they can take a minute or so to run on large databases. However, the design of the data has been done very carefully to ensure that reports generate dramatically faster than many such analysis engines.

It may be worth an example to create a report to show the sales value and gross profit for each sales area and each salesman that sells in this area:

Receivables ->Inquiries & Reports -> Sales Analysis Reports

Under Define a New Report - Report Heading

Enter a heading "Sales By Area and Rep"

Select Sales Area for "Group By 1" then enter 0 in the "From" box - since all sales area codes will be greater than 0 and then in the "To" box enter "ZZZZZ" - hopefully the sales area codes you have defined will fall between 0 and ZZZZZ - if you just want a single area then enter the area code you want in both the "From" and the "To" boxes.

Select "Sales Person" for "Group By 2" then enter 0 in the "From" box - since all sales people codes will be greater than 0 and then in the "To" box enter "ZZZZZ" - hopefully the sales rep codes you have defined will fall between 0 and ZZZZZ - if you just want a single rep. then enter the rep code you want in both the "From" and the "To" boxes.

Click on enter information to commit this report to the database.

The list of reports will show with our new report "Sales By Area and Rep" - click on the link to define columns for this report.

Enter column 1 in the column number

Heading 1 enter - "sales value" - this is the top row of the column heading

Heading 2 enter - "January 08" this is the second row of the column heading

Now look up the period number that January 08 is in and enter the period number in both the "From period" and the "To period" if you wanted to show a range of periods sales value you could choose any range - where the to period is before the from period! Since we want to display the sales value for January we need to Select the "Net Sales Value" in the "Data to Show" select box - the column can contain any of the data selections in that box. The Gross Value option is the sales value before on invoice discounts are taken into account - in most circumstances you will want the net sales value.

The budget or actual box needs to be changed from budget to actual. If you want to compare against budgeted amounts then the sales budgets need to be imported. (there is currently no user interface to enter budgeted manually).

Click Enter information and the single column definition will show at the top of the page and new empty fields for adding a new column.

To create another column for the gross margin for January - same as above - but entering as column 2 and changing the heading text from Sales Value to Gross Profit - same period range. This time select "Gross Profit" in the "Data To Show" and "Actual" for the Budget or Actual field. Click Enter Information again to accept the 2nd column - the two defined columns should show on screen.

Now to run the report click on the "Maintain Report Headers" link and look down the list of defined reports to find the "Sales by Area and Rep" report and click on the link to "Make PDF Report" - the report will run and a pdf will be displayed...

===== It may be worth an example to create a report to show the sales value and gross profit for each sales area and each salesman that sells in this area:

Receivables ->Inquiries & Reports -> Sales Analysis Reports

Under Define a New Report - Report Heading

Enter a heading "Sales By Area and Rep"

Select Sales Area for "Group By 1" then enter 0 in the "From" box - since all sales area codes will be greater than 0 and then in the "To" box enter "ZZZZZ" - hopefully the sales area codes you have defined will fall between 0 and ZZZZZ - if you just want a single area then enter the area code you want in both the "From" and the "To" boxes.

Select "Sales Person" for "Group By 2" then enter 0 in the "From" box - since all sales people codes will be greater than 0 and then in the "To" box enter "ZZZZZ" - hopefully the sales rep codes you have defined will fall between 0 and ZZZZZ - if you just want a single rep. then enter the rep code you want in both the "From" and the "To" boxes.

Click on enter information to commit this report to the database.

The list of reports will show with our new report "Sales By Area and Rep" - click on the link to define columns for this report.

Enter column 1 in the column number

Heading 1 enter - "sales value" - this is the top row of the column heading

Heading 2 enter - "January 08" this is the second row of the column heading

Now look up the period number that January 08 is in and enter the period number in both the "From period" and the "To period" if you wanted to show a range of periods sales value you could choose any range - where the to period is before the from period! Since we want to display the sales value for January we need to Select the "Net Sales Value" in the "Data to Show" select box - the column can contain any of the data selections in that box. The Gross Value option is the sales value before on invoice discounts are taken into account - in most circumstances you will want the net sales value.

The budget or actual box needs to be changed from budget to actual. If you want to compare against budgeted amounts then the sales budgets need to be imported. (there is currently no user interface to enter budgeted manually).

Click Enter information and the single column definition will show at the top of the page and new empty fields for adding a new column.

To create another column for the gross margin for January - same as above - but entering as column 2 and changing the heading text from Sales Value to Gross Profit - same period range. This time select "Gross Profit" in the "Data To Show" and "Actual" for the Budget or Actual field. Click Enter Information again to accept the 2nd column - the two defined columns should show on screen.

Now to run the report click on the "Maintain Report Headers" link and look down the list of defined reports to find the "Sales by Area and Rep" report and click on the link to "Make PDF Report" - the report will run and a pdf will be displayed...

### ***Calculated Fields Example***

To take an example where we have a column 1 that is the sales value in January 2008 and column 2 that was the sales value for January 2007 - we wish to have a 3rd column that shows the % of last year that this years sales represents.

To define column 3: Enter the column number - 3 and the headings for the column - % Increase - On Last Year then select calculation - Yes then hit the Enter Information Button - the form now shows the "Numerator column #" field and the "Denominator column #" .

This year's sales should be the numerator column - column 1 - enter 1 in this field. The denominator column 2.

The calculation type should be numerator divided by denominator. There are other options available also.

The format for this calculation should be as a percentage.

## Automating Sales Reports

Having created reports it is possible to email sales reports to defined recipients. A script called MailSalesReport.php is a template for doing this. There are no links to this script and no security level is set up for it. All that is required is to save this script to another file named anything with an extension of .php under the same directory as the other scripts.

This script will need to be edited with the email addresses of the people to receive the report and the reportID - the system generated report number to be run. The lines to edit are:

```
/*The Sales report to send */
$ReportID = 4;
/*The people to receive the emailed report */
$Recipients = array('"Root" ', '"some one else" ');
```

The lines surrounded by /\* and \*/ are comments.

Once edited to the ReportID or choice and the Recipients all entered the file should be saved.

To schedule the report to run an entry in crontab under a linux installation that would send the report at 0:0 each week day (assuming wget is installed in /usr/bin/wget and that the web server is on the same machine and the new script is called DailySalesReport.php) would be:

```
# Scheduled email of a daily sales report
0 0 * * 2-5 root /usr/bin/wget http://localhost/web-erp/DailySalesReport.php
```

since the page has no output - it would be pointless running it in a web browser although it would initiate another email to the defined recipients.

A similar template script is available called MailSalesReport\_csv.php that mails the comma separated values file for a ReportID to the Recipients defined in the script in just the same way as MailSalesReport.php script above.

A more elegant solution to automatic emailing of sales analysis reports is available using the report\_runner.php script this script can be run from a shell or directly from cron and takes command line parameters. This has the advantage instead of hardcoding a number or scripts this script can be run with the parameters below:

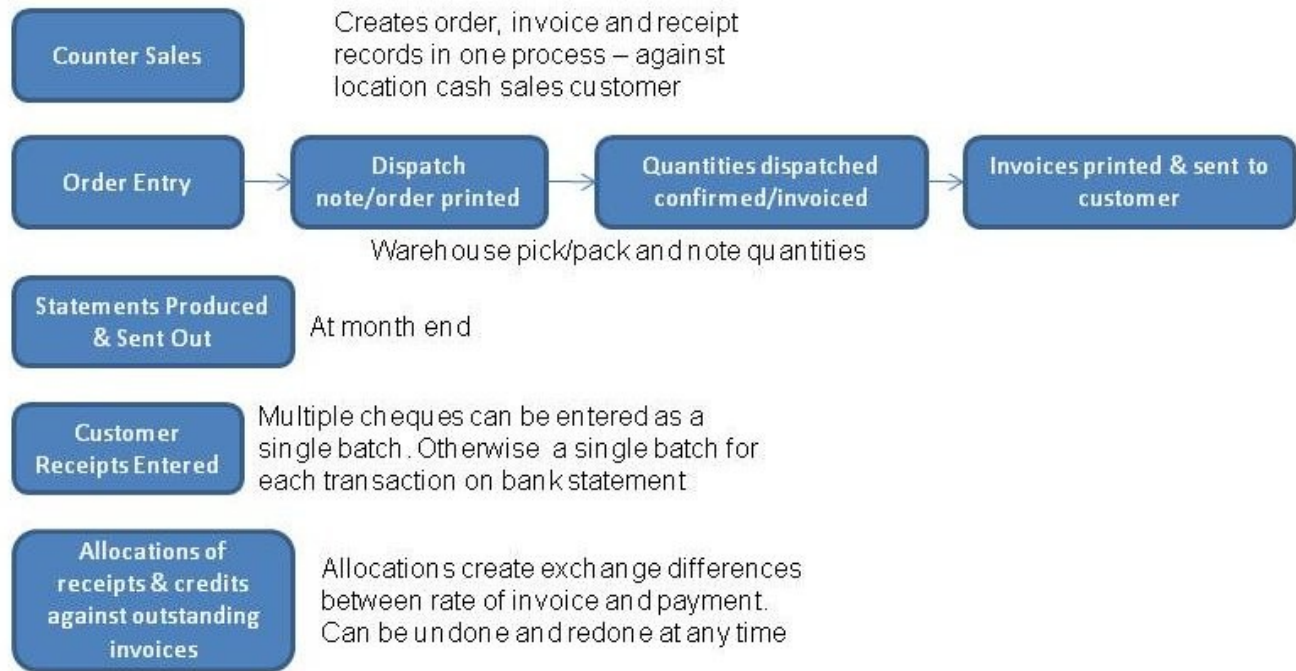
```
-r reportnumber (the number of the webERP report)
-n reportname (the name you want to give the report)
-e emailaddress[;emailaddress;emailaddres...] (who you want to send it to)
[-t reporttext ] (some words you want to send with the report-optional)
[ -H weberPHOME] (the home directory for weberp - or edit the php file)
```

# Sales Orders

## Functionality

- Customer orders can be entered and maintained and referenced back to the customer's order number.
- The cumulative quantity on order for a stock item shows as a demand in stock status inquiries.
- The cumulative quantity on order for assembly items shows the demand against its components in the stock status inquiries.
- The quantity of the order left to invoice is maintained and updated for invoices and credit notes raised against the order.
- The orders entered can be invoiced directly with little or no additional input.
- Multiple dispatches are possible from a single order. Order retains references to each dispatch.
- Differences from the order are logged when dispatches are not the same as the ordered quantities for reporting delivery in full on time.
- Pricing automatically returned based on the customer sales type, branch and currency.
- Quantity break discounts across a range of products are automatically calculated based on the discount matrix.
- Packing slips printable on laser or pre-printed stationery.
- User selectable inventory location to pick from.
- Free form entry of delivery addresses - defaulting to the customer branch physical address.
- Recurring sales orders that recurr until any chosen finish date at a defined frequency per annum
- Invoices for cash sales can be entered directly without first entering an order

# Sales Orders and Accounts Receivable



## Entry of Sales Orders

From the main menu, Orders tab, click the Order Entry link.

### Selection of the Customer and Branch

Initially, the order entry page shows the options to allow selection of a customer and branch. The customer is the actual charge account to where the order should be billed and the branch contains all the information about delivery. The customer search facilities are similar to the select customer script, but the code actually looks up on the branch code of the customer, only branches are displayed with accompanying customer charge to information. Searching for a customer can be either by entering a letter or letters in the branch code or by entering some keywords (or section of) in the customer name. Searching in this way minimises the result set returned (possibly over a dial up connection) to ensure the response is as speedy as possible to the users browser. All branches matching the criteria entered and not flagged as disabled for transactions, are returned each one with a button on the customer code. Hitting the button for the desired customer/branch selects it as the customer and branch to deliver the order to. There is opportunity later to modify the delivery details if need be. The order now shows the quick entry screen headed up with the name of the customer and branch, together with the sales type of the customer.



## Selection of Order Line Items

There are two ways to select the line items for the order.

- By default a "quick entry" screen shows allowing the direct entry of the inventory code and the quantity required for the order. The number of lines shown on this quick entry table is defined by a variable in config.php - \$QuickEntryLines which is user modifiable. After the user has entered any number of lines into this table, hitting the Quick Entry button processes the items entered into the order. The prices are retrieved based on the sales type, the currency, customer branch and the charge to customer of the order. If there were insufficient lines to enter all part codes for the order, the same process can be repeated with the quick entry table shown below the order summary after the first quick entry has been processed.
- On the quick entry screen there is a button to search parts. This button enables the user to search for a part based on the stock category and/or any part of the item's description and/or any element of the item's code. Hitting the search button after making appropriate entries in the code or description fields shows the part codes and descriptions together with picture of the item - if one has been uploaded to the server for all parts. Part pictures must be in .jpg format with a file name identical to the part code but with the extension .jpg, and it must reside in the directory specified in config.php for part\_pics. The item code is displayed as a button and the system automatically puts one of the item selected onto the order. Additional parts can be selected in the same way.

Having selected the parts for the order, it is possible to edit the quantities, price and discount applicable to each line of the order. To get the order values to re-calculate the "Recalculate" button must be clicked (this is the compromise of using server side scripting - PHP - to the exclusion of any client side - java - processing). Discounts will be calculated using the Discount Matrix functionality described under that section within the order based on the quantities that are entered.

If a line entered, displays against a red background this means that the system inventory is showing insufficient stock to cover the order line, from the inventory location as defaulted from the customer branch record - as the most appropriate inventory location to draw the stock for this branch's orders. The item code displayed is also a link to a new browser window showing the stock status inquiry for the item, this shows the stock available at all locations.

A line can be deleted at any time by clicking on the link at the end of the line to delete it.

The whole order can be cancelled at any time by clicking on the "Cancel Whole Order" button.

The customer can also be changed at any time.

Once all the line items have been selected the Delivery Details button must be clicked. Note that there have been no changes to the database at all. The data entered exists only as a server side cookie - a file on the web-server. Delivery details must be confirmed before the order can be placed.

## Delivery Details

By default the delivery details are obtained from the physical address of the branch. However, any of the information in this screen can be over-ridden. This information prints on the dispatch/packing slip and on the invoice.

The inventory location where the stock for the order is to be drawn from is defaulted from the customer branch record. However, it is possible to select an alternative inventory location if the order is to be picked from elsewhere. Inventory locations are defined by system administrators in [Main Menu](#) > [Setup](#) > [Inventory Setup](#) > [Inventory Locations Maintenance](#).

The customer's order reference should be entered here and the most appropriate freight company should be selected. The system keeps track of the last freight company used to deliver to the branch and uses this as the default, if it is over-ridden then this new value is stored against the branch.

It is possible to go back to the line item entry screen retaining all the data entered on the delivery details screen by clicking on the modify line items button. If the inventory location to draw from has been changed the colouring of the background of the line items will be updated to reflect the stock available at the new location to pick from.

If the automatic freight calculations are being used - see the parameters in config.php, the freight cost will be calculated based on the sum of the whole order cubic metres and weight. The best shipping company will also be returned. The user can choose to charge the freight calculated or just use the cheapest freight company. The freight charge calculated can be over-ridden if required.

Once all details are entered correctly the Place Order button should be clicked. It is important to note that abandoning the order before this button is clicked there have been no updates to the database and nothing is saved. Clicking into some other screen loses the order as entered. Whilst it is perfectly acceptable to have several browser screens open looking at different inquiries at the same time. It is not possible to have two windows entering two separate sales orders at the same time, entries in the one window will over-write the other.

## Entry of Cash Sales Directly - Counter Sales

In version 3.12 of webERP a new feature was introduced which allowed for cash sales to be entered directly without first entering an order and then confirming a dispatch to invoice. This feature is known as "counter sales". From the main menu->Sales tab select Enter Counter Sales. Entry is similar to entering an order, by default the quick entry screen allows entry of item codes and quantities but it is also possible to select items by the search functions in much the same way as an order. The tax is calculated and the total amount to pay is shown. This page also expects the payment to be made and entered. The payment entered is automatically allocated to the sale and the invoice and the payment (receipt) are recorded against a default counter sale customer and branch - like any other sale.

Behind the scenes this script produces all the database entries for an order and an invoice with sales analysis, stock movements etc etc all correctly created. The customer (and customer branch) used for

the entries is derived from the user's default inventory location. The only limitation is that serialised and lot controlled stock items cannot be sold using the Counter Sales functionality at the moment.

## Setting Up Counter Sales

webERP looks at the user's default location and then looks up against the location record to find the cash sales debtor account (and branch) to use for counter sales entered. Each location for which counter sales are required must first be set up with the cash sales customer and branch which is to be used for counter sales entered. Note that the default location of the customer branch is ignored - the user's default location (see Setup->General->User Maintenance - the script webERP/WWW\_Users.php) is used as the location and stock movements are all created from this location against the customer specified in the location record (Setup -> Inventory Setup -> Location Maintenance - the script webERP/Locations.php). To specify the customer and branch to use for counter sales for an inventory location (or warehouse), the customer code and branch code must be entered.

## Counter Sales Returns

To produce credit notes in a customer facing situation it was difficult to first create the credit note manually, then enter a negative receipt (payment) against the customer account, then allocate the credit note to the negative receipt (payment). This has all been simplified with this Counter Returns functionality (new script to 4.09.2). This script allows the return of goods or services with the usual stock functionality and the capability to enter a payment to the customer that automatically allocates directly to the credit note.

## Modifying An Order

Only Outstanding sales orders can be modified. Only these orders have any balance of a quantity remaining to be delivered and/or invoiced. Order lines that have been invoiced completely will not be available for modification. New items cannot be added to the order. Pricing cannot be altered if any amount of the line has already been delivered/invoiced. Quantities of an order line cannot be reduced below the quantity of the line already invoiced.

Note that changing the delivery address of an outstanding order that has already had some of the order delivered and invoiced will affect re-prints of the initial invoice - it will show as being delivered to the order delivery address that has been modified. Hard copy of original invoices are required.

## Selecting an Outstanding Sales Order

There are several ways:

- If the item ordered is known, sales orders can be selected that have the item on by first selecting the item in the Select Item page, once the item is selected a link to show outstanding sales orders is displayed.

- If the customer is known, then first select this customer then use the link on the customer selection menu to show only the outstanding orders for the customer selected.
- All outstanding orders can be displayed by entering the Outstanding Sales Orders screen without a customer or item directly from the main menu under the orders tab. The outstanding Sales Orders screen also has facilities for looking up a part directly as well.

The Outstanding sales orders are shown by inventory location, the inventory location desired can be selected on this screen, by default the location defined as the default for the user is shown. The orders matching the criteria are only shown when the user clicks on the search orders button.

The orders displayed each show links to modify the line items, invoice the order or print the dispatch note. If the order has already been printed this link will show that it has already been printed to avoid printing several dispatch notes and risk doubling up deliveries.

## Quotations

A quotation can be entered for any customer/branch in much the same way as entry of an order. The pricing can be changed and discounts entered for the quotation in the same way as an order. An order is flagged as a quotation from the Delivery Details screen. On entry of a quotation a link to produce a pdf quotation for sending to the customer is available. If the quotation option is selected then the stock is not reserved in the stock status inquiries. Quotations can shown on the outstanding sales orders screen by selecting the option to show quotations. When this option is set only quotations show, there is a link so that they can be modified and if necessary changed to a sales order, there is also a link to re-print the pdf quotation.

Having changed a quotation to a sales order, from then on the process is the same as for any other sales order, a packing slip can be printed and the order confirmed for invoicing.

## Recurring Sales Orders

Orders entered can be defined so as to recur at a desired frequency entered as:

- weekly
- fortnightly - (2 weekly)
- monthly
- bi-monthly
- quarterly
- six monthly
- annually

If the order entered contains only 'dummy' service items - ie those items that do not refer to physical stock that requires advice to warehouse people to effect the delivery - then the order can be flagged to invoice automatically.

The process of defining a recurring order is done from the normal order entry screens - entering the line items and then the delivery details. However, instead of clicking the "Place Order" button, the user should click the "Create Recurring Order" button. This then allows entry of:

- The frequency that the order should recur
- The starting date from when the order should start to recur
- The ending date after which the order should not recur anymore
- If all the line items on the order are dummy items then an option to auto-invoice is also shown

It is possible to review the recurring order templates currently defined from the `SelectRecurringSalesOrder.php` script which allows the entry of the dispatch location and then lists all those recurring order templates that are defined to be dispatched from this location.

From this selection screen it is also possible to select the template for modification. Line items on the order cannot be modified here, only the frequency, start and stop dates. If line items need to be modified then the template can be deleted and a new template created.

The sales orders are created from the recurring sales order templates by the script `RecurringSalesOrderProcess.php`. This script loops through all the recurring order templates and creates the orders as necessary based on the current date and the last time an order was created for the template and the frequency it is to recur. The date of the last recurrence is updated in the template as the date of the last recurrence + the number of days between recurrences. An email is also produced for the email contact stored in the location record from where the delivery is to be effected from. The email advises that an order was created, the order number and if it was auto-invoiced. Ideally this script should be run from a scheduler/cron daily. It can be run as many times as you like and only create the orders required - without duplicating incorrectly.

## Discount Matrix

webERP has a system called a discount matrix which allows any group of products to be defined and discounts applicable to all items of the group to be set up just once for the whole group of items. Different discounts can be applied to the "discount group" for each sales type (price list). When an item is entered into a sales order the system retrieves the correct price based on the customer's sales type (price list) and then retrieves the appropriate discount based on the quantity of the item and the other items already entered on the order. The discounts retrieved can be over-ridden.

To define the grouping of products:

Select an item that you wish to have a discount structure applied to it - using the "Select Item" link. Under the "Item Maintenance" section click on "Maintain Discount Category".

If there are no currently available discount categories then enter a discount category code - otherwise select the discount category that you wish to allocate the item to.

webERP's Demo Company Inc Demonstration user 1 Main Menu 2 Customers 3 Items 4 Suppliers 8 Manu

**Discount Categories Maintenance**

Discount Category Code: DE OR OR

Enter Stock Code: SALT Partial code: Partial description: Search

Update Item

**INFORMATION Message** : There are currently no discount categories defined. Enter a two character abbreviation for the discount category and the which this category will apply to. Discount rules can then be applied to this discount category

You can now search for additional items and add as many items to the discount group as you wish from this screen.

Having created the discount group you can now administer the discount rates applicable to this group of items.

From the main menu go to -> Setup -> Receivables/Payables section -> Discount Matrix

webERP's Demo Company Inc Demonstration user 1 Main Menu 2 Customers 3 Items

**Discount Matrix Maintenance**

**SUCCESS Report** : The discount matrix record has been added

Customer Price List (Sales Type): Default Price List

Discount Category Code: DE

Quantity Break:

Discount Rate (%):

Enter Information

Sales Type	Discount Category	Quantity Break	Discount Rate %	
Default Price List	DE	10	5.00	<a href="#">Delete</a>
Default Price List	DE	20	7.50	<a href="#">Delete</a>
Default Price List	DE	100	10.00	<a href="#">Delete</a>

This form allows you to select any of the discount groups defined above and any sales type (price list) and then enter any quantity break and discount applicable given the quantity break - if the discount is applicable for all sales then enter a quantity break of 1

# Picking Lists

## Transactions

### New Sales Order or Quotation

This script allows you the entry of sales order items with both quick entry and part search functions.  
See: [Entry of Sales Orders](#).

### Enter Counter Sales

This script allows sales to be entered against a cash sale customer account defined in the users location record. See: [Entry of Cash Sales Directly - Counter Sales](#).

### Enter Counter Returns

This script allows credits and refunds from the default Counter Sale account for an inventory location.  
See: [Counter Returns](#).

### Generate/Print Picking Lists

This script allows you to generate a picking list.

### Outstanding Sales Orders/Quotations

This script allows you to ... See: [Selecting an Outstanding Sales Order](#).

### Special Order

This script allows you to ...

### Recurring Order Template

This script allows you to ... See: [Recurring Sales Orders](#).

### Process Recurring Orders

This script allows you to ... See: [Recurring Sales Orders](#).

### Maintain Picking Lists

This script allows you to select a picking list.

## Inquiries and Reports

The webERP Sales module has the following inquiries and reports:

• Sales Order Inquiry • Print Price Lists • Order Status Report • Orders Invoiced Reports • Daily Sales Inquiry • Sales By Sales Type Inquiry • Sales By Category Inquiry • Sales By Category By Item Inquiry • Sales Analysis Reports • Sales Graphs • Top Sellers Inquiry • Order Delivery Differences Report • Delivery In Full On Time (DIFOT) Report • Sales Order Detail Or Summary Inquiries • Top Sales Items Inquiry • Top Customers Inquiry • Worst Sales Items Report • Sales With Low Gross Profit Report • Sell Through Support Claims Report

## Sales to Customers

This report shows sales to customers over a period of time. It shows the overall amount, taxes and total in the customer's currency and in the functional currency.

Report parameters:

- **Select period from.** Select the beginning of the reporting period. Default: one year before current date.
- **Select period to.** Select the end of the reporting period. Default: current date.
- **Show details.** Check this box to show sales invoices. Default: off.

Links within the report:

- **In Customer Name.** It links to view the customer account inquiry.
- **In Original Overall Total column.** Only with *show details on*, the report links to view where allocated.
- **In GL Overall Total column.** Only with *show details on*, the report links to view the General Ledger transaction.

**Note.** The conversion between the customer's currency and the functional currency is done with the exchange rate used in the respective transaction.

## Maintenance

### Create Contract

See: [Contract Costing Overview](#).

This script allows you to ... See: [Creating a New Contract](#).

### Select Contract

See: [Contract Costing Overview](#).

This script allows you to ... See: [Selecting A Contract](#).

### Sell Through Support Deals

This script allows you to ...





# Purchase Orders

## Overview

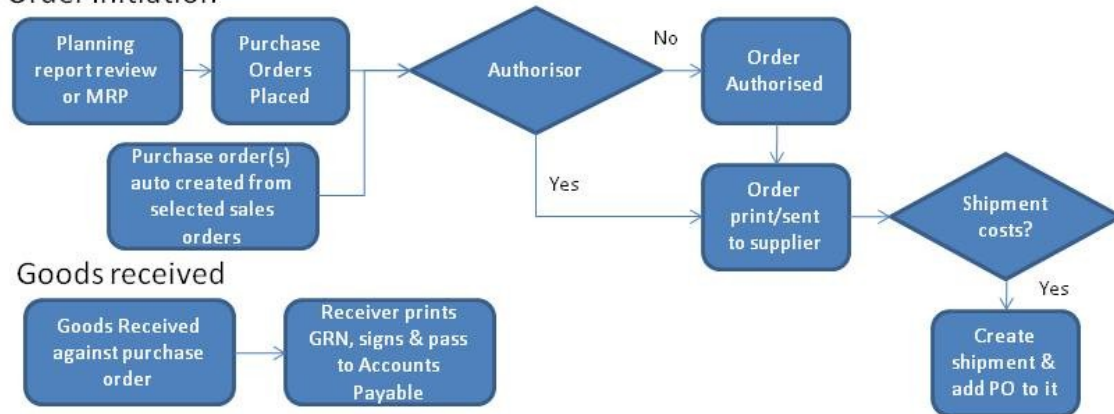
Purchase orders are the contract initiated by an organisation with its suppliers (vendors). Since, purchase orders commit the business to expenditure it is important to ensure that the commitment is not made without the proper authority. webERP forces certain procedures to be followed to ensure proper authorisation. The sequence is:

- An operator with access to the purchase order creation creates the purchase order.
- It is possible if this user has access to authorise the purchase order to have it authorised automatically. This requires a configuration setting to be enabled to allow this. Normally, another user with appropriate authorisation levels is required to authorise the order. Authorisation levels can be set by user and currency and by the amount of that currency. For example a user may be able to approve purchase orders up to \$1000 in USD. Orders cannot be printed and sent to a supplier until they are authorised.
- Users who are valid authorisers have a special screen to see which orders require authorisation - they can authorise the orders from there.
- A trail of who initiated the order, who changed an order and who authorised an order with dates is maintained in the status comments
- Once an order is authorised it must be printed - it is not possible to receive any stock against an order that has not been printed
- Once printed it is now possible to receive stock against the order

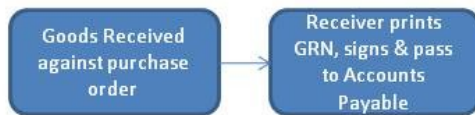
It is necessary to create purchase orders to receive stock. Stock cannot be received without an order - except by entering a stock adjustment. The receiving of stock creates a GRN - Goods Received Note that can be printed and signed off by the person entering the receipt of stock. The system retains records of the GRNs and these must be matched off against purchase invoices to ensure that only those goods received are paid for.

# Purchasing Cycle

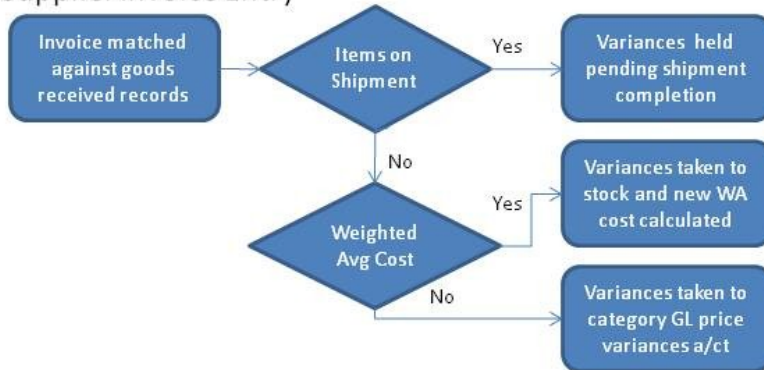
## Order Initiation



## Goods received



## Supplier Invoice Entry



## Purchase Orders Status

The order status starts off as:

- Pending - the order has been created but not authorised
- Authorised - the order has been authorised but not printed
- Printed - the order has been authorised and printed and is ready to receive
- Cancelled - the order has been cancelled. Cancelled orders are not deleted, they are retained for audit purposes - who cancelled it and the date is available for inspection in the status comments field
- Rejected - if an authoriser disagrees with the requirement to purchase this order the status of the order is changed to rejected. In many respects this status is treated the same as cancelled
- Completed - the order is fully received or no more will be received on the order. webERP maintains changes the status to completed when all lines of the order are fully received - or the line is amended to have the same amount as already received.

## Amending Purchase Orders

When you click the Purchase Orders, you can search for the outstanding Purchases, it is possible to search by purchase order number or the stock location where the order is set to receive into, or search for an item and then search for purchase orders that have that item on it. Searching the orders shows all the orders that match the criteria with their status and links with the options relevant to their status shown. The links allow the order to be modified, printed, received depending on the status of the order. The supplier and the amount of the order are also shown on the search screen.

If the order is pending then it is possible to modify the order and any lines on the order. If the order had been authorised or printed then whilst it is still possible to amend any aspect of the order, it will need to be reauthorised as the status is changed back to pending - this is to ensure that there is no way for someone without the necessary authorisation level of committing the business to purchase more than they should be doing!

If the order is completed, it is not possible to modify it.

If the order is rejected, it is possible to change the order to authorised - by a user with appropriate authority.

## Adding a New Purchase Order

To add a new Purchase Order, Click on Main menu.

- Select the Purchasing Module
- Click on Add Purchase Orders
- Enter the suppliers name or supplier code and click search.
- Select the supplier from whom you want to purchase.
- Fill in the information for both the supplier and warehouse where the goods are going to be delivered.

The purchase order date, delivery date, Requisition Ref, warehouse name, Address lines 1 to 4, telephone number, and the deliverers ) Then the supplier information that need to be entered include the address line 1to 4 that needs to be entered , the phone number, the payment terms , and there is a field to type in any comments if necessary.

- Click Enter line items.
- This will allow you to select the stock category for the stock items you want - you can elect to choose "All" stock categories to list all stock
- Click Search Now, a list showing the items meeting the criteria will display
- It is possible to enter the quantity you require in the quantity field in the list. Be aware that this is the supplier's unit quantity that is being entered here
- Click order some - all the lines with a quantity entered will come up in the order at the current supplier purchasing price. if no purchasing data is set up for the item/supplier, then the purchase price will need to be entered manually.

- Click on "Update Order Lines" to recalculate the extended amount of the order
- Then click "Process Order"

A success report should display showing that you have created a purchase order.

If the configuration setting to automatically authorise the purchase order is enabled, then if your authority allows you to authorise purchase orders in the suppliers currency and your authority level exceeds the amount of this order, then the order should automatically be authorised.

If you have authority to authorise purchase orders but the configuration setting to automatically authorise purchase orders is not set, then you will need to do another step to authorise it. There is a special screen to allow selection of pending orders for authorisation, alternatively it is possible to modify the order and change its status manually to authorised.

If you do not have the authority to authorise purchase orders in the currency of the supplier, to the value of the order, then a duly authorised person will be required to authorise it before it is possible to print the order.

## Authorising Purchase Orders

Here the directors and authorising officials will log into webERP to look for purchase orders that have been raised and they will either cancel, reject, or authorise these purchase orders.

Below are the steps of authorising purchase orders

- Click on Main menu
- Click on Purchases
- Click on Orders to Authorise
- The status of the purchase orders will be pending
- Drop this down and select authorise
- Click update

This will enable the person who created purchase orders to print and receive them. In order to Receive a purchase order, it has to be printed first and sent or emailed to the supplier. (N.B this can't be done unless the purchase order is authorised)

Once a purchase order is authorised it can then be printed as follows:

- Click on Main menu
- Click on Purchase Orders
- Go to Search outstanding purchase orders and select the purchase order you are looking for
- The options to Print, Receive or modify should show
- Click on the Print option

After printing this purchase order you can send it to the supplier through an email or print it out and post it. If the order is being shipped by the supplier and there are additional costs to take into account,

then you should use shipment costing and add the order to a shipment. Using shipment costing ensures that the costs of shipping and transport are apportioned between all the items on the shipment. See shipment costing section of the manual.

## Receiving Purchase Orders

- When the supplier delivers the goods to the warehouse , the stock manager will log into webERP
- Click main menu -> Purchasing Module
- Click Purchase orders and enter criteria to select the purchase order you require
- Assuming the order is authorised and printed there will be an option to "Receive" - click Receive
- The Goods Received screen shows and allows the quantities received to be entered. This quantity will show in the businesses units of measure but the conversion and the quantity in the suppliers unit of measure will also show.
- If the item being received is a controlled item, the batches/rolls/lots/serial numbers being received need to be specified individually and the system keeps track of how many in total are being received.
- Only the quantity received should be entered, this may well be different to the original order quantity because the supplier might not deliver all the ordered items at the same time, and at this point we need to record exactly what has been delivered, and not what has been ordered. He might deliver in parts. So these changes are supposed to be effected at this point before processing a Goods Received Note.
- Then click update.
- Click on Process a Goods Received (GRN), finally click on Print a Goods Received Note (GRN).

The goods received note should signed off by the person who received the goods - optionally a copy to the supplier's driver.

An alternative short-cut method is also provided for auto-receiving purchase orders at the prices defined in the purchase order, for authorised purchase orders. After having entered a purchase order or modified a purchase order a link to automatically receive the entire order and create the supplier invoice will show if the order is authorised. This will happen automatically if the configuration option to auto authorise purchase orders is set and the user creating or modifying the order is authorised to do so. Clicking this link will receive all the items on the purchase order to the extent there is any quantity yet to be received. However, this program cannot handle controlled items. If there is even one line of controlled/serialised stock on the purchase order then this facility cannot be used.

# Inquiries and Reports

## Purchases from Suppliers

This report shows purchases from suppliers over a period of time. It shows the overall amount, taxes and total in the supplier's currency and in the functional currency.

Report parameters:

- **Select period from.** Select the beginning of the reporting period. Default: one year before current date.
- **Select period to.** Select the end of the reporting period. Default: current date.
- **Show details.** Check this box to show purchase invoices. Default: off.

Links within the report:

- **In *Supplier Name*.** It links to view the supplier account inquiry.
- **In *Original Overall Total column*.** Only with *show details on*, the report links to view where allocated.
- **In *GL Overall Total column*.** Only with *show details on*, the report links to view the General Ledger transaction.

**Note.** The conversion between the supplier's currency and the functional currency is done with the exchange rate used in the respective transaction.

## Maintenance

### Maintain Supplier Price Lists

Use this script to maintain supplier price lists used in purchase orders.

Fields (columns):

- **StockID.** The item code used in the company. See [Item Code](#).
- **Description.** The short part description (title) used in the company. See [Part Descriptions](#).
- **Price.** Sales price from supplier to company, without taxes.
- **Suppliers UOM.** Unit of measure used by the supplier.
- **Conversion Factor.** Quantity of company UOM in supplier's UOM. It is the factor to convert the measurement in supplier's units into our measurement unit. E.g. Quantity of retail units in a wholesale unit.
- **Suppliers Description.** The short part description (title) used by supplier in his documents.
- **Lead Time.** .
- **Preferred.** All the items with this stock Id will be purchased to this supplier?
- **Effective From.** Start date.
- **Suppliers Item Code.** The item code used by supplier in his documents.

- **Min Order Qty.** Minimal quantity sold by the supplier.
- **Save.** To commit info.



# Supplier Tenders

## Overview

The tendering system enables a company to create tenders for suppliers of one or more items, to send those tenders to one or many suppliers, to enable those suppliers to login to webERP in order to submit their tenders, and enables the company to turn a tender into an order.

It also allows selected suppliers to login to webERP, to create "offers", whereby the supplier offers a certain quantity of one or many items at a given price. The company can elect to turn that offer into a purchase order, or to decline the offer

The system works by emails being automatically sent between suppliers and the company and so depends upon the supplier email address being filled out.

## Creating a Tender

In order to create a tender, a user must be given permissions to create them. This is done within the user settings screen, and defaults to not allowing the user to create tenders.

The create a new tender screen is accessed via the Purchases module. There are three sections to creating a tender, the header details, selecting suppliers to send the tender to, and selecting the items that we wish tenders to be submitted for.

## Tender Header Details

The tender header has fields for the date when the delivery must be made, the warehouse that delivery will be needed to, and the contact details for the person dealing with the tender.

## Suppliers To Be Invited To Tender

Clicking on the "Select Suppliers" button brings up a screen to search for suppliers. Only suppliers with email addresses input will show in the supplier search screen. This is because the tendering system works by sending emails to everyone involved. You can choose as many suppliers as you want to send the tender request to.

## Items To Be Included In The Tender

Clicking on the "Select Item Details" button brings up an item search screen. You can search for any item currently set up on webERP and select any quantity to be put for tender. You can select multiple items from one screen. Any number of items can be on the tender.

## Editing a Tender

Once a tender has been created it can be edited in the "Edit Existing Tenders" screen accessible from the purchasing module.

When you enter this screen a list of all outstanding tenders is shown and you can select which tender to edit.

## Suppliers making an offer

When a supplier receives the email notifying them of the tender they can login using the supplier login previously created for them. This will give them an option to "View any open tenders without an offer". Choosing this option allows the supplier to see any tenders open for them to submit, and enables them to give a price, and adjust the quantities and dates if necessary. Processing the tender will then send this information by email back to the company, and update the database with the tender submitted by the supplier.

## Supplier Offers

Sometimes it can occur that a supplier wishes to offer a one off deal of a certain quantity of a product or products at a special price. The supplier can use their supplier login to webERP to send you this offer.

From the supplier login screen the supplier should choose the "Create a new offer" option. This will present them with a stock item selection screen. They can select any number of items here and enter the quantity they wish to offer and the price at which they wish to offer them.

This offer can have as many items on it as the supplier wishes. Once completed an email is sent to the company

Existing offers can be edited by selecting the "View or Amend outstanding offers" from the menu.

## Actioning an offer

When the company has received offers from suppliers, either as a result of a tender, or directly from the supplier, these can be actioned by selecting the "Process Tenders and Offers" option from the purchases module menu screen. This supplies a drop down list of all suppliers who have made an offer, and the offer is still outstanding. You can view a particular suppliers offer by selecting that supplier.

Each line of an offer will have three possible actions against it

- Accept
- Reject
- Defer

If the accept option is chosen, then it gets converted into a purchase order (providing the user has the authority to create orders in that currency).

Choosing the reject option will remove this offer from the system, and notify the supplier cthat the offer has been rejected.

Choosing the defer option will leave that offer on the system and it will appear again the next time this option is chosen

# Shipments

The shipment costing system is meant for use in situations where there are substantial freight costs on purchased products and the business wishes to keep track of the actual cost of these items. Many smaller businesses do these calculations on spreadsheets outside the integrated system. The advantage of bringing them inside the system is that the possibility for updating standards and calculation of variances from standard at the time the costing is completed.

Having selected a supplier the system allows outstanding purchase order items to be collated into a shipment of goods arriving altogether, the shipment is allocated a shipment number. As a convenience to changing all the individual purchase orders allocated to the shipment, by changing the expected time of arrival of the shipment (ETA) the delivery date of all purchase order lines on the shipment will be updated.

The costs associated with landing and clearing this bundle of products can be entered against it from purchase invoice entry. Most likely there will be many different supplier/vendor providing services to get the goods from the supplier's warehouse to the business's warehouse. Any number of different supplier's/vendor's charges can be entered against the shipment costing. Freight charges and cartage from the wharf, airfreight, unpacking, demurrage etc can be entered as costs of the shipment. These charges are entered by clicking the shipment charges button on the supplier invoice entry screen. Where a supplier provides freight services, it is possible that the supplier invoice has charges for many different shipments, the supplier invoice entry allows for the invoice to be split between any number of shipments. The shipment costing inquiry will show these costs allocated against all of the items on the shipment, using the invoiced value of the items as the basis for apportionment. The actual shipment cost will show together with the existing standard cost and the variance.

## Shipment General Ledger Posting

Shipment charges are posted to the GRN suspense account at the time of entry of the purchase invoice. When the shipment is closed the costs of the shipment are compared against the standard cost of the shipment items taken into stock and the difference that was left in the GRN suspense account is taken to purchase variances.

If the option to update standard costs at the time of closing the shipment is used, the difference on the stock value is taken to the stock category - stock adjustment, general ledger account.

## Creating Shipments

The purchase order(s) must already be created. The shipment must be created before any of the goods have had supplier invoices entered against them. After selecting the supplier from which the product has been sourced and having entered the purchase order(s) to initiate the transaction, from the select supplier menu, choose the link "Set up a New Shipment". Each time this page is called the system increments a shipment reference and shows the shipment number that will be used. The shipment page allows the details of the shipment to be entered.

- The name of the vessel on which the product has been loaded
- The voyage reference - this could refer to the HAWB in the case of airfreight

The above fields are required and serve as a useful reference for following and tracking where product is currently and monitoring ETA through the shipping company who will need these details.

In addition to the above details the Expected Time of Arrival (ETA) is required to be entered.

When the shipment entry screen is first displayed there is facility to select the inventory location where the purchase order has been requested to arrive. By default the user's default inventory location will be used, but once the inputs above are entered the location can be changed and a click on the "Update" button will then show all the purchase order items defined to arrive at the new location.

Once a purchase order item has been selected to be part of the shipment the shipment entry screen will only allow other purchase order items that are also to be delivered to the same location. The location will be displayed on screen for informational purposes only.

The location into which the shipment is to be delivered follows the purchase order. It is not possible to set up a shipment with purchase order lines into different locations.

(NB. it is possible to change the location of a purchase order that has lines on it that are allocated to a shipment that also has other lines expected to be delivered into a different location. This could result in a problem)

The purchase order line items on outstanding orders that are yet to be invoiced and are not currently on a shipment are shown on the screen. Clicking on the link to "Add" will add the line to the shipment. The lines currently allocated to the shipment will show and a link to "Delete" the line. This allows the line to be taken off the shipment (it will not delete the purchase order line).

## **Shipment Costings**

The costs of a shipment are recorded at the time of purchase invoice entry. Entering a purchase order from the supplier of the shipment, records the actual amount invoiced and the exchange rate at which it was invoiced against the shipment. It is important to ensure the shipment is defined before any of the item is invoiced. Once some of the item is invoiced it is not available for adding to a shipment. Nor can the item be taken off a shipment to which it was already set up against. The item must be credited before this can be done. The recording of the shipment cost happens invisibly behind the scenes for GRN items.

Freight charges, duty and cartage are recorded against the shipment at the time of the purchase invoice entry against the freight company. There is opportunity to enter invoices against a shipment and all open shipments show in a select box.

Selecting a shipment is done from the select supplier screen. The shipments defined for the supplier are shown for the user's default inventory location. The location can be changed to show shipments into other locations. By default only open shipments are shown but there is an option to show closed

shipments as well. The vessel, voyage and ETA show for all shipments shown together with links to allow:

- Modification of the shipment lines or ETA or references.
- Viewing the costing with invoiced amounts in local currency against each item together with the other general shipment charges - shown by supplier and invoice number.
- Closing the shipment costing.

## **Closing a Shipment**

From the select Shipment screen, the link to close a shipment shows on all open shipments. Closing the shipment makes it impossible to post additional charges against it and also if general ledger stock integration is active, journals to take the variances from standard to the variance account and the GRN suspense are created. Closing a shipment also has an option to update the standard costs. By default this is set to yes. Again if stock GL integration is enabled (see company preferences) then the cost adjustment journals are posted in the same way as if the cost adjustment was processed separately.

# Contract Costing

## Overview

The Contracts module allows for construction of costings for specific customer projects where a bill of materials to be taken from inventory for the contract can be defined, together with a costed list of other requirements. By entering a gross profit percentage figure a price can then be arrived at to charge the customer. The contract can then be converted to a quotation. While the contract is at the quotation stage it is possible to modify the stock components and other requirements - the quotation will be updated with the new costing on committal. The quotation can then be resubmitted to the customer.

When a contract is converted to a quotation the system actually creates a manufactured inventory item with the name of the contract reference and with the description from the contract description.

When (if) the quotation is accepted by the customer, the quotation can be converted to an order in the usual way by modifying the quotation flag from quotation to order. Committing this change then changes the status of the contract to ordered so that changes are no longer allowed. This process also creates a work order so that stock required for the contract can be issued to it. By using the work order issue functionality the stock is reduced and work in progress is increased.

When supplier invoices (accounts payable) are entered there is the option to specify the contract that is to be charged with the cost. The cost of contract charges also goes to the work in progress account (as determined from the stock category record of the contract). Any number of contract charges can be entered against a supplier invoice (or credit note). In entering contract charges there is also the possibility of flagging whether or not the charge was originally envisaged and costed into the contract or not. Contract charges records are created for each entry.

The original contract costing can be compared against the actual charges against the contract, to see how much was made on the contract. When all charges are entered against the contract it needs the status of the contract to be changed to complete. This process closes the work order and compares the original contract cost against actual costs and takes the value not charged to cost of sales to the usage variances account (based on the stock category of the contract item) and clears the balance that would otherwise be left in work in progress.

## Creating a New Contract

From the contract tab of the main menu, select Create Contract. The first step is to select the customer for whom the contract is for.

The contract requires a reference up to 20 characters - without spaces, slashes or inverted commas - that will be used for the contract code. It must be unique from other contracts and also from any existing inventory item codes already in the system. A description of the contract is also required. The

description can be any length and is a text field but will be truncated in the stockmaster to X characters when the contract is converted to a quotation. The description in the contract record is retained.

Each contract must also specify the category - the existing inventory categories are displayed to select from but new categories can be created. It is important to realise that the posting for the general ledger is performed based on the general ledger codes set up against the inventory category selected. e.g. charges against the contract will be posted to the work in progress account against this inventory category and the usage variance account of this category will be used for any difference between the contract total cost and the original costing.

The gross profit percentage entered is the factor used based on the cost to arrive at the contract price.

The date that the customer requires the contract to be completed is also specified in the contract. This propagates through to the quotation and order.

If the contract is for a customer that is invoiced in a foreign currency the currency exchange rate can also be specified - it is defaulted based on the current table of exchange rates at the time the contract is created.

There are two buttons on the contract setup page that allow the stock required for the contract to be specified and the requirements that are not stock items to be recorded.

Entering the bill of materials for the contract is done from a screen that shows a stock selection options - it is possible to choose by stock category or search for individual items by code or description. The list of items matching the criteria entered displays and the quantity of each item required should be entered in the box next to the item. There is no limit to how many items can be selected. Once all the items from stock have been selected there is a button that brings back the contract details (Back to Contract Header). The contract screen will now show the bill of materials as selected and the cost of each together with the quantity of each required extending to the total value of all stock items required for the contract.

Entering the other requirements is more straightforward as a new screen allows entry of descriptions of the other items required, the quantity of the item and the cost per unit of the items. Again, a button to go back to the contract header allows the user to switch back to the contract definition screen which will now show the other requirements listed and extended to arrive at the total cost.

The sum of the cost of the bill of materials together with the total cost of the other requirements is shown as the total contract cost. This cost is used together with the GP % entered to work out the total contract cost. The GP% is the % of the total contract price that is profit - so 1 minus the GP% is % of the total contract price that is the cost. The calculation is therefore - contract total cost divided by (1 - the GP%).

## Selecting A Contract

From the Contracts tab of the main menu, Select Contract allows contracts for a specific customer to be selected, or contracts of a specific status. Contracts can have a status of:



- Setup and defining requirements
- Quoted - item has been created and sales quotation created based on contract costs
- Ordered - customer has accepted the quotation and the quotation has been turned into an order. This releases the work order so that stock can be issued to the contract through the work order issue system
- Closed - the contract has been completed and finished - the contract work order is closed so no more stock can be issued to it and no more charges can be made to it. through accounts payable

The contracts meeting the criteria specified are displayed with links to perform actions depending on its status. If the contract is quoted already there is a link to select the quotation for printing. If the quotation is ordered then there is a link to issue items to the contract work order. In all cases a link to open the contract definition is available. However, the option to modify the contract definition is disabled once the contract has been ordered by the customer. The contract definition can be modified until the contract quotation is converted to an order. This is done in the usual way - selecting the quotation then changing the quotation flag from quote to order. When the changes are committed the contract work order is created and the requirements for the work order from the contract bill of materials are copied to a normal manufacturing bill of materials. It is not necessary to venture into the manufacturing functionality of webERP as all this is handled within the contract. Only the work order issues screen which comes up directly from the link on the contract selection screen once the contract is converted to a sales order.

When the contract has been ordered by the customer a link is available to show the actual contract cost in comparison to the originally estimated costs. This screen shows the originally costed components and the other requirements costed into the total contract cost on the left side of the screen. On the right the actual inventory issued to the contract and the actual other costs entered through the supplier invoice entry screen.

## Entering Contract Costs

The act of issuing stock items to the contract work order, puts the cost of those items as contract costs. Issues to contract work orders is the same as issuing stock to any other work order. See work orders/manufacturing manual. A link to enter the inventory issued against the contract is provided from the contract selection screen. The general ledger entries created when stock is issued to a contract work order are to debit the work in progress account (from the stock category record of the contract item) and credit stock (from the stock account of the stock category record of the item being issued).

Other contract costs are entered at the time of entering AP invoices or credit notes. There is an option on this screen to enter against a contract - in a similar way to entry against a shipment. It is possible to enter a supplier invoice against any number of contracts. The amount of the supplier invoice (or credit note) that is entered against contracts is posted in the general ledger to work in progress. Contract charges records are also created referring to the supplier invoice. To reverse contract charges, supplier credit notes have the exact opposite entries to supplier invoices.

## Closing Contracts

Open contracts continue to show on the contract selection screen until they are closed. When entering supplier invoices and credits they show in the drop down list as options for issuing costs against until they are closed. Open contracts also have entries created in the general ledger for work in progress for all the stock issued to them and other requirements charged against them through accounts payable. When the contract item is invoiced to the customer the stock is reduced by the costed amount of the contract and cost of sales is charged with this amount. This value may not actually be the final cost of the contract and the difference between the actual contract cost and the costed contract cost needs to be processed to usage variances in the general ledger, this is what closing the contract does.

The process of closing the contract, compares the cost of the contract as invoiced to the customer against the costs issued to the contract (in work in progress) and creates a general ledger journal to the usage variance account (from the stock category record of the contract item). If the contract item is already invoiced to the customer and the contract work order as showing that the contract item has not yet been received against the work order then the work order receipt is processed. This receives a finished contract items against the contract work order. This process creates the general ledger postings to Debit the stock account (from the stock category record of the contract item) and credit the work in progress account. The amount of this journal is based on the original contract cost.

At the end of the contract closing process, the contract work order has the contract item received against it and the work order is then closed. In addition the work in progress account is cleared so that all entries for issues of stock and other costs to the contract are contra'd by the receipt of the contract item and any variance posting.

Using the contract closing option from the Contract Costing screen thus avoids any requirement to venture into the manufacturing module at all. Since, (if it has not been done through the manufacturing module - which is checked first) the finished contract item is received against the work order and the contract work order is closed. The status of the contract is also updated to closed.

Once a contract is closed it is no longer possible to issue costs against it either in the form of inventory or other charges. However, it is still possible to inspect the original contract costing and the actual costs that were issued against it. This is done from the contract selection screen - where completed contracts can be specified - the link to the contract costing will show.

## Contract Process Flow Summary

The process with contracts is as follows:

1. Discussion with customer
2. Create contract costing - with all requirements, both external costs and stock required
3. Produce the quotation for customer based on the contract costing created
4. If the quotation is accepted by the customer turn the quotation to a sales order - this initiates the contract costing
5. Issue stock to the contract

6. Enter supplier invoices against the contract
7. When the contract has been delivered to the customer, receive the contract item against the contract work order. If the contract is closed through the contract costing screen, this step happens automatically.
8. Invoice the contract item to the customer
9. Complete the contract costing - to take any variances and clear the work in progress account where the variances sit until the contract is closed

## **Contract Costing General Ledger Impact Summary**

When cost is allocated from a supplier invoice, the cost is debited to the work in progress account of the stock category of the contract - credit to creditors control.

When the contract item is received against the contract work order, the entry is :

DR stock

CR WIP

based on the stock category of the contract.

When the contract item is sold then it is like selling any other item DR cost of sales - from the COGS GL posting table

CR stock - from the stock category of the contract item

When you issue stock to a contract the entries are:

DR WIP - from the stock category of the contract item

CR stock - from the stock category of the issued items

When you close a contract the variance against the contracted contract is taken to account - the entries are:

DR/CR WIP of the stock category of the contract item - to clear WIP in relation to the

DR/CR usage variance of the stock category of the contract item

# Manufacturing

## Overview

Manufacturing - simply the combination of items to make other items can be implemented effectively from webERP version 3.06.

It has been possible to build bills of material for manufactured items for some time but the functionality that allows the materials to be issued from stock and manufactured items received into stock was introduced with 3.06. This is the purpose of the work order.

Functionality to add labour items to work orders and post recovery amounts to a profit and loss account for issues of labour to a work order was added after 3.09 (Sept 2008).

Functionality to set up a master production schedule and explode bills of materials into the components required to manufacture this demand and calculate the required orders to be placed/rescheduled (MRP) was added by Mark Yeager in March 2009.

Bills of material now allow components to be defined as "auto-issue". Components set up to auto-issue, automatically create the issue transactions against the work order based on the bill of material quantities on the entry of receipts of a finished item against the work order. This decreases the administration of work orders for those components with relatively low value and limited possibility for any usage variance. It is not recommended that this feature be used on components where the final requirement for it could vary with for example yield differences between work orders. Work orders take the value of components and materials issued and divide this total cost between the output items to arrive at a cost per unit for all output items. The process for performing this calculation is called "closing" the work order.

Functionality to automatically create work orders for manufactured items at a default factory when a sales order is entered for which there is insufficient stock after all sales orders are delivered and outstanding work orders and purchase orders received. This functionality needs to be turned on as an option under configuration settings. The email address of the production manager who will receive an advice of the work order being created can also be defined in the configuration settings.

In dealing with serial or batch controlled items there are two ways that the system can operate. Either the serial numbers or batches must be created at the time the work order is created or they are entered at the time they are completed. If they are created at the time the work order is set up there is an option to enter remarks about each lot or serial number about the manufacture or quality check data. To have serial numbers (or batches) defined at the work order entry stage this needs to be set in the configuration settings.

The sequence of events in manufacturing an item is as follows:

- Enter a Work Order - selecting all the output items required to be included in the work order costing. To ensure accurate costing it is recommended that work orders be created for single items wherever possible. The quantity required of the item and the date the items are required to be completed by must also be specified. If the output item is a controlled item - either serialised or lot/batch controlled - then there is also an option to enter the next serial number or batch reference which will be retrieved when entering the manufactured items received. If the configuration is set to create serial numbers (or batches) up at the time of the work order entry then there is an option to create serial numbers automatically based on the next serial number for the item defined in the stock master - all that is required is the number of serial numbers to create.
- Receive Items against the work order. When manufactured items are completed they can be 'received' against the work order. Auto-issue components are automatically issued. On the first receipt of manufactured items against a work order, the cost of the item is recalculated by rolling up the cost from the bill of material. A cost adjustment is performed if the cost changes. If serial numbers (or batches) have been defined at the time of the work order entry these will list for checking off the items being received as finished against the work order
- Issue components and raw materials to the work order
- Once all components and raw materials are issued to the work order and no more manufactured items can be received against the work order it can be closed. The closing process recalculates the cost of the items manufactured on the work order and if weighted average costing is used a cost update will be processed.

## General Ledger Integration Issues

When the "Create GL entries for stock transactions (at standard cost)" option in the company preferences form is set to "Yes", then GL journals are created as a result of work order transactions. When a work order is created there is no GL impact. The ways the GL is impacted as a result of manufacturing processes are as follows:

- Receiving Manufactured Items - the stock of finished goods - as per the stock category record of the item being manufactured is debited with the recalculated (rolled up) cost of the item - as at the time of the first receipt against the work order and credited against the work in progress account of the item (from its stock category record). Subsequent receipts of manufactured stock against the work order are debited to the stock account at the same cost as the first entry. Also, auto-issue components that get issued at the time of the receipt of the manufactured item also create GL entries to debit the work in progress account of the manufactured item's stock category WIP account. The credit goes against the stock account of the component's stock category. For manufactured and purchased items this will be a balance sheet account. However, if the item belongs to a labour type stock category then it is possible to select a profit and loss "recovery account" and for the credit for the value of labour "issued" to the work order to go to this profit and loss account.

- Issuing components to the work order - the same entries as for auto-issue components above. i.e. debit the manufactured output item's WIP account and credit the component item's stock account. Labour items can also be auto issue.
- Closing the work order - compares the quantity of components issued against the bill of material at the time of the first receipt of the manufactured items - the volume differences are evaluated at the standard cost (as at the time of the first receipt of manufactured item) to come up with the usage variance posted to the debit or credit of the manufactured item's stock category record's usage variance account. Then the cost of the items issued to the work order are compared against the cost as at the time the first receipt of the manufactured item was entered - differences here are taken to the price variances account in the manufactured item's stock category record. It is the closing of the work order that ensures that the costs received from the work order in the form of manufacturing output equals the cost of the inputs - the various components and materials issued to the work order

Event	Debit	Credit
Components issued to the work order	WIP a/ct from stock category of manufactured item	Stock account from the category of the component item
Labour issued to the work order (identical to any other component except that labour type categories have profit and loss accounts for their stock account)	WIP a/ct from stock category of manufactured item	Labour recovery account from category of the labour type item
A completed manufactured item is received against the work order	stock account from the category of the manufactured item	WIP from the category of the manufactured item
Work order closed and the difference between the WIP debits and credits from the above transactions is compared and the balance is either <ul style="list-style-type: none"> <li>• Standard costing - taken to material usage variance from the stock category of the manufactured item</li> <li>• Weighted average costing - if some of the manufactured stock remains on hand the variance is taken to the stock account from the category of the manufactured item. The cost of the manufactured item is updated with the recalculated WAC</li> </ul>	WIP /  Usage variance	WIP /  Usage variance OR stock

## Work Order Entry

The Work Order is the medium for issuing components/raw materials to. A running total of the costs issued to the work order is maintained. Work orders can be created that have any number of output items. Output items are restricted to only "manufactured" items as defined in the item entry form. The

work order tracks the quantity of the output items received against the work order and checks that no more than the work order quantity originally set up, with an allowance including the over-receive proportion as defined for purchase orders, is received.

Setting up a work order is performed from the Manufacturing tab -> transaction entry -> Work Order Entry. The work order number is automatically maintained and defaulted for new work orders as is the start date defaulted to the date the work order was created. Other data required includes:

- Factory location - this is the inventory location which is used to retrieve the bill of materials for the items being manufactured on the work order - it is possible to have different bills of material for the same item depending on the inventory location. This inventory location is also used as the default location where materials for the work order are issued from and the default location where manufactured items are received into. It is possible to modify this during the issuing and receive processes.
- Required By - this is the date when the manufacturing must be completed by

With the above information completed then the items to be manufactured on the work order need to be selected. Normally this should just be a single item but it is possible to have multiple outputs against a single work order which is useful for by-products or processes with several output products. There are search facilities in the work order entry screen - only items flagged as manufactured in the item definition screen (Stocks.php) will show for selection. For each item selected the quantity required defaults to the EOQ - (Economic Order Quantity) defined in the item definition (Stocks.php) screen. If no EOQ is defined for the item then the quantity defaults to 0 and must be entered manually. The quantity required can be over-ridden and changed at any stage. Things are a bit different if the configuration option to defined serial numbers and lots at the time of work order creation is set. The quantity on the work order is calculated based on the number of serial numbers created or the sum of the quantity required for each batches entered. It is not possible to create a duplicate of an existing batch or serial number for the same item. (It is possible to have the same serial number or batch for different items.)

The quantity received of the item is maintained automatically against the work order items. The balance of the work order yet to be manufactured and received shows as "on order" in the stock status inquiry. Similarly the quantity required of components as extended by the bill of material for work order items is shown as quantity demanded against component items stock status inquiries.

## Closing Work Orders

The selection of work orders allows the costing to be viewed. The work order costing shows all the issues of materials and components against the work order as compared against the bill of material requirements - as they were when the first receipt of manufactured stock was received against the work order. The variances on the work order in terms of the usage of components and the expected cost of materials/components issued to the work order are displayed. Closing the work order takes these variances and if general ledger integration to inventory is enabled then journals are created to write

back the work in progress balance. Of course if there are several manufactured output items on the work order then the variances are apportioned between the items based on the quantity of the item received multiplied by the expected cost as a proportion of the total expected cost of all items received on the work order. The detail of how the postings created depends on whether weighted average costing is used or standard costing.

- **Standard Costing:** Under standard costing the entire variances are taken to the profit and loss account. The usage variance is taken to the general ledger account specified in the manufactured item's stock category record. The cost variance is taken to the item's purchase price variance account on the stock category record.
- **Weighted Average Costing:** If not all the stock manufactured on the work order remains on hand - perhaps some is sold - then the variance relating to the proportion that is left on hand is taken to the value of stock e.g. a negative variance increases the value of stock. A stock cost adjustment is also created (irrespective of whether the GL integration is enabled).

Closing the work order also deletes any existing serial number/lots that were defined at the time the work order was entered (where this configuration option is enabled) but the serial number has not been entered as received/finished.

## Material Requirements Planning (MRP)

It is one thing to plan for purchasing where the item being sold is the item to be purchased. Things get more complicated when the item being sold is manufactured - each of the components in the bill of material need to be available before the item being sold can be manufactured. Where the components in turn are also manufactured then the complexity compounds - this is the material requirements planning calculations are for.

The author of the MRP - Mark Yeager has also contributed a manual page for his scripts which is linked from the manual contents page. For the curious, here (in the developers own words) are the basic steps of the MRP calculations: First, create a levels table by examining the bom table and finding a level number for each part; for instance, a part with nothing under it in a bom structure is a level 0 part, a part with 7 levels of parts below it is level 7. Next, I create an mrpsupplies table and an mrprequirements table. Supplies are from the current quantity on hand, open purchase orders, and work orders. Requirements are from open sales orders, work requirements records for open work orders, parts below their reorder levels, and demands the users can enter in an mrpdemands table for sales forecasting. Then I read through the levels table, starting at the highest level, and net the supplies and requirements for every part. If there is not enough supply, an mrplannedorder record is created, and, if that part has parts below it in the bom structure, a requirement record is created for those lower level parts based on the net requirement for the top level part times the quantity per assembly for the component, with a schedule date based on the lead time for the part.

The MRP system uses certain order modifiers to inflate the requirement quantity. The EOQ from stockmaster is used, together with the item shrinkage factor and pan size.



There are a few programs to use before running an MRP.

## **Prerequisites**

Each item that requires a shrinkage factor or pan size to be set up must be defined in the stock item maintenance form all items need to have an EOQ (Economic Order Quantity - the most efficient or required order quantity) set up.

Pansize : This modifier is sometimes called the order multiple. It allows you to create planned orders in even multiples. This is especially useful if you are required by your suppliers to place orders in specific lot sizes. It is also a useful modifier if you have established your own production run sizes. This modifier causes MRP to inflate the required order quantity to an even increment of the pansize value. As with all modifiers you do need to be careful with this modifier as its use could lead to excess inventories

From the Setup Menu - MRPCalendar.php creates a calendar of valid dates for manufacturing. That way if the system schedules a planned work order for a part for a Friday and a component has a lead time of 5 days, the system will schedule the component for the preceding Friday rather than the preceding Sunday. To create the calendar, you enter a starting and ending date range and can opt to exclude Saturdays, Sundays, or any other day of the week. After the original creation, individual days can be set to be valid or invalid manufacturing days.

It is important to remember that this is "infinite capacity" MRP - i.e. orders will be created based on the demand requirements without any constraints on the ability/capacity to manufacture the order... currently the system is only implemented to calculate and report orders required and further analysis is required to figure out how to manufacture the required orders.

From the Setup Menu the demand types need to be defined - by default webERP sets up a single Forecast demand type - which should be adequate for many businesses without further additional demand types. However, the system has ability to add additional demand types (the script MRPDemandTypes.php maintains a table of user-defined types of demands; for instance, F for Forecast or S for sales or whatever the user wants to use.

There are two programs for users to enter the demands.

MRPDemands.php can be used to enter single demands at a time. There is also a List Selection button that will list all demands for a part, if a part is entered, or all demands for a demand type, if no part is entered; when the parts are displayed, there are buttons to Edit or Delete. The Delete Demand Type button deletes all of the particular demand that is selected.

MRPCreateDemands.php can be used to generate a Master Production Schedule. The user selects a demand type, stock category, inventory location, and then enters a date range for sales orders to include. The program will generate demands beginning from the Start Date For Distribution for the number of periods – either weeks or months – that the user selects. Parts can be excluded based on their total sales quantity or total sales dollar. A multiplier can be used to increase the quantity; an example

from my company is that we wanted to forecast for a year and a half, so rather than look at the last year and a half sales, we looked at the most recent 6 months and multiplied that times 3. An example of the distribution is if in a certain sales period a part had a quantity of 15 and the Distribution Period was months and the Numbre of Periods was 6, the first three months of records would have a quantity of 3 each and the last 3 would have a quantity of two. Dates are calculated based on the manufacturing calendar.

MRP.php runs the MRP itself. It is a regenerative process that purges all of the old files and creates new ones. There is a selection to chose the location for inventory. Days Leeway can be entered, so purchase order and work order dates scheduled within the leeway of the calculated need date are considered valid; the system does not actually change the dates in the work orders or purchase orders, but there is a report of those orders that the MRP estimates should be changed. And there are check boxes to select if MRP Demands, eoq, pan size, and shrinkage factor should be used. The MRP runs pretty quickly. The system I am running it against is not as large as most long running systems, but, with about 3,000 parts, a few hundred open sales orders and purchase orders, a half a dozen demands for assemblies that go 7 levels deep and have close to a thousand parts, plus individual demands for a few hundred other parts, I run this on a 3 and a half year old iMac with 1 gig of memory and it takes less than a minute. I also tried it on my web host, which is in Chicago, while I'm in New Jersey about 30 miles west of New York, and it took less than 20 seconds.

The MRP doesn't change or create webERP purchase orders or work orders. I think it might be dangerous to do that automatically, without some sort of human oversight. In the 2.0 version, I might have some sort of screen that will bring up what I call MRP Planned Orders and allow users to generate purchase orders or work orders from them. Right now, there are several reports to show the results of the MRP. MRPReschedules.php shows those work orders and purchase orders that the system calculates should have their dates changed; if there is no requirement for the orders, a CANCEL message is displayed. MRPPlannedWorkOrders.php and MRPPlannedPurchaseOrders.php show orders that the MRP calculates should be created. The reports can be created showing every individual order needed and the source of its requirement, or the orders can be consolidated into weekly or monthly orders. MRPReport.php shows the supply and demand for individual parts. On the demand side, it shows the type of order that created the demand, the top level part for that demand, and the order number – in the case of user entered MRP demands, the order number is system generated. The supply side shows orders that make up the supply and in the case of Planned orders created by the MRP, it shows the type of demand the supply was planned to cover and the order number for that demand. Finally, there is MRPShortages.php that shows those parts that have a demand that is greater than the supply. The dollar total might be a little misleading because if there is a sales order for an assembly without enough supply to cover it, that will show up on the report, but so will all of the components that are needed to build the assembly. I haven't quite decided if I should exclude the components or not.

# Maintenance

## Work Centres

A table of work centres is maintained. It contains the following fields:

### Work Centre Code

Enter up to five characters for the work center code.

### Work Centre Description

Enter up to 20 characters for the work center name.

### Location

A work centre location is the factory or warehouse where the work center belongs. See [Locations Maintenance](#) to set up a location.

### Overhead Recovery GL Account

The value of the overheads allocated to works and pay for employees in this work center will be costed to this GL account.

### Overhead Per Hour

Enter the rate per hour (if the method you selected to calculate the overhead was as an hourly rate) .

# Labor Recording

## Overview

The cost of labour is of course a major component of the cost of manufactured items. A method is required to capture the cost of the labour spent in the process of manufacture.

The work done on work orders and contracts can be captured by the entry of time-sheets. Each employee defined can have a time-sheet - this has nothing to do with payroll - it is about capturing the time/cost of employees against work orders.

The cost associated with employees is set by associating the employee with an item. The labour item has the cost set at an amount that should recover both the manufacturing wage/salary costs (and typically manufacturing overheads). A special type of item can be defined for labour - these items must have a labour type stock category. It is the (labour) stock category record that defines how the labour cost is posted in the general ledger.

Labour stock categories post the labour cost - the hours multiplied by the item cost - to a balance sheet work in progress account and credit to a profit and loss account for the labour recovery.


Typically, the actual labour cost from the payroll is debited to the profit and loss account wages/salaries costs - the labour recovery takes this cost from the profit and loss (as a credit) and puts it into stock - until the manufactured items are sold. (webERP handles the cost of sale of a stock item by posting (debiting) the cost to the cost of sales account and reducing (crediting) the stock value by the same amount.) The profit and loss account showing the manufacturing costs would look something like the below example:

Account	Amount
Wages	10,000
Repairs and Maintenance	2,000
Power	1,000
Rent	5,000
	<hr/>
TOTAL MANUFACTURING COSTS	18,000
Labour recoveries - 400 hours @ \$50	(20,000)
	<hr/>
NET under/(over) recovery	(2,000)
	<hr/>

The over recovery represents the adjustment to the gross profit required due to the fact that more manufacturing cost was recovered into the cost of stock manufactured in the month than was incurred. Typically, if manufacturing work is greater than budgeted then the overheads are spread more thinly over a greater amount of work - naturally, this results in an over recovery of manufacturing costs. However, if labour is not so productive and the volume of work is less than budgeted then this will result in an under-recovery of manufacturing costs.

## Setting Up Employees

Labour in webERP is actually a special type of item - this allows the routings to be defined in the bill of materials along with all the other physical components. Labour items are simply stock items that have a stock category that is a labour type. Child items of labour type stock categories are all labour items. The first step to setup labour is to setup a labour type stock category. Since the GL posting for labour is set up at this level a labour type stock category is required for each type of labour that needs to be posted to a different GL account. e.g. perhaps an engineering firm has a separate cost centre for engineering labour/cost from its manufacturing - in this case engineering labour would require a separate labour type.

 **Inventory Categories Maintenance**


[Show All Stock Categories](#)

Category Code:	ZLAB
Category Description:	<input type="text" value="Labour"/>
Stock Type:	<input type="text" value="Labour"/>
Default Tax Category:	<input type="text" value="Taxable supply"/>
Recovery GL Code:	<input type="text" value="Direct Labour Costs (5500)"/>
WIP GL Code:	<input type="text" value="Work in Progress Inventory (1440)"/>
Stock Adjustments GL Code:	<input type="text" value="Inventory Adjustment (5700)"/>
Internal Stock Issues GL Code:	<input type="text" value="Inventory Adjustment (5700)"/>
Price Variance GL Code:	<input type="text" value="Purchase Discounts (5900)"/>
Labour Efficiency Variance GL Code:	<input type="text" value="Direct Labour Costs (5500)"/>

Note that the stock category screen changes when the stock type is set to "Labour" now, what was the stock account for a normal stock category becomes the labour "recovery" account - this is now a profit and loss GL account where the labour costs are credited to. Note that the stock adjustments account will never be used for dummy/service or labour type stock categories as these will never have physical quantities of stock held. Hence no adjustment will ever be required! Also, what was the

Once the labour type stock category is defined any number of labour type items can be defined like any other stock item. However, since each employee is mapped to a particular labour item it is only necessary to define labour type items for each category of labour where they will have a different cost. Perhaps tradesfolk, apprentices, supervisors may be set up with different costs - but all posted in the GL on the same basis using the same labour stock category.

Having set up the necessary labour stock categories and labour items in those categories, then the employees can be defined.

 **Employee Maintenance**

ID▲	First name▲	Surname▲	Type▲	Manager▲	Email▲		
3	Lance	Alot	LABOUR	Fred Flintstone	<a href="mailto:lance@weberpdemo.org">lance@weberpdemo.org</a>	<a href="#">Edit</a>	<a href="#">Delete</a>
1	Fred	Flintstone	LABOUR		<a href="mailto:fred@weberpdemo.org">fred@weberpdemo.org</a>	<a href="#">Edit</a>	<a href="#">Delete</a>

**New Employee details**

First Name:

Surname:

Labour Type:

Cutting Labor ▼

Email:

Normal Weekly Hours:

40

Manager:

Not Managed ▼

webERP User:

Not a webERP User ▼

Enter Information

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# Quality Assurance

## Overview

The Quality module allows the users of webERP to define what they would like to test, apply those tests to certain templates or specific products (Items, Stocks) and then to capture actual test results on a Lot to Lot or Serial number basis. Outputs from the module include a Product Specification or Data Sheet and a Certificate of Analysis. Historical Results are kept and can be compared side by side for any particular Item. There is an option in the configuration that allows QA Samples to be automatically logged for Purchase Order and Work Order receipts if the product specification exists and the item is Lot or Serial Controlled. Also in the configuration are some disclaimers for specifications and certifications.

Text for Quality Product Specification:	<div>The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.</div>	<input type="checkbox"/> This text appears on product specifications
Text for Quality Product Certifications:	<div>The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.</div>	<input type="checkbox"/> This text appears on product certifications
Auto Log Quality Samples	Yes	The flag determines if the system creates quality samples automatically for each lot during P/O Receipt and W/O Receipt transactions.

## Menu Options

All menu options for Quality are found under Manufacturing. Your menus may look different based on your permissions. The menus are shown below.



## QA Tests Maintenance

This is where all tests that will be performed are defined. Other specification related information can be captured here that isn't tested but describes in more detail the product specification. An example of this would be Processing Conditions for your product that you wish for your customers to understand. A



specification is made up of any number of tests. The test defines outer tolerances but the specification allows the upper and lower bounds of the test to be specified.

QA Tests Maintenance

QA Tests Maintenance

Test ID	Name	Method	Group By	Units	Type	Possible Values	Numeric Value	Show on Cert	Show on Spec	Show on Test Plan	Active	
1	Specific Gravity	ASTM D 792	PhysicalProperty		Text Box		Yes	Yes	Yes	Yes	Yes	Edit Delete
2	Melt Flow Rate 200 °C, 5 KG	ASTM D 1238	PhysicalProperty	g/10min	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
3	Tensile Strength	ASTM D 638	PhysicalProperty	psi	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
4	Tensile Elongation @ Yield	ASTM D 638	PhysicalProperty	%	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
5	Flexural Modulus	ASTM D 790	PhysicalProperty	psi	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
6	Notched Izod Impact 0.125"	ASTM D 256	PhysicalProperty	ft-lbs/in	Text Box		No	Yes	Yes	Yes	Yes	Edit Delete
7	HDT 66 psi Unannealed	ASTM D 648	PhysicalProperty	°F	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
8	Rockwell Hardness (R scale)	ASTM D 785	PhysicalProperty		Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
9	Drying Temperature		Processing		Text Box		Yes	No	Yes	No	Yes	Edit Delete
10	Drying Time		Processing	hours	Text Box		Yes	No	Yes	No	Yes	Edit Delete
11	Melt Temperature		Processing	°F	Numeric Range		Yes	No	Yes	No	Yes	Edit Delete
12	Mold Temperature		Processing	°F	Numeric Range		Yes	No	Yes	No	Yes	Edit Delete
13	Injection Pressure		Processing	psi	Numeric Range		Yes	No	Yes	No	Yes	Edit Delete
14	Flexural Strength	ASTM D 790	PhysicalProperty	psi	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
15	Unnotched Izod Impact 0.125"	ASTM D 256	PhysicalProperty		Text Box		No	Yes	Yes	Yes	Yes	Edit Delete
16	Flammability	UL 94	PhysicalProperty		Select Box	V0, V1, V2	No	No	Yes	No	Yes	Edit Delete
17	Molding Shrinkage 0.125" section	ASTM D 955	PhysicalProperty	in/in	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
18	Water Absorption	ASTM D 570	PhysicalProperty	%	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete
19	FDA Compliance		RegulatoryCompliance		Select Box	No, Yes	No	No	Yes	No	Yes	Edit Delete
20	RoHS Compliance		RegulatoryCompliance		Select Box	Yes, No	No	No	Yes	No	Yes	Edit Delete
22	PP Melt Flow Rate @ 230 °C, / 2.16 kg	ASTM D 1238	PhysicalProperty	g/10min	Numeric Range		Yes	Yes	Yes	Yes	Yes	Edit Delete

QA Test Name:

Method:

Group By:

Units:

Type:

Numeric Range ▾

Possible Values:

Numeric Value?:

Yes ▾

Show On Cert?:

Yes ▾

Show On Spec?:

Yes ▾

Show On Test Plan?:

Yes ▾

Active?:

Yes ▾

Enter Information

- Test Name: The name of the Test you are setting up
- Method: ASTM, ISO, UL or other.
- Group By: Free Form. Can be used to Group certain Test on the Product Specification or Certificate of Analysis
- Units: How this is measure. PSI, Fahrenheit, Celsius etc.
- Type: How do we measure/Enter this value (Text, Date, Numeric Range, and Selection List?)  
Possible Values: (Only valid for type Select List, controls what appears in the drop down?)  
Numeric Value: Enforces numbers to be entered for this test type
- Show on Cert: Does this test print on the Certificate of Analysis (Can be overwritten at a Product level)
- Show on Product Specification: Does this test print on the Product Specification (Can be overwritten at a Product level)
- Show on Test Plan: Does this test print on the Test Plan (Can be overwritten at a Product level)
- Active: once a test has results entered against it delete is no longer allowed. This flag can be used to inactivate it and not use it on future product specifications.

## Product Specification

Product Specifications are a collection of QA Tests that come together to define how a Product Data Sheet is built, what we test for and what we certify our results to. These are loosely tied to Items (Stocks). If a Product Specification is named the same as a stock ID then the Product Description will be used in printed paperwork and screens. If it is not a stock id then it is considered a generic product specification that can be used to hold any type of test results in your system. This also allows cascading templates to be created for faster product specification definition. In the future I foresee there may also be a loose connection to Fixed Assets. A Product Specification is added as soon as a test is added to it. To start a new specification, go to the Product Specification Screen, Type in a specification Name or stock id and click Submit.

**Product Specifications Maintenance**

Enter Specification Name:

Or Select Existing Specification:

Name	Method	Units	Type	Possible Values	Target Value	Range Min	Range Max	Show on Cert	Show on Spec	Show on Test Plan	Active
<a href="#">Add More Tests</a> <a href="#">Copy This Specification</a> <a href="#">Print Product Specification</a>											

Then click on "Add More Tasks"

 **Product Specifications Maintenance**

Product Specification for POLYPROPYLENE-

Name	Method	Units	Type	Possible Values	Target Value	Range Min	Range Max	Show on Cert	Show on Spec	Show on Test Plan	Active	
Specific Gravity	ASTM D 792		Text Box		0.91	0	0	Yes	Yes	Yes	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Notched Izod Impact 0.125"	ASTM D 256	ft-lbs/in	Text Box		0.7	0	0	Yes	Yes	Yes	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Drying Temperature		°F	Text Box		175	0	0	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Drying Time		hours	Text Box		2	0	0	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Melt Temperature		°F	Numeric Range			375	450	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Mold Temperature		°F	Numeric Range			90	150	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
Injection Pressure		psi	Numeric Range			10000	15000	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
FDA Compliance			Select Box	No, Yes	Yes	0	0	No	Yes	No	Yes	<a href="#">Edit</a> <a href="#">Delete</a>
PP Melt Flow Rate @ 230 °C, / 2.16 kg	ASTM D 1238	g/10min	Numeric Range		4.00	2.5	5.5	Yes	Yes	Yes	Yes	<a href="#">Edit</a> <a href="#">Delete</a>

[Add More Tests](#)  
[Copy This Specification](#)  
[Print Product Specification](#)

Adding additional tests to the Specification. Click "Add Tests". All tests not yet on this specification shown. You may enter the values for the specification on this screen before clicking the Add button.



## Product Specifications Maintenance

Product Specification for POLYPROPYLENE-

Add▲	Name ▲	Method ▲	Units ▲	Possible Values	Target Value	Range Min	Range Max
<input type="checkbox"/>	Melt Flow Rate 200 °C, 5 KG	ASTM D 1238	g/10min				
<input type="checkbox"/>	Tensile Strength	ASTM D 638	psi				
<input type="checkbox"/>	Tensile Elongation @ Yield	ASTM D 638	%				
<input type="checkbox"/>	Flexural Modulus	ASTM D 790	psi				
<input type="checkbox"/>	HDT 66 psi Unannealed	ASTM D 648	°F				
<input type="checkbox"/>	Rockwell Hardness (R scale)	ASTM D 785					
<input checked="" type="checkbox"/>	Drying Temperature		°F		175		
<input checked="" type="checkbox"/>	Drying Time		hours		2		
<input checked="" type="checkbox"/>	Melt Temperature		°F			375	450
<input checked="" type="checkbox"/>	Mold Temperature		°F			90	150
<input checked="" type="checkbox"/>	Injection Pressure		psi			10000	15000
<input type="checkbox"/>	Flexural Strength	ASTM D 790	psi				
<input type="checkbox"/>	Unnotched Izod Impact 0.125"	ASTM D 256					
<input type="checkbox"/>	Flammability	UL 94		,V0,V1,V2			
<input type="checkbox"/>	Molding Shrinkage 0.125" section	ASTM D 955	in/in				
<input type="checkbox"/>	Water Absorption	ASTM D 570	%				
<input checked="" type="checkbox"/>	FDA Compliance			No,Yes	Yes		
<input type="checkbox"/>	RoHS Compliance			Yes,No			

Add

## Copying Specifications

Specifications can be quickly copied from one specification to another. From the Product Specification Maintenance screen select the From Specification. Choose "Copy this Specification". Then enter the Destination Specification.




## Product Specifications Maintenance

Enter The Item, Fixed Asset or Template to Copy this Specification to:

Copy

## Print Product Specification

Prints a Customer Facing document that shows all the QA Tests that you have specified to "Show on Product Specification"


		Technical Data Sheet
<b>POLYPROPYLENE</b>		
Technical Data Sheet Properties		
<b>Physical Property</b>	<b>Value</b>	<b>Test Method</b>
Specific Gravity	0.91	ASTM D 792
Notched Izod Impact 0.125"	0.7 ft-lbs/in	ASTM D 256
PP Melt Flow Rate @ 230 °C, / 2.16 kg	4.00 g/10min	ASTM D 1238
* Data herein is typical and not to be construed as specifications.		
Injection Molding Processing Guidelines		
<b>Setting</b>	<b>Value</b>	
Drying Temperature	175 °F	
Drying Time	2 hours	
Melt Temperature	375 - 450 °F	
Mold Temperature	90 - 150 °F	
Injection Pressure	10000 - 15000 psi	
* Desiccant type dryer required.		
Regulatory Compliance		
<b>Regulatory Compliance</b>	<b>Value</b>	
FDA Compliance	Yes	
The information provided on this datasheet should only be used as a guideline. Actual lot to lot values will vary.		
<small>Disclaimer: No information supplied by Company ABC constitutes a warranty regarding product performance or use. Any information regarding performance or use is only offered as suggestion for investigation for use, based upon Company ABC or other customer experience. Company ABC makes no warranties, expressed or implied, concerning the suitability or fitness of any of its products for any particular purpose. It is the responsibility of the customer to determine that the product is safe, lawful and technically suitable for the intended use. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents.</small>		

## Logging Samples

Samples can be logged automatically by the system or manually by a Quality person. If the configuration is set to Yes and the item is lot or serial controlled then at P/O receipt a sample is created in the system for each new Lot or serial received for the item being received. The system will not create duplicate samples if you receive the same lot 3 times against a purchase order or work order.



You can view and edit existing samples in the "QA Samples and Test Results" under the Manufacturing module.

 **Select QA Samples**

Lot Number:  Sample ID:  From Sample Date:  To Sample Date:

To search for Pick Lists for a specific part use the part selection facilities below

Select a stock category:

Enter text extracts in the **description**:   
 OR Enter extract of the **Stock Code**:


Enter Results▲	Specification ▲	Description▲	Lot / Serial▲	Identifier▲	Created By▲	Sample Date▲	Comments ▲	Cert Allowed▲	
0000000003	POLYPROPYLENE		LOT123	A1	agaluski	09/29/2014	Manally Created	No	<a href="#">Edit</a> <a href="#">Delete</a>
0000000004	POLYPROPYLENE		LOT456	A1	agaluski	09/29/2014		No	<a href="#">Edit</a> <a href="#">Delete</a>
0000000005	POLYPROPYLENE		LOT123	B2	agaluski	09/29/2014		No	<a href="#">Edit</a> <a href="#">Delete</a>
0000000006	POLYPROPYLENE		LOT456	RETEST 1	agaluski	09/29/2014	Need to retest	No	<a href="#">Edit</a> <a href="#">Delete</a>

Specification:   
 Lot:   
 Identifier:   
 Comments:   
 Use for Cert?:   
 Duplicate for Lot OK?:

When manually adding a sample you select a specification, enter a lot # (No validation exists) and an identifier and some comments. An identifier can be used to distinguish multiple samples for the same lot from each other. In many manufacturing environments samples are taken through the process for example at machine startup, quarter, half, three quarter processing and at batch end. The identifier allows us to distinguish these from each other. It can also be used to specify a retest later of a sample retain. Duplicate for Lot OK – if you choose no and a sample already exists for this lot it will not create a new one. Use for Cert marks the specific sample to be used for certification if multiple samples exist for a particular lot. Only one sample can be marked as “Use for Cert” per Item/lot combination. The system also disallows a sample being used for certification if it is missing test results. A warning is given is test results are out of specification. Some companies may wish to change this warning to a hard stop. This will require a code change or a new configuration parameter to be entered into the system.

## Entering Test Results for a Sample

Selecting a sample from the Select Sample screen allows test results to be entered as well as a test date and the name of the person that performed the testing. When reviewing the Test Plan Results screen the tests are color coded. Yellow: No Result Entered. Orange: Out of Specification. White: In Spec.

 **Test Plan Results**

**SUCCESS Report** : Sample Results were updated for Result ID 55

**SUCCESS Report** : Sample Results were updated for Result ID 62

**SUCCESS Report** : Sample Results were updated for Result ID 54

**ERROR Message Report** : Test Results have not all been entered. This Lot is not able to be used for a a Certificate of Analysis

[Back to Samples](#)

Sample ID	Specification	Lot / Serial	Identifier	Sample Date	Comments	Used for Cert
0000000006	POLYPROPYLENE	LOT456		09/29/2014		No


Test Name	Test Method	Range	Target Value	Test Date	Tested By	Test Result	On Cert
Notched Izod Impact 0.125"	ASTM D 256		0.7 ft-lbs/in	09/29/2014	Andrew Galuski		Yes
PP Melt Flow Rate @ 230 °C, / 2.16 kg	ASTM D 1238	2.5-5.5 g/10min	4.00 g/10min	09/29/2014	Andrew Galuski	2	Yes
Specific Gravity	ASTM D 792		0.91	09/29/2014	Andrew Galuski	.91	Yes

[Enter Information](#)

[Add More Tests](#)


[Copy These Results](#)

Additional tests (just for this sample) can be added without affecting the existing template.


**Test Plan Results**

Add▲	Name ▲	Method ▲	Units ▲	Possible Values	Target Value	Range Min	Range Max
<input type="checkbox"/>	Melt Flow Rate 200 °C, 5 KG	ASTM D 1238	g/10min				
<input type="checkbox"/>	Tensile Strength	ASTM D 638	psi				
<input type="checkbox"/>	Tensile Elongation @ Yield	ASTM D 638	%				
<input type="checkbox"/>	Flexural Modulus	ASTM D 790	psi				
<input type="checkbox"/>	HDT 66 psi Unannealed	ASTM D 648	°F				
<input type="checkbox"/>	Rockwell Hardness (R scale)	ASTM D 785					
<input type="checkbox"/>	Flexural Strength	ASTM D 790	psi				
<input type="checkbox"/>	Unnotched Izod Impact 0.125"	ASTM D 256					
<input type="checkbox"/>	Flammability	UL 94		,V0,V1,V2			
<input type="checkbox"/>	Molding Shrinkage 0.125" section	ASTM D 955	in/in				
<input checked="" type="checkbox"/>	Water Absorption	ASTM D 570	%		.5	.3	.6
<input type="checkbox"/>	RoHS Compliance			Yes,No			

Manually added tests that are not part of the normal testing plan are noted for this sample. Because they were manually added they may also be deleted from the sample.


**Test Plan Results**

**SUCCESS Report** : A Sample Result record has been added for Test ID 18 for

[Back to Samples](#)

Sample ID	Specification	Lot / Serial	Identifier	Sample Date	Comments	Used for Cert
0000000006	POLYPROPYLENE -	LOT456		09/29/2014		No


1

Test Name ▲	Test Method▲	Range ▲	Target Value▲	Test Date ▲	Tested By ▲	Test Result ▲	On Cert▲
Notched Izod Impact 0.125"	ASTM D 256		0.7 ft-lbs/in	09/29/2014	Andrew Galuski ▼		Yes
PP Melt Flow Rate @ 230 °C, / 2.16 kg	ASTM D 1238	2.5-5.5 g/10min	4.00 g/10min	09/29/2014	Andrew Galuski ▼	2	Yes
Specific Gravity	ASTM D 792		0.91	09/29/2014	Andrew Galuski ▼	.91	Yes
Water Absorption	ASTM D 570	0.3-0.6 %	.5 %	09/29/2014	Andrew Galuski ▼		Yes ▼ <a href="#">Delete</a>

[Add More Tests](#)  
[Copy These Results](#)



Results can be copied from one sample to another. The system does not limit the result to be from matching items. This is helpful if you purchase Item A, test the product then repackage it into Product B using a W/O. You can copy the test results from Product A to Product B.

 **Test Plan Results**

Lot Number:

Sample ID:

From Sample Date:

To Sample Date:

To search for Pick Lists for a specific part use the part selection facilities below

Select a stock category:

Enter text extracts in the **description**:


OR Enter extract of the **Stock Code**:

Copy Results▲	Enter Results▲	Specification ▲	Description▲	Lot / Serial▲	Identifier▲	Created By▲	Sample Date▲	Comments▲	Cert Allowed▲
<input type="radio"/>	0000000004	POLYPROPYLENE		LOT456	A1	agaluski	09/29/2014		No
<input type="radio"/>	0000000005	POLYPROPYLENE		LOT123	B2	agaluski	09/29/2014		No
<input type="radio"/>	0000000006	POLYPROPYLENE		LOT456		agaluski	09/29/2014		No
<input type="radio"/>	0000000007	NYLON		12345788		agaluski	09/29/2014		No

Override existing Test values? ☐

## Print a Certificate of Analysis

1) From the Select QA Sample Screen Click on the "Yes" link in the column "Cert Allowed"


**Select QA Samples**

Lot Number:  Sample ID:  From Sample Date:  To Sample Date:

To search for Pick Lists for a specific part use the part selection facilities below  
 Select a stock category:  Enter text extracts in the **description**:   
 OR Enter extract of the **Stock Code**:

Enter Results▲	Specification ▲	Description▲	Lot / Serial▲	Identifier▲	Created By▲	Sample Date▲	Comments ▲	Cert Allowed▲		
0000000003	POLYPROPYLENE		LOT123	A1	agaluski	09/29/2014	Manally Created	<b>Yes</b>	Edit	Delete
0000000004	POLYPROPYLENE		LOT456	A1	agaluski	09/29/2014		No	Edit	Delete
0000000005	POLYPROPYLENE		LOT123	B2	agaluski	09/29/2014		No	Edit	Delete
0000000006	POLYPROPYLENE		LOT456		agaluski	09/29/2014		No	Edit	Delete
0000000007	NYLON		12345788		agaluski	09/29/2014		No	Edit	Delete

Specification:

Lot:


Identifier:

Comments:

Use for Cert?:

Duplicate for Lot OK?:

2) Click Select the sample and then Print COA

 **Test Plan Results**

[Back to Samples](#)

Sample ID	Specification	Lot / Serial	Identifier	Sample Date	Comments	Used for Cert
0000000003	POLYPROPYLENE	LOT123	A1	09/29/2014	Manally Created	Yes

Test Name	Test Method	Range	Target Value	Test Date	Tested By	Test Result	On Cert
Notched Izod Impact 0.125"	ASTM D 256		0.7 ft-lbs/in	09/29/2014	Andrew Galuski	.7	Yes
PP Melt Flow Rate @ 230 °C, / 2.16 kg	ASTM D 1238	2.5-5.5 g/10min	4.00 g/10min	09/29/2014	Andrew Galuski	4.3	Yes
Specific Gravity	ASTM D 792		0.91	09/29/2014	Andrew Galuski	.91	Yes

Enter Information

[Add More Tests](#)

[Copy These Results](#)

[Print COA](#)

The certification looks like this:



Certificate of Analysis for Lot: LOT123      Date: 09/29/2014


Physical Properties

Physical Property	Value	Test Method
Specific Gravity	.91	ASTM D 792
Notched Izod Impact 0.125"	.7 ft-lbs/in	ASTM D 256
PP Melt Flow Rate @ 230 °C, / 2.16 kg	4.3 g/10min	ASTM D 1238

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Viewing Historical Results

1. Select “Historical QA Test Results” from the Manufacturing Reports menu
2. Select your Specification
3. Choose a date range to see sample results from.


**Historical Test Results**

Show Test Results For: POLYPROPYLENE - ▼

From Sample Date: 04/02/2014

To Sample Date: 09/29/2014

Submit

**Historical Test Results for POLYPROPYLENE-**

	Sample ID: 0000000003	0000000004	0000000005	0000000006
	Lot/Serial: LOT123	LOT456	LOT123	LOT456
	Sample Date: 09/29/2014	09/29/2014	09/29/2014	09/29/2014
Specific Gravity	.91			.91
Notched Izod Impact 0.125"	.7			
PP Melt Flow Rate @ 230 °C, / 2.16 kg	4.3			2
Water Absorption				

# Material Requirements Planning

## Overview

MRP - Material Requirements Planning -is software used to manage production and purchasing in an efficient and economical manner. It takes demand from sources such as current and forecast orders, work orders, and parts below safety levels, subtracts supply, in the form of inventory on hand, on order, or in process, and calculates requirements for ordering or building parts to cover that demand. This entry in the wiki will describe the MRP features that are available in webERP and the procedures to follow to implement the system.

## Base Data Requirements

To effectively run MRP, certain information relating to parts should be established. Since MRP calculates the quantities to purchase or make based on this data, it is important to ensure that these parameters are maintained rigourously. As always the garbage in -> garbage out principles apply. The critical data required is as follows:

Under Item Maintenance -> Modify Item Details, there are three "order quantity modifiers", which are fields that will inflate the quantity MRP will recommend either purchasing or building to cover a demand.

- EOQ or Economic Order Quantity. This is the minimum quantity for which MRP will plan an order. If MRP determines that there is a need for a quantity of 1 for a part, but that part has an EOQ of 5, MRP will recommend that an order for 5 is created.
- Pansize, also known as the order multiple. This allows you to create orders in even multiples. As an example, if MRP determined there was a need for a quantity of 135 for a part, and the pansize was set to 10, MRP would create a planned order for 140, which is the next highest even multiple to cover the requirement.
- Shrinkage Factor, which is a percentage value used to cover expected scrap or other loss.

Under Item Maintenance -> Maintain Reorder Levels, the re-order level for a part at a certain location is specified. If the quantity on hand for the location falls below that level, MRP will create a demand to cover the difference.

Under Item Maintenance -> Maintain Purchasing Data, Lead Time can be entered. MRP uses this in scheduling recommended orders.

## Production Calendar

To avoid situations where, based upon a part's need (required) date minus its lead time, MRP might schedule a part for a day where the business is closed, a Manufacturing Calendar of valid dates can be created. This is done under the Setup menu – Inventory Setup - MRP Available Production Days.

The screenshot shows a web-based interface for creating a production calendar. At the top, there are two input fields labeled 'From Date:' and 'To Date:'. Below these is a section titled 'Exclude The Following Days' with a list of days from Saturday to Friday, each followed by a checkbox. At the bottom of this section are two buttons: 'Create Calendar' and 'List Date Range'. A horizontal line separates this section from the one below. The lower section has a 'Change Date Status:' label followed by an input field, and an 'Update' button centered below it.

To initially create the calendar, enter the From Date and To Date, click on any days of the week you wish to exclude, and press the Create Calendar button. After that, you can enter individual dates in the Change Date Status field and press UPDATE to change that date's status from valid to invalid or invalid to valid. Entering a From Date and To Date and pressing List Date Range will display all the days in the range and show “YES” if they are valid manufacturing days and “NO” if they are not. When creating the calendar, the date range should extend beyond the planning period you are using for MRP, and keep in mind that the Create Calendar button will purge any previously entered calendar.

## Master Production Schedule - Demand Forecasts

The next step in preparing for the MRP is to enter demand forecasts. This is an optional step if you only want to consider current orders. Before entering the actual demands, it is necessary to create Demand Types, which are used to organize the demand records you create and make it easier to keep track of and edit records. Demand Types are created under Setup – Inventory Setup – MRP Demand Types. Simply enter a Demand Type code and a description. At least one Demand Type must be created, but you can have as many as you want to distinguish the various types of demands that you want to keep track of. The Demand Type appears in various reports, and the system also allows for the mass deletion of demand records by the Demand Type.

There are two programs to enter actual order demands, both of them under the Manufacturing menu.

The first, Master Schedule, allows for entering, editing, and deleting individual demands, and also for the listing of demands by part number or Demand Type, and the deletion by Demand Type.

Enter text extracts in the **description**:

**OR**

Enter extract of the **Stock Code**:

**OR**

Search Now

---

Part Number:

Quantity:

0

Due Date:

Demand Type

F - Forecast

Enter Information

List Selection

Delete Demand Type

To enter a demand, type in the part number, quantity, and due date, select the Demand Type, and press the Enter Information button. Pressing the List Selection button displays multiple records. If the part number field is blank, all demands for the selected Demand Type will be displayed. If a part number is entered, all demands for that part number will be displayed. When the demands are displayed, there are buttons to press to edit or delete that particular demand. Pressing the Delete Demand Type button deletes all demands for the selected Demand Type.

The Master Schedule can be generated automatically using the Auto Create Master Schedule script - this generates multiple demands from sales orders based on the selection criteria entered.



Demand Type:	<input type="text" value="F - Forecast"/>	
Inventory Category:	<input type="text" value="All Stock Categories"/>	
Inventory Location:	<input type="text" value="All Locations"/>	
From Sales Date:	<input type="text"/>	To Sales Date: <input type="text"/>
Start Date For Distribution:	<input type="text"/>	
Distribution Period:	<input type="text" value="Weekly"/>	
Number of Periods:	<input type="text" value="1"/>	
Exclude Total Quantity Less Than:	<input type="text" value="1"/>	
Exclude Total Dollars Less Than:	<input type="text" value="0"/>	
Multiplier:	<input type="text"/>	
	<input type="button" value="Submit"/>	

First, select the Demand Type for the demands that are to be created. Next, enter the selection criteria for the sales orders, which would be the inventory category, inventory location, and the date range for the sales orders. Next, enter the Start Date for Distribution, which is the due date for the first demand record that will be created, and then select the type of distribution period – weekly or monthly – and the number of periods the total quantity will be distributed over. Parts can be excluded based on their total quantity or the sales amount. A Multiplier can be used that multiplies the total quantity for each part by that number; an example of its usage would a case where you wanted to create demands for the next 18 months, but rather than just entering a date range for the previous 18 months, you entered a date range for the last 6 months and used a Multiplier of 3 so that it would use the latest sales patterns. To clarify how the whole program works, the user enters the selection criteria for the sales orders, the program finds the total quantity for each part, and then creates demand records that distribute that quantity for the type and number of periods entered. If a part had a total quantity of 12 and the number of periods selected was 12, 12 records with a quantity of 1 would be created; if the total quantity were 3, records with a quantity of 1 for the first 3 periods would be created; if the total were 15, the first 3 records would have a quantity of 2 and the last 9 would have a quantity of 1. After the demands are created, they can be edited or deleted using the Master Schedule program, selecting either by part number or Demand Type.

## Running the MRP

Only once all of the preliminary steps have been taken, the MRP itself can be run. Since MRP calculations are based on the data in the system about:

- Lead Time
- Demand forecast - Master (Production) Schedule



- Economic Order Quantity
- Minimum Stock Quantity
- Shrinkage/Waste
- Pansize

If this data is not rigorously maintained then the MRP calculations are potentially not well founded - do not proceed with MRP calculations until the above data is checked and double checked in your system.

The MRP calculation is under Manufacturing -> MRP Calculation.

---

Last Run Time:	2009-03-09 13:27:05
Location:	NH
Days Leeway:	0
Use MRP Demands:	Yes
Use EOQ:	Yes
Use Pan Size:	Yes
Use Shrinkage:	Yes

Location	<input type="text" value="NH"/>
Days Leeway:	<input type="text" value="0"/>
Use MRP Demands?:	<input checked="" type="checkbox"/>
Use EOQ?:	<input checked="" type="checkbox"/>
Use Pan Size?:	<input checked="" type="checkbox"/>
Use Shrinkage?:	<input checked="" type="checkbox"/>

The program displays the last time MRP was run and the parameters that were selected for that run. There are check boxes to specify if MRP Demands are used in calculating the MRP and also if the EOQ, pan size, or shrinkage factor are used. The inventory location that should be used for the quantity on hand can be selected. Days leeway can also be entered and is used to determine if a purchase order or work order should be rescheduled; if the difference between a requirement date and the due date of the purchase order or work order is within the days leeway, then the order is not shown to need rescheduling.

## How The MRP Calculation Works

Here is how MRP works. First, it finds a level number for each part based on the bom (Bill of Materials) file; a part with no other parts under it in a bom structure has a level of 0, while a part with 7 levels of parts under it has a level of 7. Next, an mrpsupplies table is created based on the current

quantity on hand, open purchase orders, and work orders, and an mrprequirements table is created based on open sales orders, worequirements records for open work orders, parts below their reorder levels, and demands entered in the mrpdemands table for sales forecasting. MRP subtracts all demands from the supplies for each part, sorting the parts by the level number and starting with the highest level, and creates an mrplannedorder record if there is insufficient supply to cover the demand. If that part has parts below it in the bom structure, MRP also creates an mrprequirements record for the lower level parts based on the net requirement for the top level part times the quantity per assembly for the component, with a schedule date based on the lead time for the part. MRP is a regenerative process, meaning that every time it is run, it purges the old files and creates new ones. The time it takes to run will depend on file sizes and the system it is being run on, but it should be quick enough so that it can be run often and various what-if scenarios can be tried as far as sales forecasts and other parameters go.

## MRP Reports

MRP produces several reports that are under Manufacturing -> Inquiries and Reports. MRP Reschedules Required shows the work orders and purchase orders that, according to the MRP, need to have adjustments made to their due dates. MRP Suggested Purchase Orders and MRP Suggested Work Orders show the orders that MRP has determined should be created to cover demands. MRP Shortages shows all of the parts that have an insufficient quantity to satisfy demand. One thing to keep in mind about this report is that if there is a shortage of a top level assembly, it shows on the report as well as the parts that make it up, so the total dollar amounts might be doubled. The inquiry simply called MRP is used to display all of the supply and demand information for a part.

Part: 480010489001  
 Desc: POLYGON, 4800RPM W/MTR DRV  
 M/B: P

EOQ: 1.00 On Hand: 4.00  
 Pan Size: 0.00 On Order: 2.00  
 Shrinkage: 0.00 Gross Req: 31.00  
 Lead Time: 0 Last Cost: 5,620.00

	Past Due	05/03/2009	05/10/2009	05/17/2009	05/24/2009	05/31/2009	06/07/2009	06/14/2009	06/21/2009	06/28/2009
Gross Reqts	9	11	0	0	0	0	8	3	0	0
Open Order	2	0	0	0	0	0	0	0	0	0
Planned	3	11	0	0	0	0	8	3	0	0
Proj Avail	0	0	0	0	0	0	0	0	0	0

	07/05/2009	07/12/2009	07/19/2009	07/26/2009	08/02/2009	08/09/2009	08/16/2009	08/23/2009	08/30/2009	09/06/2009
Gross Reqts	0	0	0	0	0	0	0	0	0	0
Open Order	0	0	0	0	0	0	0	0	0	0
Planned	0	0	0	0	0	0	0	0	0	0
Proj Avail	0	0	0	0	0	0	0	0	0	0

	09/13/2009	09/20/2009	09/27/2009	10/04/2009	10/11/2009	10/18/2009	10/25/2009	11/01/2009	11/08/2009	Future
Gross Reqts	0	0	0	0	0	0	0	0	0	0
Open Order	0	0	0	0	0	0	0	0	0	0
Planned	0	0	0	0	0	0	0	0	0	0
Proj Avail	0	0	0	0	0	0	0	0	0	0

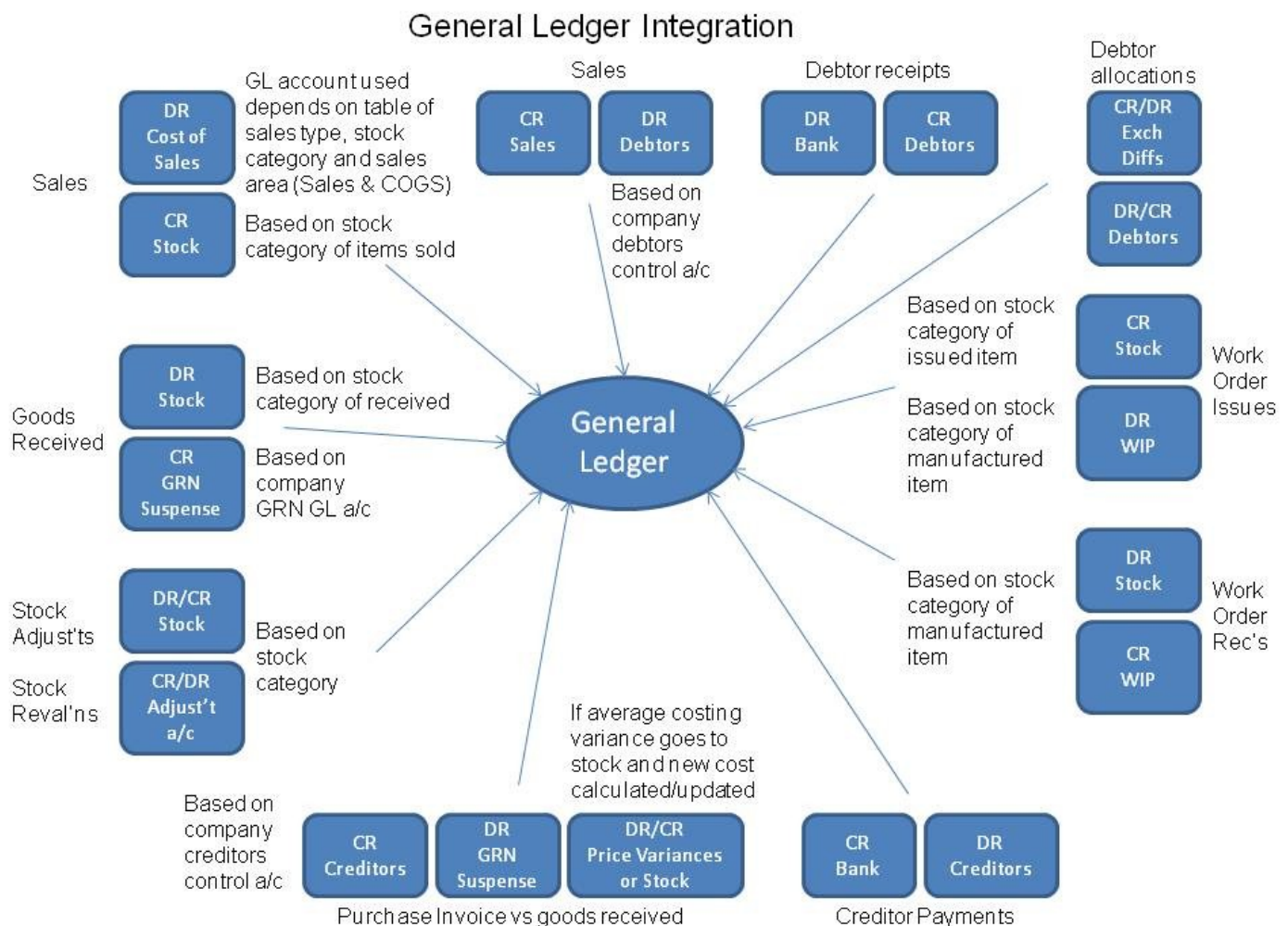
DEMAND					SUPPLY					
Dem Type	Where Required	Order	Quantity	Due Date	Order No.	Sup Type	For	Quantity	Due Date	MRP Date
F	FV-2D000-00000	1	5.00	04/03/2009		QOH		4.00	00/00/0000	00/00/0000
F	505014751NX0	2	4.00	04/15/2009	2893	PO		2.00	12/24/2008	12/24/2008
F	505014751NX0	237	4.00	05/05/2009	2	Planned	F	3.00	04/15/2009	04/15/2009
F	FV-2D000-00000	238	7.00	05/07/2009	237	Planned	F	4.00	05/05/2009	05/05/2009
F	505014751NX0	239	8.00	06/12/2009	238	Planned	F	7.00	05/07/2009	05/07/2009
F	FV-2D000-00000	240	3.00	06/15/2009	239	Planned	F	8.00	06/12/2009	06/12/2009
					240	Planned	F	3.00	06/15/2009	06/15/2009

The top part of the display shows total gross requirements, open orders, planned orders, and projected quantity available in weekly buckets. The left part of the bottom section shows the source of all demand for the item, and the right part of the bottom section shows all available supply and all supply that MRP suggests should be created to cover demand. All of these reports use the tables created by MRP, so if a new purchase order or work order is created, it and any effect it might have will not show up in the reports unless the MRP is run again.

# General Ledger

## Overview

The general ledger is the accounting hub that is central to the "sub" ledgers for creditors (Accounts Payable), debtors (Accounts Receivable) and stock (inventory). All entries in the sub ledgers are also represented by entries in the general ledger. It is the integration set-up that determines how entries in the sub-ledgers are reflected in the general ledger. Most activity in the general ledger will be automatically created from the activity in the sub-ledgers with receivables, payables and stock administration.



However, there are also facilities to:

- Enter general ledger receipts against a pre-defined bank accounts.
- Enter general ledger payments against pre-defined bank accounts.
- Enter general ledger journals between any general ledger accounts - except bank accounts. These can also be made to reverse automatically in the following period. Further journals can be posted to any period future or previously - the period is determined by reference to the date entered.
- Inquire on general ledger account activity and from any entry in this inquiry drill down to the journals created to produce the entry.
- Inquire on the general ledger trial balance for any period end in history or currently.
- Produce cost centre profit and loss accounts for each cost centre (called "tags")

## Account Sections

The account section is the top level object for the General Ledger. It is the container for everything within the GL. They are created or amended from the Maintenance menu in the General Ledger module. There are two sections that cannot be removed or renamed, these are the Income and the Cost of Sales sections

## Account Groups

The account group is the parent object of a general ledger account. Child accounts created inherit the properties of the account group - ie the account will be a profit and loss account if it belongs to an account group that is a profit and loss account, the child accounts will display in the trial balance (TB) together in the sequence determined by the account groups sequence in the trial balance (TB).

Using a numbering system inhibits the ability to manipulate the format of the trial balance ie you have to be able to change the account code to change where an account appears ie

10100 motor expense Copenhagen

10110 motor expenses The Hague

10120 motor expense Amsterdam

would be great but then if we wish to restructure so that Copenhagen expenses are all shown together and The Hague is now all shown together etc we will have to change the numbering. In web-erp all that is required is to change the account group. In the first situation we could have an account group for motor expenses and all these account numbers would be set up as belonging to the account group. We can decide whereabouts the account group should appear in the trial balance by changing the sequence in trial balance field. All accounts in the account group will show together. If we decided to change the trial balance to show The Hague expenses together as a separate group of costs, we could create an account group for the The Hague selling costs - or whatever, and change the motor expenses the Hague account no 10110 to be a member of that account group.

Account groups require the sequence in the trial balance to be specified and also whether the accounts in that group will be profit and loss accounts or balance sheet accounts.

A balance sheet account is one where only the balance at the end of the period concerned is of interest. A profit and loss is one where we are interested in the movement over the period. eg. Motor expenses we are not concerned with the balance at the end of the month so much as how much was spent over the period of the profit and loss. However, for a bank account we wish to know what we have now as a balance not the movements in the account. As noted accounts created as a member of an account group will inherit the properties of the account group ie if the account group is a balance sheet group then the accounts will be interpreted as balance sheet accounts.

Say we wish to report on "The Hague", "Compenhagen" and "Amsterdam" we can set up an account group for each, with a series of sub-account groups under each of these account groups.

- The Hauge -> Sales
- The Hague -> Cost of Sales
- The Hague -> Overheads
  - The Hague -> Overheads -> Motor Expense
  - The Hague -> Overheads -> Advertising
  - The Hague -> Overheads -> Postage Stationery
  - The Hague -> Overheads -> Repairs Maintenance

## General Ledger Accounts

Any number of general ledger accounts can be defined, the structure of the accounts is goverened by the [Account Group](#) - which defines whether an account is a balance sheet or profit and loss account and whereabouts it should appear in the trial balance. All accounts are displayed under the heading of the account group so the numbering of general ledger accounts has no bearing on the display of the trial balance or accounts (in contrast to legacy systems).

General ledger accounts are the cost holders for all accounting in webERP. Whilst it is possible to run webERP to keep track of just stock or debtors/accounts receivable or accounts payable, it is only when these functions are all integrated with the accounting hub that the real value of webERP's integrated design is fully realised. With all costs recorded in accounts payable, bank accounts, accounts receivable, stock, shipment costing, contract costing etc and with the correct configuration, the accounts almost drop out with minimal additional manual inputs required. Useful management information is therefore available in real time as the transactions are made. Next day reporting with accurate stock cut off and accruals all automatically made by the purchasing system is possible.

To create a general ledger account, click on:

Main Menu->Maintenance: GL Account

The list of existing general ledger accounts will display - together with the whether the account group of the account is a P & L. To enter a new account all that is required is to give it a number and a description and select an existing account group.

## **General Ledger Tags (Or Cost Centres)**

General Ledger tags provide an alternative way of viewing General Ledger transactions. Each income or expenditure transaction can be given its own tag, and then reports can be run based on tags.

As an example consider an organisation with several vehicles and the organisation wishes to report on how much each vehicle costs to run. A tag can be setup for each vehicle, and then when there is any expense, such as fuel, maintenance, licensing, insurance etc then each transaction can be tagged to individual vehicles, and then a report be produced for the cost of each tag corresponding to each vehicle.

Tags effectively add another dimension to the general ledger - or "cost centre" functionality. There is a "tag" profit and loss account so you can produce a p & l for each "tag".

The tag is offered up each time you create a general ledger transaction or purchase invoice or stock adjustment so all general ledger transactions can be captured with the "tag" or "cost centre" they relate to and the P & L can be reported by "tag" (or "cost centre").

## **General Ledger Budgets**

Each Profit and Loss General Ledger code can have a monthly budget set against it. To enter these budgets select GL Budgets from the maintenance menu in the General Ledger Module. From this first screen you can then select the GL account that you wish to enter the budget for.

The user is then presented with a screen split into 3 sections. The first section is for the previous financial years figures, and shows the actual figures, compared to the budget. The budget figures cannot be changed.

The next two sections are for this financial year, and next financial year respectively. For these two years you can amend the monthly budget for each year. If the amount is split evenly over the year, you can input a total budget figure and then click on the apportion budget button, which will distribute the budget evenly.

## **Bank Accounts**

Certain general ledger accounts can be defined as bank accounts - as many bank accounts as needed can be defined. At the time of defining a general ledger account as bank account the currency of the bank account must also be specified. General ledger accounts defined as bank accounts can be reconciled to bank statements using the matching facilities - all receipts and payments show in the currency of the bank account for easy matching off statements. Entries made to bank accounts using

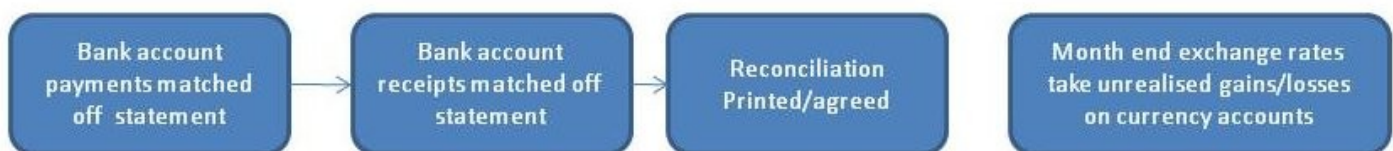


receipts or payments, also create a total receipt or payment, which is retained for the purposes of matching off the bank statements. Using the bank payments page, general ledger payments can be analysed to any number of other general ledger accounts, but only one entry to the bank account is made. This page also allows payments to supplier accounts to be created. Similarly, using the receipt entry page, a series of receipts from customers which may all have been banked together can be deposited as one amount to a bank account. There is only one amount appearing on the statement as the total of all these receipts, this bank account transaction is created and available for matching deposits off the bank statements.

Bank accounts are defined from the setup tab from the link to Bank Accounts Maintenance. There is facility to enter the name of the account, the currency of the account, the bank account number and the address of the bank if required, as well as selecting the general ledger account to which it refers. There are links to edit existing bank account records and to delete them. However, once defined as referring to a particular general ledger code it is not possible to change the general ledger code of the bank account. This is because there would be entries made to this account. Similarly, if bank transactions have been created using this bank account it is not possible to delete it. The bank account transactions must be purged first (but currently no facility exists to purge bank transactions). It is not possible to change the currency of a bank account once there are transactions against it.

Once all receipts and payments are matched to bank statements, the bank reconciliation statement can be printed which should show how the current general ledger balance reconciles to the bank statement for this account. The reconciliation also has an option available for bank accounts set up in other than the functional currency of the business (local currency), to post differences in exchange. The balance of the account is maintained in local currency in the general ledger and for the purposes of the bank reconciliation this is converted to the bank account currency at the exchange rate in the currencies table (see Setup -> Currency Maintenance) - this rate can be changed manually to the rate of the day and the foreign currency balance on the account will change - to correct this balance an exchange difference needs to be recorded. Having worked through the matching of receipts and payments to the bank statements - the bank statement balance can be entered to compare against the system balance - a correcting entry is then made to the GL to post the difference on exchange. The posting to the general ledger is back dated to the end of the preceeding month - since it is assumed that the reconciliation may be a few days or a week behind the current date.

## Bank Account Reconciliations





## Bank Account Payments

From the general ledger tab, the first link under transactions is Bank Account Payments.

The following data is required:

- The bank account from which the payment has been (or is to be) made. A select box allows this to be selected from the list of defined bank accounts.
- The date on which it was paid. This is important since the accounting period in which the payment is entered is determined from the date. The system will default to today's date - this must be changed where bank payments are being entered retrospectively.
- The currency which is being paid. Payment to suppliers may be made in foreign currency being purchased in the currency of the bank account at the exchange rate entered - see below.
- The exchange rate - this is the exchange rate between the currency being paid and the currency of the bank account. If the currency being paid is the same as the currency of the bank account then this rate should be 1. If another currency is being purchased with the payment then the rate at which it is being purchased should be entered.
- The functional exchange rate - this the exchange rate between the currency of the bank account and the functional currency of the business as defined in the company preferences (ie the reporting currency of the business). Where the bank account is in the same currency as the functional (reporting) currency of the business then this value should be 1. The functional currency entry will only be required when the bank account currency is different to the the functional currency and will default to 1 automatically if they are the same.
- Narrative - applicable to the whole payment. Narrative applicable to individual general ledger entries can be entered separately.

Payments can take two forms - either it is a general ledger payment or it is a payment to a supplier. General ledger payments require an analysis of how the payment should be posted to the general ledger. General ledger accounts can be specified either as the account code directly (if the account code is known) or by selecting from the select box. Any narrative applicable to the general ledger amount can be entered too - and the amount to be posted to the selected/entered account. The total payment is taken as being the sum of all the entries made. If the total of all entries made is negative then this is entered as a negative payment - these are accepted to allow for correction of data entry errors. Payments are always entered in the currency of the payment - the conversions are handled by the system for general ledger postings etc.

## Import Bank Transactions

This script imports bank transactions. It works with bank accounts that have an import format already defined.

The file format used by your bank for statement exports is defined by system administrators in Main Menu > General Ledger > Maintenance > Bank Accounts.

## General Ledger Receipts

The system allows for the receipt of money into any of the bank accounts that have been set up and for the income to be credited to any GL account. Receipts can be entered in any currency, and webERP will track the exchange rates correctly

To initiate a receipt choose the 'Bank Account Receipts Entry' item from the Transactions menu within the General Ledger module.

Firstly, the receipt header information is required, the bank account - one of the previously defined bank accounts (see setup), the date the batch of receipts are banked, the currency and exchange rate of the banking and the type of receipt together with any narrative. The currency can be selected from the defined currencies (see setup). The receipt types can also be selected - they are defined in config.php. Once this information is entered it must be accepted before the receipts in the batch can be entered.

Secondly the details of each receipt line must be entered. This consists of the GL tag (if any is to be assigned to this line), the GL account code to post this line to, the amount of the receipt, in the currency selected in the header, details of the payees bank, and any narrative you wish to be entered against this receipt in the general ledger.

Once all the lines have been entered you can click on the button to accept and process the batch. Once this has been done, the batch cannot be amended.

## Matching of Bank Statements to webERP

When a bank statement arrives, the transactions that have cleared through the bank, must now be matched off against the transactions in webERP. This can be done by selecting "Bank Account Receipts Matching" or "Bank Account Payments Matching" from the Transactions menu in the General Ledger module.

Next select the bank account that the statement is for, and use the different options available to filter how the transactions are shown. Then it is just a matter of ticking off the transaction on webERP and on the bank statement.

## General Ledger Journals

Enter general ledger journals between any general ledger accounts - except bank accounts. These can also be made to reverse automatically in the following period. Further journals can be posted to any period future or previously - the period is determined by reference to the date entered.

## General Ledger Integration Setup

Bank Accounts are automatically integrated with the general ledger and cannot exist separately without the GL being used. Every transaction is recorded in two places (double entry) eg. A bank account payment reflects in the bank account and also in the expense account that it was paid for - eg.

stationery, fuel, entertaining, advertising or whatever. One entry goes as a debit on the left and the other as a credit on the right - when you look at the trial balance the debits should tie up with the credits ie the trial balance - a list of the general ledger balances should have balancing debit total and credit totals.

With respect to the sales (AR) and purchase (AP) ledgers, the integrated general ledger postings that are created automatically for transactions in these modules can be turned off in the company preferences screen by setting each of the integration flags to No.

Integrated general ledger postings do provide a good way of building up the business's accounts from activity in these sub ledgers.

You can choose between two levels of integration:

## **1. Integrate GL at the Debtors and Sales Level Only**

This creates general ledger journals for each sale as follows:

DR the debtors control account - defined in the company preferences screen

CR the sales account - defined with reference to the customer sales area, stock category of the item being sold and the sales type (price list) of the customer. This provides great flexibility as to how sales should be posted

CR the tax to the taxgl account defined in the tax authorities (ie the general ledger code of the tax authority of the customer branch). It is also possible to have just one general ledger account for all sales by defaulting ANY sales area, ANY stock category and ANY sales type with a single general ledger code - see later section on sales general ledger codes.

the reverse takes place for a credit note.

When cash is received:

CR the debtors control - defined in company preferences DR the bank account - defined in the bank account setup.

There are also general ledger entries for discounts and differences on exchange which have been ignored for the purposes of this introduction.

This level of integration ensures that the list of balances of all customer accounts (in local currency) always ties up with the general ledger debtors control account.

## **2. Integrate GL at the Stock Level As Well**

For every sale:

CR stock value at the standard cost of each item sold - the stock GL account being defined in the stock categories record.

DR Cost of Goods Sales (COGS - or COS) with the same cost. - the COGS GL accounts are defined with similar flexibility as described for the Sales GL accounts under the setup menu under AR/AP options

the reverse happens for credits.

This enables the stock value to be continuously updated in the general ledger and always be equal to the stock valuation at standard cost.

This level of integration also has ramifications for stock adjustments, stock deliveries and stock cost changes.

For stock adjustments the quantity adjusted is extended by the standard cost and it is written on (CR) or off (DR) to the stock adjustment GL account as specified in the stock category record for that item.

For receipts of stock - the stock coming in is extended by the standard cost and the entry is to:

DR stock at standard cost x number received - the stock account being defined in the stock category record for the item being received.

CR GRN suspense at standard cost x number received - this account is specified again in the company preferences screen.

The two levels of general ledger integration are:

- Sales journals that post a credit to a sales general ledger account, a debit to a discount account, a credit to a tax account, a credit to a freight recovery account and a debit to a debtor account. This level of integration also reverses the posting described here for sales credit notes. This level also triggers the general ledger journals for banking of cash against debtor accounts. Debiting a bank account and crediting the debtors account.
- Stock journals that post a debit to a cost of sales account and a credit to a stock account - and the reverse entries for sales credit notes.

The level of general ledger integration is determined by reference to the flags in the company preferences page.

## Sales Journals

The general ledger accounts that are used in this level of integration are determined from several inputs.

- Sales Area of the customer being invoiced/credited
- Sales Type (or price list) of the customer being invoiced/credited.
- Stock Category of the item being invoiced/credited.

A table of sales general ledger accounts is maintained and can be modified from the setup tab. When an invoice is created from the ConfirmDispatch\_Invoice.php script the system uses a function defined in

GetSalesTransGLCode.inc to look up the general ledger codes that are appropriate. By default this function uses the following logic:

- If there is a record in the SalesGLPostings table that has a matching Area, SalesType and Stock Category then the function returns the sales account and the discount account applicable.
- If there is a match for the Area and SalesType using the default Stock Category (ANY) then the codes applicable to this record are returned.
- Then if there is a matching Sales type, stock category with default (AN) area this is used.
- Then if there is a matching stock category record using the default area (AN) and the default salestype (AN) this is used - finally
- If there is no record is found after trying the above combinations then the GL Code for the default area, sales type and default stock category is used - this is GL code 1. If GL Code 1 is not defined, then it will be created.

Since the logic of how the general ledger account is determined is defined in this function it is relatively simple to change this to what is most appropriate for the business.

The freight recovery and the debtors control account used are those defined in the company preferences page.

The tax account used is the account defined in the tax authorities definition used for the customer being invoiced.

## Stock Journals

The general ledger accounts that are used for posting sales transactions are determined using the sales area, the sales type of the customer being invoiced/credited and the stock category of the item being invoiced/credited. A table of general ledger accounts is maintained and can be modified from the set up tab from the link "COGS GL Interface Postings". The same logic as above is applied and the function is defined in the same GetSalesTransGLCode.inc script to look up the appropriate GL codes. Again, since the logic of how the general ledger account is determined is defined in the function GetCOGSGLAccount, it is relatively simple to change this to suit the business.

The account to credit stock with for the cost of goods sold is determined by reference to the stock item being sold. The stock category of the item is retrieved and the general ledger codes applicable to the stock category are used.

The profit and loss accounts used for stock adjustments are also determined by reference to the stock category record.

The profit and loss account used for posting the variance between standard cost of a purchased item and its actual cost as invoiced is also determined from the stock category record.

# General Ledger Inquiries and Reports

The webERP General Ledger module has the following inquiries and reports:

## Bank Account Balances

This script displays the bank accounts authorised for with balances.

## Bank Account Reconciliation Statement

This script displays the bank reconciliation for a selected bank account.

## Cheque Payment Listing

The cheque payments listing function allows you to create a PDF summary of all payments made from the bank account you specify, within a date range that you specify.

To access this functionality, choose "Cheque Payments Listing" from the Reports/Inquiries menu of the General Ledger Module

## Bank Transactions Inquiry

This inquiry allows you to view all bank transactions for a selected date range, and the inquiry can be filtered by matched or unmatched transactions, or all transactions can be chosen.

To print this inquiry just click on the printer icon in the top right hand corner of the table.

The inquiry can be selected by choosing "Bank Transactions Inquiry" from the Inquiries/Reports menu in the General Ledger module.

## General Ledger Account Inquiry

You can view the transactions for individual accounts, for a selected range of periods. To view an inquiry from the main menu, select "Account Inquiry" from the Reports/Inquiries menu in the General Ledger module.

You are then taken to an account selection screen, where you can search for an account either by its code, or by its description. From the list of possible accounts that you are shown, simply click on the button for the account code that you are interested in.

Now you will see a screen with a drop down list of GL codes, with the one you chose as the selected one. You can now choose to filter the inquiry by tag, or to show all transactions. Finally a select box with all defined periods will be shown, and the current month will be highlighted. You can drag across multiple periods to highlight whatever periods you require.

Once this is done clicking on Show account transactions will list all the transactions for the chosen account, and will be listed and totalled by period.

You can also enter the account inquiry via any of the top level reports, simply by clicking on the account code in those reports.

To print the inquiry, simply click the printer icon in the top right of the table, and the inquiry will be printed.

## **Graph of Account Transactions**

Using this script you can display a graph of General Ledger account transactions.

## **General Ledger Account Listing Report**

Using this option you can produce a pdf report of all transactions for selected accounts, over a selected period. To produce this report, use the "Account Listing" option from the Inquiries/Reports menu on the General Ledger module.

You can select a range of accounts, by clicking and dragging within the Accounts select box, and likewise you can select a range of periods by clicking and selecting a range within the periods selection box.

The report can also be filtered by individual tag, or all tags can be shown

## **General Ledger Output to CSV file**

Using this option you can create a csv file of all transactions for selected accounts, over a selected period. This file can be opened by any spreadsheet package for you to use the data to produce any reports you may want. To produce this report, use the "Account Listing to CSV File" option from the Inquiries/Reports menu on the General Ledger module.

You can select a range of accounts, by clicking and dragging within the Accounts select box, and likewise you can select a range of periods by clicking and selecting a range within the periods selection box.

The report can also be filtered by individual tag, or all tags can be shown

## **General Ledger Journal Inquiry**

You can produce a list of all general ledgers that have been produced within a given date range, and/or a range of journal numbers. To do this, select the "General Ledger Journal Inquiry" from the Reports/Inquiries menu in the General Ledger module.

webERP will tell you the possible journal number range by giving the highest and lowest numbers that it currently has in the system. You can choose any numbers within that range to show in the inquiry.

This will produce a table of all journals, with their individual journal lines for the criteria specified. To print this table, just click on the printer icon in the top right hand corner.

You can produce a pdf of individual journals, by clicking on the "print" link at the end of the first line of the required journal.

## **Trial Balance**

The Trial Balance is run from the Reports/Inquiries menu in the General Ledger module. It can be run for any range of periods, including running it over a financial year end. So for instance if the financial year end is 31st December, it is still possible to run it for a 6 month period from October to March. It can also be run for a range of months greater than 1 year. This provides great flexibility in the reporting system.

It can be run as a PDF which can be printed, emailed, saved to an archive etc, or can be viewed on screen.

Whilst viewing the on screen version, clicking on the account code takes you to the GL Account Inquiry screen for that account, and for the period range selected for the Trial Balance.

## **Balance Sheet**

Balance Sheet (or Statement of Financial Position) is a summary of balances. Assets, liabilities and ownership equity is listed as at a period end. It be accessed by choosing the "Balance Sheet" option from the Reports/Inquiries menu in the General Ledger module.

The balance sheet has three parts: assets, liabilities and ownership equity. The main categories of assets are listed first and are followed by the liabilities. The difference between the assets and the liabilities is known as equity or the net assets or the net worth or capital of the company and according to the accounting equation, net worth must equal assets minus liabilities.

webERP is an "accrual" based system (not a "cash based" system). Accrual systems include items when they are invoiced to the customer, and when expenses are owed based on the supplier invoice date.

The report can be run as a pdf file for later printing, emailing, or archiving, or it can be shown on screen. It can be run in summary mode - just showing the totals for each account group, or in detailed mode listing each general ledger account balance for all balance sheet accounts grouped by account group.

## **Profit and Loss Statement**

Profit and Loss statement (P&L), also called an Income Statement, or Statement of Operations can be accessed by choosing the "Profit and Loss Statement" option from the Reports/Inquiries menu in the General Ledger module. This is the statement that indicates how the revenue (money received from the sale of products and services before expenses are taken out, also known as the "top line") is transformed into the net income (the result after all revenues and expenses have been accounted for, also known as the "bottom line").



The purpose of the income statement is to show whether the company made or lost money during the period being reported. The P&L is reported for a user selectable range of periods.

The Profit and Loss report can be run as a pdf file for later printing, emailing, or archiving, or it can be shown on screen. It can be run in summary mode - just showing the totals for each account group, or in detailed mode listing each general ledger account balance for all profit and loss accounts grouped by account group.

## **Statement of Changes in Equity**

The statement of changes in equity, often referred to as statement of retained earnings, details the change in owners' equity over an accounting period by presenting the movement in reserves comprising the shareholders' equity.

The purpose of the statement of changes in equity is to show the changes in a company's retained earnings during the period being reported.

The changes in equity report can be run as a pdf file for later printing, emailing, or archiving, or it can be shown on screen. It can be run in summary mode - just showing the totals for each account group, or in detailed mode listing each general ledger account balance for all profit and loss accounts grouped by account group.

## **Statement of Cash Flows**

The statement of cash flows, also known as the successor of the old *source and application of funds statement*, reports how changes in balance sheet accounts and income affect cash and cash equivalents, and breaks the analysis down to operating, investing and financing activities (see [GLCashFlowsSetup](#)).

The purpose of the statement of cash flows is to show where the company got their money from and how it was spent during the period being reported for a user selectable range of periods.

The statement of cash flows represents a period of time. This contrasts with the statement of financial position, which represents a single moment in time.

webERP is an "accrual" based system (not a "cash based" system). Accrual systems include items when they are invoiced to the customer, and when expenses are owed based on the supplier invoice date.

It can be generated using either direct method or indirect method. The main difference between them is the cash flows from operating activities, the first section of the statement of cash flows; there is no difference in the investing and financing activities sections.

### **Statement of Cash Flows using Direct Method**

The cash flows from operating activities will show lines such as cash from customers and cash paid to suppliers. "*Major classes of gross cash receipts and gross cash payments are disclosed*" (Reference: IAS 7, paragraph 18).

## Statement of Cash Flows using Indirect Method

The cash flows from operating activities will include net income followed by the adjustments needed to convert the total net income to the cash amount from operating activities. *"Profit or loss is adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows"* (Reference: IAS 7, paragraph 18).

Activities are reported on a net basis (only one line per account).

Report parameters:

- **Select period from.** Select the beginning of the reporting period. Default: first period of the current fiscal year.
- **Select period to.** Select the end of the reporting period. Default: current period.
- **Show the budget for the period.** Check this box to show the budget for the period. Default: off.
- **Show accounts with zero balance.** Check this box to show all accounts including those with zero balance. Default: off.
- **Show cash and cash equivalents accounts.** Check this box to show cash and cash equivalents accounts. Use this for validation, not for final report. Default: off.

**Note 1.** The *"net profit for the period"* is calculated from the accounts of the *statement of comprehensive income*.

**Note 2.** The *"dividends"* are calculated as *"net profit for the period"* minus *"retained earnings"*. The *"retained earnings"* are calculated using the complement method; that is: the changes of retained earnings are equal to the opposite of changes in other *statement of financial position* accounts. This is done to correct the impact of the *"net profit for the period"* underreporting before the end of that period; so, if you have differences between dividends in this report and the real dividend payments, check retained earnings related accounts.

**Warning!** Although the standard states that *"Net profit for the period"*, *"Dividends"*, and *"No effect on cash flow"* are part of section *"Operating activities"*, in this report they are shown separately to cover the accountants that use to separate those accounts.

## Notes to Financial Statements

The notes to financial statements are an additional information pertaining to a company's operations. They are considered to be an integral part of the financial statements and are required by the full disclosure principle.

Because not all relevant financial information can be communicated in the main reporting documents, such as statement of financial position and income statement, they are necessary to show non-numeric data, *"comprising a summary of significant accounting policies and other explanatory notes"* (Reference: IAS 1, paragraph 10), and details of relevant GL accounts.

This script helps with the preparation of these notes.

## **Horizontal analysis**

The horizontal analysis, also known as trend analysis, is a financial statement analysis technique that shows changes in the amounts of corresponding financial statement items over a period of time. It is a useful tool to evaluate trend situations.

The statements for two periods are used in horizontal analysis. The earliest period is used as the base period. The items on the later statement are compared with items on the statement of the base period. The changes are shown both in currency (actual change) and percentage (relative change).

The actual change is calculated as *selected\_period - previous\_period*.

The relative change is calculated as  $(\text{selected\_period} - \text{previous\_period}) / \text{previous\_period} * 100$ .

### ***Horizontal Analysis of Statement of Financial Position***

The debit amounts (assets) of the selected and previous statement of financial position are shown as positive numbers; the credit amounts (liabilities and equity) are shown as negative numbers.

The sources of funds are shown as positive numbers in the absolute variation column; the applications of funds are shown as negative numbers in the absolute variation column.

The increasing items are shown as positive numbers in the relative variation column; the decreasing items are shown as negative numbers in the relative variation column.

### ***Horizontal Analysis of Statement of Comprehensive Income***

The debit amounts (revenues) of the selected and previous statement of comprehensive income are shown as positive numbers; the credit amounts (costs and expenses) are shown as negative numbers.

The changes that increase the net profit are shown as positive numbers in the absolute variation column; the changes that decrease the net profit are shown as negative numbers in the absolute variation column.

The increasing items are shown as positive numbers in the relative variation column; the decreasing items are shown as negative numbers in the relative variation column.

### ***Horizontal Analysis of Statement of Changes in Equity***

The changes that increase the retained earnings are shown as positive numbers in the absolute variation column; the changes that decrease the retained earnings are shown as negative numbers in the absolute variation column.

The increasing items are shown as positive numbers in the relative variation column; the decreasing items are shown as negative numbers in the relative variation column.

## ***Horizontal Analysis of Statement of Cash Flows***

The source amounts (where the money has come from) of the selected and previous statement of cash flows are shown as positive amounts; the application amounts (where the money has gone) are shown as negative amounts.

The changes that increases the cash and cash equivalents are shown as positive numbers in the absolute variation column; the changes that decreases the cash and cash equivalents are shown as negative numbers in the absolute variation column.

The increasing items are shown as positive numbers in the relative variation column; the decreasing items are shown as negative numbers in the relative variation column.

## **Tag Reports**

An Income and Expenditure report can be produced, filtered by individual tags. So for instance following the example above, if you wished to view the costs associated with a particular vehicle you can run this report selecting the appropriate tag for the vehicle to report on to find the information.

As with the Profit And Loss report, this can be produced as an on screen report, or as a pdf.

The report can be run by selecting "Tag Reports" from the Reports/Inquiries menu in the General Ledger module.

## **Tax return reports**

To print the reports for your VAT/Sales tax/Purchase tax returns, choose the "Tax reports" option from the Reports/Inquiries menu in the General Ledger module.

You can choose a report for any of the tax authorities within which you operate and webERP will only print those transactions needed for your report.

The report can be run for one month, two months, a quarter, or for six months depending on the requirements for this particular tax authority.

You can run a summary report to get just the relevant totals, or a detailed report to list all the transactions within that total.

The report will be run as a pdf file for printing, emailing, archiving etc.

## **Maintenance**

### **Account Sections (maintenance)**

This script allows you to define the sections in the general ledger reports. See: [Account Sections](#).

## Account Groups (maintenance)

This script allows you to define the groupings of general ledger accounts. See: [Account Groups](#).

## GL Accounts (maintenance)

This script allows you to define the general ledger accounts. You can delete, insert, or update an account. See: [GL Accounts](#).

## GL Account Authorised Users

This software has methods to assign permissions or access rights to specific users and groups of users. The system controls the ability of the users to view or make changes to the contents of the GL accounts.

With this script, you can change a specific GL account access permissions for users:

- You can add or remove the read permission for each user that grants or denies his ability to view that GL account.
- You can add or remove the write permission for each user that grants or denies the ability to update that GL account.

If you need to copy the access rights to general ledger accounts from one user to another, you can use an utility. See: [Copy Authority of GL Accounts from one user to another](#).

## User Authorised GL Accounts

This software has methods to assign permissions or access rights to specific users and groups of users. The system controls the ability of the users to view or make changes to the contents of the GL accounts.

With this script, you can change a specific user access permissions to GL accounts:

- You can add or remove the read permission for each GL account that grants or denies the ability of that user to view it.
- You can add or remove the write permission for each GL account that grants or denies the ability of that user to update it.

If you need to copy the access rights to general ledger accounts from one user to another, you can use an utility. See: [Copy Authority of GL Accounts from one user to another](#).

## GL Budgets (maintenance)

See: [GL Budgets](#).

## **GL Tags (maintenance)**

This software allows the use of accounting tags to help you track specific units within your organization. You can set up any quantity of accounting tags. In this way, you can group transactions and assign them to cost centres, profit centres, activities centres, divisions, departments, or any units for which you need to produce a statement of comprehensive income for each "*tag*". See: [GL Tags](#).

## **Bank Accounts (maintenance)**

See: [Bank Accounts](#).

## **Bank Account Authorised Users**

This software has methods to assign permissions or access rights to specific users and groups of users. The system controls the ability of the users to view and make changes to the contents of the bank accounts.

With this script, you can add or remove the access permission for each user that grants or denies his ability to view or update that bank account.

## **User Authorised Bank Accounts**

This software has methods to assign permissions or access rights to specific users and groups of users. The system controls the ability of the users to view and make changes to the contents of the bank accounts.

With this script, you can add or remove the access permission for each bank account that grants or denies the ability of that user to view or update it.

# Petty Cash Management System

## Overview

The Petty Cash module enables employees to submit expense claims directly into the system that can then be authorised by their supervisor.

Petty cash expenses are controlled in a friendly way, enabling all employees (including those without accounting knowledge) to enter their expenses and get paid for them.

The Petty cash module uses a temporary GL table (pcashdetails), containing all information about payments and expenses entered as petty cash. When cash assignments or expenses are authorized by a supervisor, they are posted into the gltrans table and flagged.

Once any transaction in the petty cash system has been posted it cannot be modified, edited or deleted in any way. Once posted, that's it.

## Setup General Parameters

### Set up expenses

#### ***Definition of expenses allowed to be used in the Petty Cash system.***

This table is used to isolate non-accountant users (most of workers/users of webERP) from the technical details and names used in accounting.

So when the system posts a petty cash expense against gltrans table, it will be posted against the GL account code selected.

PcExpenses.php is used to maintain this table (pcexpenses).

### Set up types of tabs

Different kinds of users have different privileges. CEO can spend petty cash money on a different way than a truck driver does (no disrespect, for any of them ;-). The system maintain these different categories of tabs of table pctype tabs.

PcTypeTabs.php is used to define this kind of different tabs. E.g.: Director, Office staff, Truck Driver, etc.

Set up expenses allowed for type of tab The link between types of tabs and expenses.

Here we need to define which expenses are allowed to a certain type of tab. This table is used to prevent users assigning expenses for expenses not allowed. as example, a user with role "member of parliament" could have a tab of a type "all allowed, including night drinks in a pub", while a user with

role "hard worker" could have a tab of a type "transport to workplace" only, so the system can achieve a better control of each one's expenses.

Each company must define here the policy of petty cash payments.

PcExpensesTypeTab.php is the script managing this.

## Set up tabs

PcTabs.php is the script used to set up petty cash tabs

A petty cash tab contains:

- **Tab Code:** The identity of the petty cash tab, limited to 20 characters.
- **User:** User of the tab. Who is spending/receiving money for petty cash expenses. Must be a webERP user.
- **Type of tab:** As previously defined
- **Currency:** A tab will handle money in one currency only. So users allowed to spend in 2 or more currencies (e.g. international commercial team) will have 1 tab for each currency
- **Limit:** Maximum amount the user can spend, to have a better control. Nowadays it only issues a warning to the supervisor, but can be coded to work differently (better)
- **Cash assigner:** The user who will assign cash to the tab. This would typically be the supervisor of the user who is claiming an expense.
- **Authorizer - Cash:** The user who will authorise cash assigned to the tab. This could be the same user as 'Cash assigner', or perhaps someone higher up the hierarchy if greater financial control is required.
- **Authorizer - Expenses:** The user who will authorise expense claims.
- **GL Account For Cash Assignment:** GL account where the cash assignment comes from. It must be a bank account, so when assigning cash to a tab, the system will deduct the amount from the bank account and increase the petty cash account
- **GL Account Petty Cash Tab.** In GL we should have an account (one per currency) to reflect "amount of money distributed among employees" or "Petty Cash Account". This is the account where the money goes after a cash assignment is done or where the money comes where an expense is posted
- **Default Tag:** For each expenses entry, any of the pre-defined tags can be selected, but most users will have one which use most frequently.
- **Tax Group:** The tax for each expense can be entered. Much like currencies, only one Tax Group can be applied to a tab. So users allowed to spend in 2 or more countries/territories will need 1 tab for each Tax Group.

At this point we have the system ready to work.



# Workflow

## Assignment of cash

The supervisor (authorizer) gives money cash to an employee to be used as petty cash. In script PcAssignCashToTab.php we record this fact.

The supervisor can select only the tabs he/she is supervisor of. They must specify amount and date. There is also a field for notes, where any further detail can be added.

At this stage no transaction is posted in gltrans table, only at pcashdetails we write down: "Supervisor gives to user X (tab really), Y dollars on date D".

Cash Assignments can be edited and deleted before are authorized. Once authorized and posted can not be modified in any way.

## Expense claims

Employee will go out and spend money. Then will report to webERP these expenses in script PcClaimExpensesFromTab.php

Employee will select a tab (from his/her own tabs). And then records details of all expenses incurred:

- Date of expense
- Expense code (from the list his/her tab is allowed depending on the type of tab involved)
- Tag
- Gross Amount: The total amount being claimed including taxes
- Tax: The tax amount displayed on the receipt. Multiple tax fields will be displayed for Tax Groups with multiple tax authorities/rates.
- Notes: For any further detail needed to remember
- Receipt Attachment: A file can be uploaded as proof of the expense. The accepted file types are png, jpg, jpeg, pdf, doc, docx, xls, xlsx

At this stage no transaction is posted in gltrans table, only at pcashdetails we write down: "User U reports spending X amount in concept C on date D".

Expenses reported can be edited and deleted before are authorized. Once authorized and posted can not be modified in any way.

## Expense authorisation

Once the expenses have been entered, a supervisor will need to authorize them.

In script PcAuthorizeExpenses.php the supervisor must select the tab he/she is supervising.

Expenses which have not yet been authorized will have a tick box alongside them. To authorize expenses, select the relevant tick boxes. If incorrect or in doubt (an employee claiming 10.000.000

USD for fuel car) he can call/email/report him and sort it out. Because it's not authorized yet it can be modified (to 100 USD...)

When the update button is pressed and there are some expenses ticked, then GL posting occurs.

## **Cash authorisation**

A supervisor will also need to authorize assigned cash (or payments).

In script PcAuthorizeCash.php the supervisor must select the tab he/she is supervising.

Assigned cash entries which have not yet been authorized will have a tick box alongside them. To authorize assigned cash entries, select the relevant tick boxes.

When the update button is pressed and there are some assigned cash entries ticked, then GL posting occurs.

## **Posting workflow**

If a cash assignment need to be posted then:

### ***In gltrans***

- Amount of assignment is deducted from "GL Account For Cash Assignment" as specified in tab definition.
- Amount of assignment is increased in "GL Account Petty Cash Tab" as specified in tab definition.

### ***In banktrans***

The bank transaction is recorded conveniently to report the money going out from the "GL Account For Cash Assignment"

If an expense need to be posted then:

### ***In gltrans***

- Amount of expense is deducted from "GL Account Petty Cash Tab" as specified in tab definition
- Amount of expense is increased in "GL Expense Account" as specified in expenses definition.

## **Notes**

### ***Users***

All users must be webERP users. Security setting 6 has been created to allow users use this module. So employees can login into webERP only to claim / report their expenses, if allowed.

## ***About advance payments***

Many organisations run "open tabs", so employees ask for money first, and later on they spend it (we hope in an appropriate manner) and then report expenses incurred. Any difference will be settled "next report" or "next cash assignment".

That's the idea keeping expense report and cash assignment separate, as it's flexible and fits all situations:

Example Advance of 500 USD and submit claims of 480 USD:

1. cash assignment of 500 USD
2. claims of 480 USD
3. approval of 480 USD (status: employee owes 20 USD to company)
4. there's 2 options depending on company's culture:
  1. return of 20 USD (cash assignment negative, so  $500 - 480 - 20 = 0$  balanced)
  2. employee keeps 20 USD for his next report. The system will keep track of previous expenses/ cash assignments done, to keep the balance up to date)

Example Advance of 500 USD and submit claims of 530 USD:

1. cash assignment of 500 USD
2. claims of 530 USD
3. approval of 530 USD (status: company owes 30 USD to employee)
4. there's 2 options depending on company's culture:
  1. extra cash assignment of 30 USD (cash assignment positive, so  $500 - 530 + 30 = 0$  balanced)
  2. next cash assignment of 500 USD will show he has only 470 available, as 30 were owed.

# Fixed Assets Manager

## Features Overview

The Fixed Assets Manager module allows the recording of individual fixed assets into the database and integration back to the webERP General Ledger.

- Assets are assigned a unique id number.
- Any number of fixed asset categories can be defined e.g. Plant, Equipment, Buildings etc.
- Assets can be depreciated using either straight line or diminishing value depreciation methods.
- Each asset can have it's own depreciation rate.
- Any number of fixed asset locations can be defined. Assets can only belong to one location.
- Assets can be listed by category and location so they can be readily identified in a fixed asset audit.
- Depreciation calculation and posting run checks if it has been previously run, and defaults the run date to avoid duplicated depreciation runs.
- A transaction log of depreciation, additions and disposals is maintained by the system.
- Full fixed asset schedule of any date period range is possible.
- Fixed asset general ledger posting is performed based on the GL accounts specified in any number of user defined, fixed asset categories.
- Fixed asset maintenance tasks can be logged and assigned to an individual with a manager. These tasks can then be used to generate a maintenance schedules.

## Creating a New Fixed Asset

The sequence of events in creating a new fixed asset is as follows:

### Define Fixed Asset Categories

Any number of fixed asset categories are defined - from Fixed Asset Module -> Fixed Asset Categories. These are the groupings of like assets e.g. Plant, IT equipment, Buildings, Land etc. The general ledger accounts for depreciation, fixed asset cost and accumulated depreciation are all defined for all assets of the same category at this level.

### Define Fixed Asset Locations

Fixed asset locations must be defined. These can be in a hierarchical manner e.g. "Head Office" may have a sub-location of "Server Room".

## **Add Fixed Asset Items**

A fixed asset is created from the Fixed Assets module -> Add Fixed Asset. This process allows the description and a long description to be recorded, together with the asset's serial number or barcode, the category of fixed asset it belongs to and its location in the business. The depreciation method and rate is also specified. At this point there is no cost (nor accumulated depreciation) associated with the asset

## **Purchase Orders For Fixed assets**

A purchase order is placed for the asset as a non-stock item. There is provision to enter the asset id of the asset into the purchase order. When the asset is received - the cost is posted to the general ledger account specified by the asset's category. It is also possible to add cost to existing assets in this way. Each cost added is recorded in the fixed asset transaction log so additions over a period can be identified easily.

## **Purchase an Item Directly With Supplier Invoice**

Instead of entering a purchase order with the asset specified directly it is possible to enter a purchase invoice directly allocating the charges to any number of fixed assets. The supplier invoice form allows entry against fixed assets directly. All assets created - but with no cost will show in a select box - any of these can be selected or if the asset id is known it can be entered manually. In this way it is possible to add to existing assets. Depreciation will calculate on the new total cost of the asset (or book value if DV depreciation is being used).

## **Selecting A Fixed Asset**

From the Main Menu -> Assets Manager module tab -> Select an Asset. There are options to select an asset category and asset location that results in display of assets for that selected category and location only. Alternatively, the asset code or any part of the description can be entered to display an asset. An asset can be selected from the resulting list by clicking on the required Asset Code button.

When an asset is selected, the details of the asset are displayed including the cost and accumulated depreciation with all entered transactions reflected. The cost and accumulated depreciation cannot be entered or altered manually. The asset cost is always be derived from the Accounts Payable module, and depreciation is automatically calculated. All other details of the asset can be modified as required when an asset is selected. These include description, serial number, barcode, category, location, depreciation type and rate.

## **Fixed Asset Depreciation Run**

The depreciation run must be carried out monthly to create the general ledger journals for depreciation at the rates and depreciation methods defined for the assets. In addition to the general ledger journals a log of the depreciation transactions is also created.

The depreciation run checks the last month it was run, and defaults the date to run for the following month. In this way, every time the depreciation run is carried out it is self evident whether it has been run for the month under review or not. There is no functionality to reverse a depreciation run and this date check helps prevents duplicate runs.

## **Change Location of a Fixed Asset**

Assets can be transferred to a different location. This enables the company to keep track of the location of their assets. To do this select 'Change Asset Location' from the Transactions menu of the Asset Manager module. Then just select the new location of the asset and all reports will be updated with this new location.

## **Fixed Asset Disposals**

To dispose of a fixed asset an invoice is raised for a fixed asset in the usual order entry screen. Instead of selecting a stock item, there is a button that allows a fixed asset to be selected. By selecting a fixed asset to be sold, the system creates a stock item for the fixed asset. When the sales order is confirmed for invoicing and if the debtors ledger is integrated into the general ledger then entries to dispose of the asset to the general ledger accounts defined in the fixed asset category of the asset are created. The fixed asset transaction is created for the disposal and the fixed asset updated to show the date it was disposed and the proceeds on the disposal.

## **Fixed Asset Register**

The Fixed Asset Register screen requires the entry of a start date and an end date. The Fixed Asset Register output can produce a pdf report, comma separated values for importing into a spreadsheet (CSV), or html for display on screen. The Register shows, for any displayed asset, the cost brought forward at the start date, the total of any additions subsequent to the start date, the depreciation brought forward and the depreciation charged over the period, together with the carried forward cost, accumulated depreciation and net book value.

## **Fixed Asset Maintenance**

Maintenance Task enables addition of maintenance tasks for any existing asset, with task description, person responsible, manager and days before due date.

The My Maintenance Schedule inquiry outputs a listing of all outstanding maintenance tasks in reverse due date order. From this Schedule tasks can also be marked as complete.

# Setup

## General Setup Options

### Company Preferences

Defines the settings applicable for the company, including name, address, tax authority reference, whether GL integration used, etc.

See [Company Parameters](#).

### System Parameters

Sets the main system configuration parameters.

Narrative is shown alongside each parameter to give the user an idea of where the setting is used.

See [System Parameters](#).

### Users Maintenance

Entry of users and security settings of users.

See [Setting Up Users](#).

### Maintain Security Tokens

Administration of security tokens.

See [Security Schema](#).

### Access Permissions Maintenance

Adds or removes security roles by a system administrator.

See [Security Roles](#).

### Page Security Settings

Changes the security token of a script.

See [PageSecurity values](#).

### Currencies Maintenance

Defines the currencies available. Each customer and supplier must be defined as transacting in one of the currencies defined here.

Any number of currencies can be defined in webERP. Every currency that is transacted with either in sales (AR) or purchasing (AP) needs to be defined in the system. To define currencies go to the Setup tab -> General -> Currency Maintenance. Only a few fields are required to be completed for each currency defined:

- **Currency.** The ISO 4217 code for the currency - this is the international standard 3 character code that is used worldwide to represent the currency. If the code entered exists then it is possible for webERP to retrieve exchange rates from either the European Central Bank or Google, if there is no rate maintained for the currency at the ECB. webERP is capable of updating exchange rates daily from the ECB if set to do so under Setup->Configuration ->Auto Update Exchange Rates Daily. If this is set to yes, then when the first user logs in for the day the exchange rates are updated automatically. If it is set to no then exchange rates will only be updated if the user does so manually.
- **Country.** The country of the currency can be entered
- **Hundredths Name.** The name of 100th of a single unit of the currency can be entered. e.g. pence for GBP or cents for USD
- **Decimal Places to Display.**
- **Exchange Rate.** The rate. This must be the number of the local currency that can be purchased with one of this currency.
- **Show in webSHOP.**

A utility is also provided which can produce a graph of the movement of any of the defined currencies against the functional currency

## Tax Authorities and Rates Maintenance

Entry of tax authorities - the state institutions that charge tax.

See [Tax Calculations](#).

## Tax Group Maintenance

Allows for taxes to be grouped together where multiple taxes might apply on sale or purchase of items.

See [Tax Calculations](#).

## Dispatch Tax Province Maintenance

Allows for inventory locations to be defined so that tax applicable from sales in different provinces can be dealt with.

See [Tax Calculations](#).

## Tax Category Maintenance

Allows for categories of items to be defined that might have different tax rates applied to them.



See [Tax Calculations](#).

## List Periods Defined

Shows a list of all the system defined periods.

## Report Builder Tool

Report Writer and Form Creator script that creates templates for user defined reports and forms.

See [Report Builder/Form Builder](#).

## View Audit Trail

Shows the activity with SQL statements and who performed the changes.

## Geocode Maintenance

Sets the configuration for geocoding of customers and suppliers.

## Form Designer

Customizes the form layout without requiring the use of scripting or technical development.

All measurements are in PostScript points (72 points = 25,4 mm).

All coordinates are measured from the lower left corner of the sheet to the top left corner of the element.

The form elements are:

- **Image**. Its attributes are x, y, width and height.
- **SimpleText**. Its attributes are x and y.
- **MultiLineText**. Its attributes are x, y, width and height.
- **Rectangle**. Its attributes are x, y, width and height.
- **CurvedRectangle**. Its attributes are x, y, width, height and radius.
- **Line**. Its attributes are start x co-ordinate, start y co-ordinate, end x co-ordinate, and end y co-ordinate.

## Web-Store Configuration

Maintain web-store configuration and set up.

## SMTP Server Details

Sets the SMTP server.

Simple Mail Transfer Protocol (SMTP) is an Internet standard for electronic mail (email) transmission.

## **Mailing Group Maintenance**

Maintaining mailing lists for items to mail.

## **Receivables/Payables Setup**

### **Sales Types**

### **Customer Types**

### **Supplier Types**

### **Credit Status**

### **Payment Terms**

### **Set Purchase Order Authorisation levels**

### **Payment Methods**

### **Sales People**

### **Sales Areas**

### **Shippers**

### **Sales GL Interface Postings**

**COGS GL Interface Postings**

**Freight Costs Maintenance**

**Discount Matrix**

**Inventory Setup**

**Inventory Categories Maintenance**

**Inventory Locations Maintenance**

**Inventory Location Authorized Users Maintenance**

**User Authorised Inventory Locations Maintenance**

**Discount Category Maintenance**

**Units of Measure**

**MRP Available Production Days**

**MRP Demand Types**

**Maintain Internal Departments**

**Maintain Internal Stock Categories to User Roles**

**Label Templates Maintenance**

# Tax Calculations

## Overview

Many countries and states have varying methods for the calculation of ad-valorem taxes on sales. There is some flexibility in the configuration of how these automatic calculations are made and to which general ledger accounts the postings are made to. If all else fails tax rates can be entered by line of the invoice or credit as necessary. Several different rates of tax can be applied to each line item individually and some rates can compound on top of previous taxes calculated. The automatic calculation of taxes works based on:

1. Where the branch is that is to invoiced - each branch is defined as belonging to a certain tax group. It is the tax group that determines the taxes that will apply to the sale.
2. What the item being invoiced is - e.g. In many states reduced rates of taxes apply to the more essential items for basic sustenance. - each item is defined as belonging to a certain "tax category"
3. From where the item is dispatched i.e. the warehouse from which the goods are picked. The tax legislation in most countries require that supplies made within the country attract tax - GST/VAT or whatever. The inventory location from where the goods or service is being provided has a tax province it is the tax province of the inventory location in conjunction with the tax group of the customer branch and the tax category of the item that determines the rates of tax applicable.

## Setting up Taxes

- All the tax authorities under which goods are to be sold must be defined in the tax authorities table under the set up tab. The tax authority record requires the specification of the general ledger account codes where purchase tax is to be posted and where sales taxes are to be posted to, as well as a description as to what the tax authority is called. eg. UK Inland Revenue VAT, ATO - GST(Australia), NZ IRD - GST (New Zealand). If there are several ways in which taxes can be defined within a single authority then it is appropriate to set up another authority. One example might be the Netherlands where as well as charging tax (at 3 different levels) it is possible to dispatch goods to a customer in the Netherlands - from a warehouse in the Netherlands without adding tax to the invoice where the customer has an exemption arrangement and has agreed to pay the VAT on its purchases themselves directly to the Dutch revenue authority. In this circumstance a separate tax authority - customer exempt - NL - GST may be set up.
- Each customer branch is defined as falling under a particular tax group. The tax authority is the state body responsible for the collection of taxes. In many areas there are several such bodies that collect tax eg. in Canada there is a Federal Authority that collects GST and the state that collects Provincial Sales Tax PST. A tax group is therefore made up of one or more tax authorities. The tax group is set up with one or more tax authorities for which tax is payable on sales to the customer branch. Note that the tax authority is not held against a particular charge account - customer account. It is the branch where the goods are delivered to which is important in determining how the tax calculations work.
- Each stocking location or warehouse is also defined as within a particular taxprovince. This is specified from the locations maintenance form.
- Each stock item is defined as being subject to tax at a particular "tax category". The tax category is set in the stock item maintenance screen. In setting the tax category for each item some thought is

required as to the taxing of the item under different authorities. Most tax authorities have just two rates of tax applicable i.e. 0% and the normal tax rate eg. 10% for Australia, 12.5% New Zealand. However, in some authorities there may be several tiered rates - the Netherlands has three rates of tax. The categories setup must be based on the requirements of the tax authority (which the business requires goods to be sold within) with the most tax categories. The tax category entered against each stock item is entered against the stock master record. A look up selection box is provided showing all the tax categories defined.

- The applicable rates of tax then need to be defined. A rate is required for supplies from each Stock Location Tax province to each of the defined Tax Authorities and Tax Categories. It is this table of rates that allows the system to determine the rate applicable to each line item invoiced, based on the branch to which the item is to be supplied, the item itself and the location from where the goods are delivered.

### ***Single Tax on Sales within one Tax Authority Example - 2 Tax Categories:***

In most tax authorities there are just two rates of tax 0% and some other rate lets say 10%. Sales to export customers will not be taxable as they are exempt. If the business simply operates in the one country, then things are very simple. Items that are zero rated have the stock master record modified to give them a tax category - for zero rated. All other taxable items have the default tax category - taxable supply. Two Tax Authorities are defined, the first the country in which it operates and the other called Export. A tax group is defined for export and one for Local Sales. Customer branch records must be set with the Tax Group of the Local Sales or Export. The location record of each of the warehouses is defined as being the country tax authority. Now the rates applicable to export tax authority will all be 0 for tax categories - Taxable Supply and Export. The rate of tax applicable to the country tax authority will be 10% for taxable supply and 0% for Zero Rated.

### ***Sales only within one Tax Authority Example - 3 Tax Levels:***

Maybe zero-rated for food and 5% on clothing and 10% on all other goods. The tax category of all food items should be set to say Zero Rated and the tax rate of all clothing items set to - Clothing - all other taxable items at the full rate set to a tax level of Taxable Supply. The tax rates for the country tax authority for taxable supply set to 10%, Zero Rated - 0% and Clothing - 3 5%.

### ***Sales Within Two Tax Authorities Example - 3 Tax Levels:***

The business has a warehouse in another country - (Tax Authority A) or state with a different revenue collection authority and one authority has two levels and the other has 3 levels (Tax Authority B) as in the two examples above. Rates need to be defined for deliveries from each warehouse to customer branches in each tax authority. In most cases the rate of tax applicable to exports will be 0% - exempt. Tax Authority A will have entries applicable to deliveries within Tax Authority A for each of the 3 tax levels (even though only 2 are applicable - the rate for level 3 will be the same as 1) and also for deliveries to Tax Authority B. Tax Authority B will have rates set up for each level for deliveries within Tax Authority B and also for deliveries to Tax Authority A - the later rates will most likely be 0%.

The logic used in determining the rate to be used is as follows:

The TaxAuthority of the warehouse the goods are delivered from, the TaxLevel of the item and the Tax Authority of the branch of the customer being delivered to are determined. Using all three of these factors the rate is returned from the TaxAuthLevels table.

General ledger posting relating to the taxes calculated are made in accordance with the codes set up in the Tax Authority table.

## Tax Category Maintenance

In this script, you can enter, edit or delete a tax category name. A tax category is required for each category of items that attracts different rates of tax because in some authorities childrens clothing and basic food items are not subject to tax. Similarly luxury items might attract higher rates of tax.

You can enter any tax category name. But there are three special tax category names:

- **Exempt.** "*Exempt*" written in British English (en-GB). This tax category name is translated to other languages, if translated term is available. You can edit and you can delete this category. Items that are defined with this tax category would normally attract no tax - so the rates for the authority/tax category combination would normally be zero.
- **Freight.** "*Freight*" written in British English (en-GB). This tax category name is translated to other languages, if translated term is available. You can NOT edit nor you can NOT delete this category, because it is used in several scripts. The Freight tax category specifies the tax rate from the tax authorities/tax category combination for the order freight value. This is hard coded in webERP so it cannot be deleted and must be present
- **Handling.** "*Handling*" written in British English (en-GB). This tax category name is translated to other languages, if translated term is available. You can edit and you can delete this category.

# SQL Report Writer

## Introduction

The report builder tool provides administrators with the ability to create, copy, edit, delete, import and export database driven reports and forms. Pre-defined reports are stored in the language directory labeled specified for the given language. After installing the plug-in, there may be several standard reports and forms installed. More reports or forms can be added by importing them from either the host servers reports directory or uploading them directly from the browser. Standard reports can be viewed and customized through the Report Viewer. Forms may only be edited through Report builder. The Report Viewer manual covers the output procedures necessary for exporting or viewing reports created with the report builder.

**NOTE:** DETAILED UNDERSTANDING OF THE DATABASES AND FIELDS IS REQUIRED TO USE REPORT BUILDER! FAILURE TO DO SO WILL RESULT IN ERRORS OR NON-FUNCTIONAL REPORTS AND FORMS.

## What's the difference between a report and a form?

There are several differences between reports and forms. They are summarized in the table below:

Reports	Forms
<ul style="list-style-type: none"><li>• Strict format requirement</li><li>• List data in a tabular format</li><li>• Allow for easy data export in csv format</li><li>• Reports can be customized without knowledge of the databases</li></ul>	<ul style="list-style-type: none"><li>• Fields can placed throughout the page</li><li>• Contain both static and dynamic data</li><li>• Can contain images and graphics</li><li>• Are grouped in 'form groups' to allow variation of data presentation from the same data set</li><li>• Can be viewed directly via parameters passed by other scripts</li></ul>

## What is Report Builder - Reports

Report Builder is a web based tool that gathers the necessary webERP database information to generate company reports. Attributes such as page setup, fields retrieved, and filter criteria are entered to provide the specific information desired. Reports are generated with a standardized output but still have configurable



columns and options to allow for flexibility. Every report created with this tool can be customized and formatted by the users to create custom reports. Every report consists of the following general format:

**Header:** Consists of four lines and the body heading. The first three lines are Company Name, Title 1, and Title2. Company name cannot be changed but it's attributes, such as font, color, whether to show or not, can be altered. Title 1 and Title 2 are specified in each report and default to '%reportname%' and 'Report Generated %date%', respectively. Their attributes can also be changed. The forth header line displays the filter parameters specified for each report. This line will show for all reports. Finally, the table heading which is derived for the fields selected to show sorted by the column they show in. The table heading descriptions are included in the header of each page so every page lists the data field titles and their respective positioning within each column.

**Body:** Lists the data elements returned for the report. They appear in columns specified from the criteria setup for each report. Each column may contain one or more query results. The maximum number of columns is eight. A flag to truncate is available to limit the data to a single row, truncating the remaining information if not needed for the report.

**Footer:** Lists the page count out of the total number of pages. This field will always show and has no user configurable attributes.

## What is Report Builder - Forms

Report builder also will build form templates used in scenarios where reports will not allow the flexibility needed for formatting the output. Invoices, Purchase Orders, Checks, and Collection Letters are good examples of forms. Forms are more complex to generate than reports but allow the user added flexibility of positioning, font attributes, images, and enhanced data content. There are also certain requirements when building a form that need to be adhered to for the form to display properly. These will be discussed in the section on building a form.

In this manual, we will use an invoice form for demonstration purposes. An invoice form contains several pieces of database information, static and dynamic, graphics, images and page numbering. All will be demonstrated in the example.

The construction of a form consists of three parts similar to reports; header, body, and footer.

**Header:** The header is more complex in forms in that most of the information is processed as the header. Company name, static text, graphics and images all are handled in the header. This is because they are static through every page of the form. They can, however, be located anywhere on the page.

**Body:** The body typically contains a table of dynamic information. For our invoice example, the item description, quantity, and price will make up our body data. The tables positioning, size and format attributes are all flexible. The information for the body will continue to subsequent pages if necessary.

**Footer:** The footer typically handles the totaling of data. In our invoice example, we want to total all the items ordered, add freight and list the invoice total. This cannot be completed until all the data is processed which might span several pages. Therefore, all fields that are of type 'data total' fields display as 'continued' until the last page where the final total is inserted.

## Administrator Page

The administrator page is the starting point for all report and form manipulation. Upon entry, this page displays the current standard reports loaded into the database as well as any customized reports generated by the webERP users. Forms are listed by the Form Group they are a part of. From here, there are several choices for report/form manipulation. They will be covered in the following sections.

### Report Builder - Administrator Page

Default Reports	Custom Reports	
<b>Receivables</b> Customer List Invoice Report Invoiced Orders	<b>Receivables</b> Dave's Test Invoice	Create New Report
<b>Payables</b> Vendor List	<b>Payables</b>	Edit
<b>Inventory</b> Counts Products Stock Movements	<b>Inventory</b>	Rename
<b>General Ledger</b> Test2 Test554	<b>General Ledger</b>	Copy
<b>Financial Reports</b>	<b>Financial Reports</b>	Delete
<b>Miscellaneous Reports</b>	<b>Miscellaneous Reports</b>	Import
		Export

## Importing and Exporting

An important feature of the Report Builder is it's ability to import and export report and form parameters. This feature allows one user to generate a report on their webERP system and export it to his local file system where it can then be e-mailed, transferred or imported into another webERP system. There is also a provision to alter the naming within the report to allow for language translations for the field descriptions.

There are two types of importing types supported. First, packaged standard reports shipped with webERP are stored in the /languages/en\_US/ directory (or the language directory specified in the appropriate translation) where they can be selected for import. Entering a report name and selecting 'Import' will install the report into the group defined in the report file with the report file name specified. If the report filename is left blank, the default report name specified in the import file will be used. Second, a report file can be uploaded through the browser and imported into the group specified in the report file. If a report name is specified, the report will be saved under the specified name, but if left blank, the default report name contained in the uploaded file will be used.

**NOTE:** Standard reports will be imported into the Standard Reports listing and custom reports will be imported into the Custom Reports listing. The report type is specified in the uploaded report file.

Exporting downloads the report file to the user's browser and can either be viewed or saved. The file format is type 'text' and must be saved as a text file. Report Builder uses the extension .rpt.txt for files contained in the distribution package.

## Editing an exported report file

Report and form files can be edited to support multi-language users. The text file may be edited with any text editor. Only modify the descriptions between the single quotes and leave the remaining portions of the file untouched. A translation section example is shown below:

```
/* Language Fields. */
/* Only modify the language portion between the single quotes after the colon. */

/* Report Name and Title Information: */
ReportName:'Invoice'
Title1Desc: '%reportname%'
Title2Desc: 'report generated %date%'

/* Report Field Description Information: */
FieldDesc0:'Branch ID'
FieldDesc1:'Order Number'
FieldDesc2:'Quotation'
FieldDesc4:'Order Number'
FieldDesc5:'Order Date'
FieldDesc6:'Branch ID'
FieldDesc7:'Customer Reference'
FieldDesc8:'Deliver To Name'
FieldDesc9:'Quantity'
FieldDesc10:'Part Number'
FieldDesc11:'Unit Price'
FieldDesc12:'Customer Name'
FieldDesc13:'Address 1'
FieldDesc14:'Address 2'
FieldDesc15:'City'
FieldDesc16:'State'
FieldDesc17:'Postal Code'
FieldDesc18:'Country'
FieldDesc19:'Delivery Date'
' FieldDesc20:'Customer Branch ID'
FieldDesc21:'Order Date'
FieldDesc22:'Order Number'
FieldDesc23:'Customer Name'
FieldDesc24:'Order Number'
/* End of language fields. */
```

In this example, the report name is 'Invoice'. To change the report name to Invoice Register, simply change the word 'Invoice' with 'Invoice Register'. Language changes can also be made here for translation and the report saved in the languages directory appropriate for the language used.

## Editing, Copying, Renaming and Deleting Reports/Forms

### Editing a report

Standard and Custom reports can be edited by simply selecting the report to edit and pressing Edit. The following several menus are the same as defined in the Create a new report below. The report builder is the only place that standard reports can be changed. In the Report Viewer, the user is limited only to the selection

of criteria, no page setup or field property changes are allowed. In the Report Viewer, custom report modifications are more flexible where the user can adjust the page properties, field properties and criteria. The Report Viewer will not allow the user to add, change or delete and fields or criteria, just their properties.

## **Copying a report**

Reports may be copied by selecting a report and pressing Copy. Enter the name of the new report and the group it will be displayed with. All copied reports are saved as the same type of report as the original, standard or custom.

## **Renaming a report**

Renaming a report is similar to copying a report except the report is overwritten with the new report name and the report group cannot be changed. If you need to move a report to a different group, copy the report to that group and delete the original report.

## **Deleting a report**

To delete a report, select the report and press Delete. A confirmation window will pop-up to confirm the deletion before the report is removed. If a report is accidentally deleted, it may be possible to import it back again if it was a report from the distribution or exported and saved as backup.

## **How Do I Create a New Report?**

There are five steps to building a report. They are:

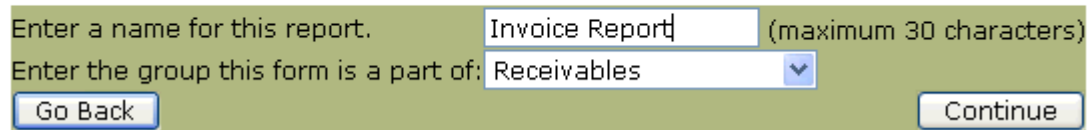
1. Entering the report name and category.
2. Setting up the page layout.
3. Specifying the database tables and link equations.
4. Entering and arranging a list of possible fields to display.
5. Entering and arranging date, grouping, sorting, and filter criteria.

The best way to demonstrate how to build a report would be to show an example. We'll build a report called: Invoice Report. First we'll need to access the report builder. It is found under the Setup menu under the General category titled Report Builder Tool. Once there press the Add New button.

### **Step 1: Report name and group category**

For our report, enter Invoice Report into the Enter a name text box. Also, we need to specify that it is a report by selecting the Report radio button. We now need to place this report under the proper category so select Receivables from the drop down menu for the group this report is a part of.

# Report Builder - Report Identification



Enter a name for this report. Invoice Report (maximum 30 characters)

Enter the group this form is a part of: Receivables

Go Back Continue

Press Continue when all information has been entered.

**IMPORTANT:** At this time a record will be added to the reports table and will appear in the list of available reports. Users can choose this report to generate but the result will be a 'No data in this report' warning. The report should be deleted if the report builder process is not completed for a given report.

## Step 2. Setting up the page layout

The next screen allows us to alter some of the default settings for the layout of the report. Most fields are self explanatory but there are a few notes to remember.

**Page layout:** You should set the default paper size to what you really want it to be. It cannot be changed when viewing standard reports. You may return here to make further changes by editing the report after you finish building the report testing the output.

**Column Width:** If you have a pretty good idea of how many columns you want your report to be and the width, you can enter them here. If you leave the defaults for now and finish your report you may go back and change the column widths after you test you finished product at a later time.

**Titles:** Data will appear as it is typed but there are system generated tags to automate the report. This list is current as of this writing but may change as more tags are added.

Tag	Description
%date%	Inserts the current date into the title in the place the tag appears within the title string.
%reportname %	Inserts the report name stored in the database.

**NOTE:** Margin and column widths are in millimeters, font sizes are in points.

## Report Builder - Report: Invoice Report - Page Setup

Go Back		Update		Continue			
Page Layout							
Paper Size: A4			Orientation: <input checked="" type="radio"/> Portrait <input type="radio"/> Landscape				
Page Margins							
Top 10 mm	Bottom 10 mm	Left 10 mm	Right 10 mm				
Header Information / Formatting							
Company Name	Show <input checked="" type="checkbox"/>	Font Helvetica	Size 12	Color Blue	Align Center		
Report Title 1 %reportname%	Show <input checked="" type="checkbox"/>	Font Helvetica	Size 10	Color Black	Align Center		
Report Title 2 Report Generated %date%	Show <input checked="" type="checkbox"/>	Font Helvetica	Size 10	Color Black	Align Center		
Report Filter Description		Font Helvetica	Size 8	Color Black	Align Left		
Report Data		Font Helvetica	Size 10	Color Black	Align Left		
Report Totals		Font Helvetica	Size 10	Color Black	Align Left		
Column widths - mm (0 for same as prior column)							
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
25	25	25	25	25	25	25	25

After all information has been entered, press Continue to enter the database information.

### Step 3. Specifying the database tables and link equations

This form allows us to specify the tables and linked tables that are used to build the query. These fields generate what will become the second part of the query, “FROM table1 INNER JOIN table2 ON table2linkequation INNER JOIN table3 ON etc”.

**NOTE: IMPORTANT: KNOWLEDGE OF THE DATABASE TABLES AND STRUCTURE IS REQUIRED.**

Enter the data in the boxes as shown below. Only one row of data may be entered at a time in sequence. After each table/Link Equation row has been entered, press the Update button to validate the table and commit the link equation. The form will reload with data just entered and will then allow the next Table/Link Equation to be entered. The fields are case sensitive.

Text Box Name	Data to Enter
Table Name - Primary	salesorders
Table Name - Second	salesorderdetails
Link Equation - Second	salesorders.orderno = salesorderdetails.orderno
Table Name - Third	debtorsmaster
Link Equation - Third	salesorders.debtorno = debtorsmaster.debtorno
Table Name - Fourth	custbranch
Link Equation - Fourth	salesorders.branchcode = custbranch.branchcode

**NOTE:** After the data has been entered, the tool will validate the data by attempting to retrieve a single row from the query. If a single row cannot be accessed from the database, you cannot progress past this point.

**NOTE:** If you get stuck here, remember that the report exists in the standard reports list and should be deleted to prevent users from running the report.

## Report Builder - Report: Invoice Report - Database Setup

<input type="button" value="Go Back"/>		<input type="button" value="Update"/>	<input type="button" value="Continue"/>
	Table Name	Link Equation (SQL Syntax) example: tablename1.fieldname1=tablename2.fieldname2	
Primary	<input type="text" value="salesorders"/>		
Second	<input type="text" value="salesorderdetails"/>	<input type="text" value="salesorders.orderno = salesorderdetails.orderno"/>	
Third	<input type="text" value="debtorsmaster"/>	<input type="text" value="salesorders.debtorno = debtorsmaster.debtorno"/>	
Fourth	<input type="text" value="custbranch"/>	<input type="text" value="salesorders.branchcode = custbranch.branchcode"/>	

After all information has been entered, press Continue to enter the possible fields to query.

### Step 4. Specifying the possible fields to retrieve

This form will add the allowed fields to a query build list. These fields generate will become the first part of the query, “SELECT field list here”. At least one field needs to be entered to make a valid report. Up to the total number of fields in the linked databases provided in step 3 are allowed. In practice, however, a smaller list usually works the best. Each field has it’s own attributes. They can be re-sequenced, force a column break, set to show and marked to track a running total. Only the fields added here will appear in the report viewer list for selection.

**PRACTICAL NOTE:** It’s a good idea to pre-order the fields in a logical order in the way you want the data to appear. Also, selecting the fields to show combined with the column breaks should result in a default report of eight columns or less so they can be displayed directly from the standard report without modifications.

**Order:** The order determines the sequence of the generation of the field list. If an order number is entered that already exists, it will be inserted into the list in the order specified and the remaining fields will be bumped down one position. If the order number is left out, it will append the new field to the end of the list. Order numbers begin with 1.

**Fieldname:** This text field needs to match the exact table and fieldname in the database. The fieldname is entered in the form ‘table.fieldname’ to provide absolute identification of the field to be retrieved. A test to retrieve a single line form the database with the fieldname and display description will be performed to validate the input. If the fieldname is incorrect or the display description is blank, an error will result.

**Name to Display:** The description can be any English (or other language) description. This is the ID assigned to the fieldname. It will appear on the report heading and links directly to the table.fieldname entry. Special characters are allowed but not recommended.

**Break:** This field specifies whether there should be a column break after this entry is displayed. The field can only be altered in the Report Viewer for custom reports so it's best to get it right in the standard report to generate the desired output. It is a good idea to group certain fields in the same column. For example, addresses typically read better if they appear in a block versus spread out over several columns. Also, the report is limited to eight columns to display. Most standard reports will list more than eight fields and using column breaks will help organize the output.

**Show:** Identifies the fields to display. Only fields that are checked to show will appear in the report. It is a good practice to show the fields that you want to appear in the standard report but not necessarily all fields. The user can decide what pieces of data they want and alter this field only in custom reports. If no fields are identified to show, the report viewer will generate a warning message 'No data to display'.

**Total:** Specifies if a running total should be kept. Can be set for any numeric field. If grouping is set, the report viewer will also track subtotals by the group selected as well as the total for all field retrieved in the report.

Let's add some fields to our report. We'll use an abbreviated list to show the general idea. If more fields are needed or need to be edited, the report may be edited and fields added or deleted as necessary. Enter the fields as shown in the table below.

Sequence	Fieldname	Name to Display	Break	Show	Total
1	salesorders.orderno	Order Number	No	Yes	No
2	salesorders.orddate	Order Date	No	Yes	No
3	salesorders.branchcode	Branch ID	Yes	Yes	No
4	salesorders.customerref	Customer Reference	No	Yes	No
5	salesorders.deliverto	Deliver To Name	Yes	Yes	No
6	salesorderdetails.quantity	Quantity	No	Yes	Yes
7	salesorderdetails.stkcode	Part Number	No	Yes	No
8	salesorderdetails.unitprice	Unit Price	Yes	Yes	Yes
9	debtorsmaster.name	Customer Name	No	Yes	No
10	debtorsmaster.address1	Customer Address 1	No	No	No



11	debtorsmaster.address2	Customer Address 2	Yes	No	No
12	debtorsmaster.address3	City	No	No	No
13	debtorsmaster.address4	State	No	No	No
14	debtorsmaster.address5	Postal Code	No	No	No
15	debtorsmaster.address6	Country	Yes	No	No
16	custbranch.deliverydate	Delivery Date	No	Yes	No
17	custbranch.custbranchcode	Branch ID	No	No	No

If you make an error, the buttons on the right of each row entered allow you to edit, re-sequence, or delete a row. Your form should look something like this:

## Report Builder - Report: Invoice Report - Field Setup

Enter a New Field						
Order	Fieldname (table.fieldname)	Name to Display	Break	Show	Total	
			<input type="checkbox"/>	<input type="checkbox"/>	No	<input type="button" value="Add New"/>
Field List						
1	salesorders.orderno	Order Number	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
2	salesorders.orddate	Order Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
3	salesorders.branchcode	Branch ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
4	salesorders.customerref	Customer Reference	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
5	salesorders.deliverto	Deliver To Name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
6	salesorderdetails.quantity	Quantity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Yes	↑ ↓ ↻ ✕
7	salesorderdetails.stkcode	Part Number	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
8	salesorderdetails.unitprice	Unit Price	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Yes	↑ ↓ ↻ ✕
9	debtorsmaster.name	Customer Name	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
10	debtorsmaster.address1	Address 1	<input type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
11	debtorsmaster.address2	Address 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
12	debtorsmaster.address3	City	<input type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
13	debtorsmaster.address4	State	<input type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
14	debtorsmaster.address5	Postal Code	<input type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
15	debtorsmaster.address6	Country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕
16	salesorders.deliverydate	Delivery Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No	↑ ↓ ↻ ✕
17	custbranch.custbranchcode	Customer Branch ID	<input type="checkbox"/>	<input type="checkbox"/>	No	↑ ↓ ↻ ✕

After all information has been entered, press Continue to enter the filter criteria.

## Step 5. Entering and arranging criteria

This form builds the options for date selection, grouping, sorting, and filtering for the standard report. These fields generate what will become the where of the query, “WHERE criteria1 AND criteria 2 AND etc ORDER BY grouping, sorting”. Here’s how each field works:

**Date:** If your report has a date field that is displaying, this is where you will specify the type of data choices available. Many are just quick selections to standard periods of time. The two most generic, ALL and RANGE allow the user to quickly view every entry in the database or specify the particular date range they are interested in. For all date selections (except ALL), the table name and fieldname ‘table.fieldname’ must be entered into the Date Fieldname text box or an sql error will result. The fieldname will be tested with the selected tables to validate the input. A default date can be chosen here as well. For example, If a standard report named Today’s Sales is being generated, you may still want to allow the user to select a date range but you want the date to first come up with Today as the default. In this case, you would select as many date choices as you wish but upon entry to the report, Today will be the default.

**NOTE:** If your report doesn’t have any date fields, or doesn’t depend on date information, either de-select all the check boxes in which case the date options will not be displayed in the report viewer or just check the ALL box to show the date option with only a single choice available.

**Truncate Long Descriptions:** This is handy for summary reports or when a field is long and you want to avoid column wraps of the text. Checking this box truncates any field that will exceed the column width to keep it to one line. This feature also truncates the column headings.

### Grouping Fields:

**Sorting Fields:** Grouping Fields and Sorting Fields are similar. The main difference being the grouping is specified earlier in the ORDER BY portion of the sql string and subtotaling is calculated and displayed on the report. If no groupings are specified, the option will not show in the Report Viewer criteria selection form.

**Default:** Checking the default box will pre-select a particular group and/or sort field. These choices may be altered in both the standard reports and the custom reports but saves time if your target report is designed to have a specific grouping or sorting.

**Filter Criteria:** The filter criteria allows for user options to further refine their search. There are no limit to the number of options but usually 3-4 work the best. The type of criteria must make sense relative to the field. If the field is a text field, the all:range criteria work best. For yes/no fields, the all:yes:no, printed:unprinted, etc work the best.

**NOTE:** The Grouping Display Fieldname must match exactly the Fieldname in the Field List for the Group Subtotal to function properly. The report fields will still be grouped properly but the subtotals and group breaks will not be displayed.

Let’s fill in our report with the following data:

1. Check all the date boxes except the ‘to-date’ boxes. This will give the user more than enough choices.
2. Enter salesorders.orddate in the Date Fieldname text box.
3. Check No in Truncate Long Descriptions. We can change it later if necessary.
4. Enter the Grouping as follows:

Sequence	Fieldname	Display Description	Default
----------	-----------	---------------------	---------

1	salesorders.orddate	Order Date	No
2	salesorders.orderno	Order Number	No

5. Enter the Sorting as follows:

Sequence	Fieldname	Display Description	Default
1	debtorsmaster.name	Customer Name	Yes
2	salesorders.orderno	Order Number	No

6. Enter the Field Criteria as follows:

Sequence	Fieldname	Display Description	Type of Criteria
1	salesorders.branchcode	Branch ID	All:Range
2	salesorders.orderno	Order Number	All:Range
3	salesorders.quotation	Quotation	All:Yes:No

**NOTE:** Notice that we allow the user to filter based on salesorders.quotation even though the field is not listed in the Field List. The Report viewer will still use the field to filter the data even though you may not want the field to display. This is usually not a good idea in practice. The output report header will indicate that the filter criteria included quotation if Quotation: Yes or Quotation: No is selected to show that the report only contains filtered data.

The form should look something like this:

## Report Builder - Report: Invoice Report - Criteria Setup

Go Back
Update
Finish

Report Date Information

Date Field List  
(check all that apply)  
  
Uncheck all boxes for date independent reports;  
leave Date Fieldname empty

☒ All  
☒ Range  
☒ Today  
☒ This Week  
☐ This Week To Date  
☒ This Month  
☐ This Month To Date  
☒ This Quarter  
☐ This Quarter To Date  
☒ This Year  
☐ This Year To Date

Default Date Selected
All

Date Fieldname (table.fieldname)
salesorders.orddate

Truncate Long Descriptions
☒ Yes ☐ No

Grouping List

Sequence	Fieldname (table.fieldname)	Name to Display	Default	
			<input type="checkbox"/>	Add New
1	salesorders.orddate	Order Date	<input type="checkbox"/>	↑ ↓ ↺ ✕
2	salesorders.orderno	Order Number	<input type="checkbox"/>	↑ ↓ ↺ ✕

Sorting Information

Sequence	Fieldname (table.fieldname)	Name to Display	Default	
			<input type="checkbox"/>	Add New
1	debtorsmaster.name	Customer Name	<input checked="" type="checkbox"/>	↑ ↓ ↺ ✕
2	salesorders.orderno	Order Number	<input type="checkbox"/>	↑ ↓ ↺ ✕

Criteria Setup

Sequence	Fieldname (table.fieldname)	Name to Display	Type of Criteria	
			All:Range	Add New
1	salesorders.branchcode	Branch ID	All:Range	↑ ↓ ↺ ✕
2	salesorders.orderno	Order Number	All:Range	↑ ↓ ↺ ✕
3	salesorders.quotation	Quotation	All:Yes:No	↑ ↓ ↺ ✕

That's it, click on Finish to exit the report builder and we're ready to see our result.

## How Do I Create a New Form?

There are five steps to building a form. They are:

1. Entering the form name and category.
2. Setting up the form page layout.
3. Specifying the database tables and link equations.
4. Entering and arranging a list of possible fields to display and setting their attributes.
5. Entering and arranging date, form break, and filter criteria.

The best way to demonstrate how to build a report would be to show an example. We'll build a report called: Invoice Form. First we'll need to access the report builder. It is found under the Setup menu under the General category titled Report Builder Tool. Once there press the Add New button.

### Step 1: Form name and group category

For our form, enter Invoice Form into the Enter a name text box. Also, we need to specify that it is a form by selecting the Form radio button. We now need to place this form under the proper category so select Invoices/Packing Slips from the drop down menu for the group this form is a part of.

Enter a name for this report.	Invoice Form (maximum 30 characters)
Select report or form type to create:	
<input type="radio"/> Report ==> Enter the group this report is a part of:	Orders
<input checked="" type="radio"/> Form ==> Enter the group this form is a part of:	Invoices and Packing Slips
<input type="button" value="Go Back"/>	<input type="button" value="Continue"/>

Press Continue when all information has been entered.

**IMPORTANT:** At this time a record will be added to the forms table and will appear in the list of available forms. Users can choose this form to generate but the result will be a 'No data in this form ' warning. The form should be deleted if the report builder process is not completed for a given form.

## Step 2. Setting up the page layout

The next screen allows us to alter some of the default settings for the page layout of the form. Most fields are self explanatory but there are a few notes to remember.

**Page layout:** Set the settings desired for the page layout. Each displayed entry for the page are handled individually in the field setup form. You may return here to make further changes by editing the form after you finish building the form testing the output.

<input type="button" value="Go Back"/>	<input type="button" value="Update"/>	<input type="button" value="Continue"/>
Page Layout		
Paper Size: Letter	Orientation: <input checked="" type="radio"/> Portrait <input type="radio"/> Landscape	
Page Margins		
Top 10 mm	Bottom 10 mm	Left 10 mm Right 10 mm

After all information has been entered, press Continue to enter the database information.

## Step 3. Specifying the database tables and link equations

This form allows us to specify the tables and linked tables that are used to build the query. These fields generate what will become the second part of the query, "FROM table1 INNER JOIN table2 ON table2linkequation INNER JOIN table3 ON etc".

**NOTE:** IMPORTANT: KNOWLEDGE OF THE DATABASE TABLES AND STRUCTURE IS REQUIRED.

Enter the data in the boxes as shown below. Only one row of data may be entered at a time in sequence. After each table/Link Equation row has been entered, press the Update button to validate the table and commit the link equation. The form will reload with data just entered and will then allow the next Table/Link Equation to be entered. The fields are case sensitive.

Text Box Name	Data to Enter

Table Name - Primary	salesorders
Table Name - Second	salesorderdetails
Link Equation - Second	salesorders.orderno = salesorderdetails.orderno
Table Name - Third	debtorsmaster
Link Equation - Third	salesorders.debtorno = debtorsmaster.debtorno
Table Name - Fourth	custbranch
Link Equation - Fourth	salesorders.branchcode = custbranch.branchcode

**NOTE:** After the data has been entered, the tool will validate the data by attempting to retrieve a single row from the query. If a single row cannot be accessed from the database, you cannot progress past this point.

**NOTE:** If you get stuck here, remember that the report exists in the standard reports list and should be deleted to prevent users from running the report.

<input type="button" value="Go Back"/> <input type="button" value="Update"/> <input type="button" value="Continue"/>		
	Table Name	Link Equation (SQL Syntax) example: tablename1.fieldname1=tablename2.fieldname2
Primary	debtorsmaster	
Second	debtortrans	debtortrans.debtorno=debtorsmaster.debtorno
Third	stockmoves	stockmoves.transno=debtortrans.transno
Fourth	salesorders	salesorders.orderno=debtortrans.order_
Fifth	stockmaster	stockmoves.stockid = stockmaster.stockid
Sixth	Select a table...	

After all information has been entered, press Continue to enter the fields to display.

## Step 4. Specifying the possible fields to display

This form will add the allowed fields used to generate the form output. Fields may be graphic, image, data or static text. At least one field needs to be entered to make a valid form. Up to the total number of fields in the linked databases provided in step 3 are allowed for data fields. In practice, however, a smaller list usually works the best. Each field has it's own attributes, including placement, font style, size, color and alignment and more depending on the field chosen. More on field types later.

**PRACTICAL NOTE:** It's a good idea to pre-order the fields in a logical order in the way you want to the data to appear.

**Order:** The order determines the sequence of the generation of the field list. If an order number is entered that already exists, it will be inserted into the list in the order specified and the remaining fields will be

bumped down one position. If the order number is left out, it will append the new field to the end of the list. Order numbers begin with 1.

NOTE: In forms, the order is not terribly important since each field contains it's own positioning information.

**Name to Display:** The description can be any English (or other language) description. This is the ID assigned to the fieldname. It will appear on the report heading and links directly to the table.fieldname entry. Special characters are allowed but not recommended.

**Show:** Identifies the fields to display. Only fields that are checked to show will appear in the form. It is a good practice to show the fields that you want to appear in the standard report but not necessarily all fields. The user can decide what pieces of data they want and alter this field only in custom reports. If no fields are identified to show, the report viewer will generate a warning message 'No data to display'.

**Type:** Specifies the type of field. We will go over each type in detail below.

## Data Line

Data lines contain a single piece of information from the database query. A dropdown list of available fields is shown along with the attributes of the text to be displayed.

Cancel		Update		Finish	
Fieldname (table.fieldname)					
salesorders.customerref					
Start Position (Upper Left Corner in mm)					
Abscissa		70	Ordinate		92
Box Dimensions (mm)					
Width		50	Height		5
Text Attributes					
Text Processing		None			
Font		Helvetica			
Size		12			
Align		Center			
Truncate		No			
<input checked="" type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Black		Red Green Blue			
Border Line					
<input checked="" type="radio"/> No Border					
<input type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Black		Red Green Blue			
Line Width (pts)		1			
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Black		Red Green Blue			

## **Data Block**

Data Blocks are a special case of data lines that concatenate several fields from the database with a separator value. Data blocks are ideal candidates for addresses where fields need to be near each other but vary in length and how they are separated from each other. The example below is for an en\_US address where address3-5 are city, state and postal code, respectively and address 6 is the country. The output will be displayed as follows:

Widgets International (name)  
1234 Main Street (address1)  
Suite #3 (address2)  
Anytown, CA 90019(address3), (address4) (address5)  
US (address6)



Cancel				Update		Finish	
Fields							
Sequence	Fieldname (table.fieldname)	Separator					
	Select a field...	None	Add New				
Field List							
1	debtorsmaster.name	Line Break	↑ ↓ ↻ ✕				
2	debtorsmaster.address1	Line Break	↑ ↓ ↻ ✕				
3	debtorsmaster.address2	Line Break	↑ ↓ ↻ ✕				
4	debtorsmaster.address3	Comma-Space	↑ ↓ ↻ ✕				
5	debtorsmaster.address4	Double Space	↑ ↓ ↻ ✕				
6	debtorsmaster.address5	Line Break	↑ ↓ ↻ ✕				
7	debtorsmaster.address6	None	↑ ↓ ↻ ✕				

Start Position (Upper Left Corner in mm)	
Abscissa	20
Ordinate	62
Box Dimensions (mm)	
Width	70
Height	4.5
Text Attributes	
Font	Helvetica
Size	8
Align	Left
Truncate	No
<input checked="" type="radio"/> Standard Color	<input type="radio"/> Custom Color (Range 0-255)
Black	Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>
Border Line	
<input checked="" type="radio"/> No Border	Line Width (pts) 1
<input type="radio"/> Standard Color	<input type="radio"/> Custom Color (Range 0-255)
Black	Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>
Fill	
<input checked="" type="radio"/> No Fill	
<input type="radio"/> Standard Color	<input type="radio"/> Custom Color (Range 0-255)
Black	Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>

## Data Table

Data Tables are the main part of the form where data lists are displayed. The table has a start position along with width and height information. The border line (if specified) will be drawn around the perimeter of the table as well as between each column of data. The Fill information will separate each line of information with alternating White-Fill Color highlights between every line (similar to line separation in reports). If no fill is specified, the form background will be white. Each data line in the table will make up a single column. Multiple data line cannot appear in the same column (unlike reports where column breaks are allowed). Each data item can have it's own font attributes and can be processed through a text processing option. The total of the column widths of the displayed data (with Show checked) should be equal to the total width of the table

for the output to display properly. The Name to Display information will make up the heading of each respective table column and will appear as the heading of the table on every page generated.

Cancel

Update

Finish

Start Position (Upper Left Corner in mm)		Box Dimensions (mm)	
Abscissa <input type="text" value="10"/>	Ordinate <input type="text" value="110"/>	Width <input type="text" value="200"/>	Height <input type="text" value="60"/>
Border Line		Fill	
<input type="radio"/> No Border	Line Width (pts) <input type="text" value="1"/>	<input type="radio"/> No Fill	
<input checked="" type="radio"/> Standard Color	<input type="radio"/> Custom Color (Range 0-255)	<input type="radio"/> Standard Color	<input checked="" type="radio"/> Custom Color (Range 0-255)
<input type="text" value="Blue"/>	Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>	<input type="text" value="Black"/>	Red <input type="text" value="224"/> Green <input type="text" value="235"/> Blue <input type="text" value="255"/>

Fields							
Sequence	Fieldname (table.fieldname)		Name to Display		Text Processing		Add New
<input type="text" value=""/>	<input type="text" value="Select a field..."/>		<input type="text"/>		<input type="text" value="None"/>		
	Font	Size	Align	Color	Width	Show	
	<input type="text" value="Helvetica"/>	<input type="text" value="10"/>	<input type="text" value="Center"/>	<input type="text" value="Blue"/>	<input type="text" value="20"/>	<input checked="" type="checkbox"/>	
Field List							
1	stockmoves.qty		Quantity		Negate		
2	stockmoves.stockid		Product ID				
3	stockmaster.description		Description				
4	stockmoves.discountpercent		Discount Percent				
5	stockmoves.price		Price		Convert Dollars		

Data Total

Data Totals take all the fields entered (3 in this example) and pull the total from the database for a given form. If the form is multipage, the words 'Continued' will be displayed on every page except the last where the form totals will be substituted. If the word 'Continued' appear, the user knows that the form is multipage. The page number tracks and displays the current page as the form is being generated.

Cancel		Update		Finish	
Start Position (Upper Left Corner in mm)					
Abscissa 175			Ordinate 185		
Box Dimensions (mm)					
Width 30			Height 5		
Fields					
Enter fields to total (Table.FieldName)					
Select a field...			Add		
debtotrans.ovamount debtotrans.ovgst debtotrans.ovfreight			Remove		
Text Attributes					
Text Processing			Convert Dollars		
Font			Helvetica		
Size			12		
Align			Right		
Truncate			No		
<input checked="" type="radio"/> Standard Color Blue			<input type="radio"/> Custom Color (Range 0-255) Red    Green    Blue		
Border Line					
<input checked="" type="radio"/> No Border					
<input type="radio"/> Standard Color Black			<input type="radio"/> Custom Color (Range 0-255) Red    Green    Blue		
Line Width (pts)			1		
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color Black			<input type="radio"/> Custom Color (Range 0-255) Red    Green    Blue		


### Fixed Text Field

Fixed Text Fields display a single line of text. It should be used for static form information such as labels and messages that are not generated by a database query.

Cancel		Update		Finish	
Text to Display					
Invoice/Packing Slip					<input type="button" value="↑"/> <input type="button" value="↓"/>
Start Position (Upper Left Corner in mm)					
Abscissa 145			Ordinate 10		
Box Dimensions (mm)					
Width 60			Height 5		
Text Attributes					
Font		Helvetica ▾			
Size		16 ▾			
Align		Right ▾			
Truncate		No ▾			
<input checked="" type="radio"/> Standard Color Blue ▾		<input type="radio"/> Custom Color (Range 0-255) Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			
Border Line					
<input checked="" type="radio"/> No Border					
<input type="radio"/> Standard Color Black ▾		<input type="radio"/> Custom Color (Range 0-255) Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			
Line Width (pts)		1 ▾			
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color Black ▾		<input type="radio"/> Custom Color (Range 0-255) Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			

### Image - JPG or PNG

Images of type jpg, jpeg and png are accepted. An image may be selected from the current list of available images or uploaded through the browser. The abscissa and ordinate must be specified. If the width and height are left blank, the image retains it's original size and aspect ratio. If either a width or a height are specified, but not both, the image is sized to fit the specified dimension and the other is autosized to maintain the aspect ratio. If both width and height are specified, the image is size to fit the width and height provided.

Cancel		Update		Finish	
Current Image					
Image Selection					
<input type="radio"/>		<input type="text"/>		Browse...	
<input checked="" type="radio"/> Select Stored Image		<div> Ppslogo.jpg  Ppslogo.png </div>			
Start Position (Upper Left Corner in mm)					
Abscissa		10		Ordinate	
				10	
Image Dimensions (mm)					
Width				Height	

## Rectangle

Rectangles may be generated with many attributes. A rectangle without a border could be used to shade an area of the form. A rectangle with a border and no fill can be used to outline a block of information.

Cancel		Update		Finish	
Start Position (Upper Left Corner in mm)					
Abscissa		10		Ordinate	
				85	
Box Dimensions (mm)					
Width		200		Height	
				23	
Border Line					
<input type="radio"/> No Border					
<input checked="" type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Black			Red		
			Green		
			Blue		
Line Width (pts)			1		
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Green			Red		
			Green		
			Blue		

## Line

Lines can be drawn vertically, horizontally or diagonally. Colors and line widths are also programmable.

Cancel		Update		Finish	
Start Position (Upper Left Corner in mm)					
Abscissa 10			Ordinate 91		
End Position (mm)					
<input checked="" type="radio"/> Horizontal			Length 200		
<input type="radio"/> Vertical			Length		
<input type="radio"/> Custom			Abscissa		Ordinate
Line Attributes					
<input checked="" type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Black			Red	Green	Blue
Line Width (pts)			1		

## Company Data Line

Company Data Lines are similar to Data Lines except the field list is derived from the companies database.

Cancel		Update		Finish	
Fieldname (table.fieldname)					
companies.gstno					
Start Position (Upper Left Corner in mm)					
Abscissa 10			Ordinate 60		
Box Dimensions (mm)					
Width 60			Height 5		
Text Attributes					
Text Processing			None		
Font			Helvetica		
Size			10		
Align			Left		
Truncate			No		
<input checked="" type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Black			Red	Green	Blue
Border Line					
<input checked="" type="radio"/> No Border					
<input type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Black			Red	Green	Blue
Line Width (pts)			1		
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color			<input type="radio"/> Custom Color (Range 0-255)		
Black			Red	Green	Blue

## Company Data Block

Company Data Blocks are similar to Data Blocks except the field list is derived from the companies database.

Cancel

Update

Finish

Fields			
Sequence	Fieldname (table.fieldname)	Separator	
	companies.regoffice6	None	Add New

Field List			
1	companies.coynome	Line Break	↑ ↓ ↻ ✕
2	companies.regoffice1	Line Break	↑ ↓ ↻ ✕
3	companies.regoffice2	Line Break	↑ ↓ ↻ ✕
4	companies.regoffice3	Comma-Space	↑ ↓ ↻ ✕
5	companies.regoffice4	Double Space	↑ ↓ ↻ ✕
6	companies.regoffice5	Line Break	↑ ↓ ↻ ✕
7	companies.regoffice6	None	↑ ↓ ↻ ✕

Start Position (Upper Left Corner in mm)

Abscissa 50

Ordinate 10

Box Dimensions (mm)

Width 60

Height 5

Text Attributes

Font Helvetica

Size 10

Align Left

Truncate No

☒ Standard Color
 

Black

☐ Custom Color (Range 0-255)
 

Red

Green

Blue

Border Line

☒ No Border
 

Line Width (pts) 1

☐ Standard Color
 

Black

☐ Custom Color (Range 0-255)
 

Red

Green

Blue

Fill

☒ No Fill
 

Line Width (pts) 1

☐ Standard Color
 

Black

☐ Custom Color (Range 0-255)
 

Red

Green

Blue

## Page Number

The Page Number field prints only the page number in numeric format (not: Page X of Y). If the wording 'Page ' is necessary, a new Fixed Text Field will be necessary to generate the prefix for the page number.

NOTE: There is a limitation between report builder and FPDF with the page number alias. Report builder will allow multiple forms to be built in a single query. Since multipage forms are possible, the page total based on each form page break cannot be calculated in real time by report builder. FPDF has an alias to track the total number of pages but does so for the entire PDF file. For example, if the user asks to generate all invoices for 'Today', there will probably be more than one. Also, one or more may be multipage. The FPDF alias will provide the total number of pages for the entire form build (all invoices for Today) and not for each invoice form. Report builder only knows what page it is working on and not how many total pages are in each individual invoice. Therefore, only the report builder current page number is generated with this field and the total number of pages of the form is not available. The 'continued' feature for totals indicates that a form is multipage.

<input type="button" value="Cancel"/>		<input type="button" value="Update"/>		<input type="button" value="Finish"/>	
Start Position (Upper Left Corner in mm)					
Abscissa		135		Ordinate	
				40	
Box Dimensions (mm)					
Width		70		Height	
				5	
Text Attributes					
Font		Helvetica ▼			
Size		12 ▼			
Align		Right ▼			
<input checked="" type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Green ▼		Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			
Border Line					
<input checked="" type="radio"/> No Border					
<input type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Black ▼		Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			
Line Width (pts)		1 ▼			
Fill					
<input checked="" type="radio"/> No Fill					
<input type="radio"/> Standard Color		<input type="radio"/> Custom Color (Range 0-255)			
Black ▼		Red <input type="text"/> Green <input type="text"/> Blue <input type="text"/>			

The details of each field are too numerous to reproduce here. The best way to review the fields in our example would be to import the form and examine the fields of interest. If you make an error, the buttons on the right of each row entered allow you to edit, re-sequence, or delete a row. Properties for each field can be edited as well. An abbreviated field list is shown below:



Go Back
Continue

Enter a New Field

Order	Name to Display	Show	Type	
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	Data Line	Add New

Field List

1	Customer Ref	<input checked="" type="checkbox"/>	Data Line	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
2	Buyer Address	<input checked="" type="checkbox"/>	Data Block	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
3	Item Table	<input checked="" type="checkbox"/>	Data Table	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
4	Invoice Total	<input checked="" type="checkbox"/>	Data Total	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
5	Invoice Label	<input checked="" type="checkbox"/>	Fixed Text Field	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
6	PPS Logo	<input checked="" type="checkbox"/>	Image - JPG or PNG	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
7	Rectangle	<input checked="" type="checkbox"/>	Rectangle	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
8	Horiz Line 1	<input checked="" type="checkbox"/>	Line	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
9	Company Number	<input checked="" type="checkbox"/>	Company Data Line	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
10	Company Address	<input checked="" type="checkbox"/>	Company Data Block	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties
11	Page Num	<input checked="" type="checkbox"/>	Page Number	<div style="display: flex; justify-content: space-around; font-size: 0.8em;"> <span>↑</span><span>↓</span><span>✎</span><span>✖</span> </div>	Properties

Go Back
Continue

After all information has been entered, press Continue to enter the filter criteria.

## Step 5. Entering and arranging criteria

This form builds the options for date selection, page break field, and filtering for the form. Here's how each field works:

**Date:** If your report has a date field that is displaying, this is where you will specify the type of data choices available. Many are just quick selections to standard periods of time. The two most generic, ALL and RANGE allow the user to quickly view every entry in the database or specify the particular date range they are interested in. For all date selections (except ALL), the table name and fieldname 'table.fieldname' must be entered into the Date Fieldname text box or an sql error will result. The fieldname will be tested with the selected tables to validate the input. A default date can be chosen here as well. For example, If a standard report named Today's Sales is being generated, you may still want to allow the user to select a date range but you want the date to first come up with Today as the default. In this case, you would select as many date choices as you wish but upon entry to the report, Today will be the default.

**NOTE:** If your report doesn't have any date fields, or doesn't depend on date information, either de-select all the check boxes in which case the date options will not be displayed in the report viewer or just check the ALL box to show the date option with only a single choice available.

**Form Page Break Field:** Form Page Break Fields specify the field that is used to separate forms. For our invoice example, the invoice number would be the logical form break. This will force a new form for every invoice number within the range defined in the criteria and date parameters.

**Filter Criteria:** The filter criteria allows for user options to further refine their output. There are no limit to the number of options but usually 3-4 work the best. The type of criteria must make sense relative to the field. If the field is a text field, the all:range criteria work best. For yes/no fields, the all:yes:no, printed:unprinted, etc work the best.

The form should look something like this:

Go BackUpdateFinish

Report Date Information

Date Field List  
(check all that apply)  
  
Uncheck all boxes for date independent reports; leave Date Fieldname empty

☒ All  
☒ Range  
☒ Today  
☒ This Week  
☐ This Week To Date  
☐ This Month

☐ This Month To Date  
☐ This Quarter  
☐ This Quarter To Date  
☐ This Year  
☐ This Year To Date

Default Date Selected

All

Date Fieldname (table.fieldname)

debtortrans.trandate

Form Page Break Field  
(table.fieldname)

debtortrans.transno

Criteria Setup

Sequence	Fieldname (table.fieldname)	Name to Display	Type of Criteria	
	Select a field...		All:Range	Add New
1	debtortrans.transno	Order Number	All:Range	↑↓✎✕
2	debtorsmaster.name	Customer Name	All:Range	↑↓✎✕
3	salesorders.deliverto	Deliver To Name	All:Range	↑↓✎✕

That's it, click on Finish to exit the report builder and we're ready to see our result.

## Viewing your report or form

Reports are viewed through the Report Viewer. Report Viewer is covered in another manual but we'll take a quick look to see how our report turned out. From the main menu, select Receivables, then Invoice Report under the Inquiries and Reports Menu. The criteria page is displayed where we can alter the filter criteria. For now, press Generate PDF and view our report. If the columns need to be altered or fields re-arranged, go back to the Report Builder and edit the necessary entries. Once the report is completed and you're satisfied with the format of the output, it's best to export the report (it's text file) and save it locally or in the standard reports directory on the server in case it gets deleted accidentally.

## Passing Parameters to Forms

Forms may be called directly from scripts by passing an id and criteria parameters. the parameters are assigned the variables cr[x] where [x] is replaced by the parameter to be assigned. Parameter 0 (zero) is

reserved for the date field. Parameters 1-9 correspond to the order in which the criteria are ordered in the form. An example href tag might look like:

```
<a href="reportwriter/FormMaker.php?id=prch:po&cr0=a&cr1=Range:3:3">
```

**Variable 'id':** The id definitions correspond to the index value of the variable \$FormGroups in the file /reportwriter/admin/defaults.php. the current definition codes are:

gl:chk = Bank Checks  
ar:col = Collection Letters  
ar:cust = Customer Statements  
gl:deps = Bank Deposit Slips  
ar:inv = Invoices/Packing Slips  
ar:lblc = Customer Labels  
prch:lblv = Vendor Labels  
prch:po = Purchase Orders  
ord:quot = Customer Quotes  
ar:rcpt = Sales Records  
ord:so = Sales Orders  
misc:misc = Miscellaneous

**Variable cr0:** The possible values for cr0 are the letters a-k as defined below (also found as the indexes of the variable \$DateChoices in the file /reportwriter/admin/defaults.php):

a = All  
b = Range  
c => Today  
d => This Week  
e => This Week to Date  
f => This Month  
g => This Month to Date  
h => This Quarter  
i => This Quarter to Date  
j => This Year  
k => This Year to Date

**Variable cr1 through cr9:** Variables cr1-cr9 need to correspond to the sequence of the field as specified in the form criteria. There are three parts to the value passed. The first is the text label which must match exactly to a label from the criteria dropdown list for the associated field. The second and third are the >From and To values for label of the criteria if they require them (such as the labels Range and Equal To). The three values are separated by semi-colons. If the second or third parameter is not required, it may be left out (such as in the case Yes, No, Printed, Unprinted, etc.).

From our example above:

```
<a href="reportwriter/FormMaker.php?id=prch:po&cr0=a&cr1=Range:3:3">
```

The form group for Purchase Orders will appear (listing all variations of the PO forms) as shown below:

Select a Form to Output

☐ Purchase Order

Cancel

Criteria Setup

Export PDF

The user must select which variation of the form he needs and can either Generate the PDF, alter the Criteria, or Cancel and return to the index.php script. The hidden parameters cr0=a will default to the All date range (date independent) and cr1=Range:3:3 would default the first field listed in the criteria listing setting the To and From value to 3. If the first criteria field is the PO Number, report writer will generate just a single PO form with the PO number equal to 3. If the user wishes to alter the criteria by pressing Criteria Setup, The default parameters will be filled in automatically but may be changed if the user desires.

Cancel

Export PDF

Criteria Setup			
		From	To
Date	All ▾		
PO Number	Range ▾	3	3
Printed	All ▾		

# Multi-Language

webERP can be translated to any language so that the entire web-interface is displayed in the language of any user. The system can display different languages for different users - all at the same time - depending on the setting of the language in the individual users' settings.

Each user can select their language by clicking on their user name at the top left of every screen immediately to the right of the company name. Clicking on your user name this brings up the user settings screen below:

The screenshot shows the 'User Settings' interface for a user named 'Demonstration user' (User ID: admin). The settings include:

- User ID: admin
- User Name: Demonstration user
- Maximum Number of Records to Display: 50
- Language: English United Kingdom (dropdown menu)
- Theme: xenos (dropdown menu)
- New Password: (masked with dots)
- Confirm Password: More than 5 characters
- Email: admin@weberp.org
- PDF Language Support: Latin Western Languages - Times (dropdown menu)

A 'Modify' button is located at the bottom right of the settings form.

A dropdown box displaying all the available translations is available. Also, the character set of PDFs must also be selected from the 3 choices to create small portable pdf files using the CID fonts bundled with webERP. The preferred user display theme can also be selected from this screen.

## Other Language Translations

If your language is not listed in the drop down box it is possible to create a new translation. The recommended procedure to create a translation is as follows:

1. [Join the mailing list here](#)

Let the list know you're wanting to help with a translation - someone may already be working on it.

2. Obtain the latest messages.po file and enter the translations using your favourite editor (or poedit).

The latest messages.po file is included with the latest archive:

`www_root/webERP/locale/en_GB/LC_MESSAGES/message.po`

Edit the file provided entering the translations for the strings labelled msgid in the string labelled msgstr. Watch for html strings embedded inside the strings the html will also be required in the translated string. Also be sure to ensure that each translated string is enclosed in speech marks (").

Please also complete the translation file header information - with your details so that you are accorded proper recognition for your contribution.

It is worthwhile investigating the poedit package as this has some time saving features for creating gettext translation files.

Return the file containing your translations to [submissions@weberp.org](mailto:submissions@weberp.org)

An archive of the new language directory and instructions will be put up on sourceforge so everyone can access your translation.

## Technical Overview

### How is it Done

webERP uses the GNU gettext package for language translations. For the gettext library to be used - which must be installed on your webserver, PHP must be compiled with gettext functions. However, since version 3.01 thanks to Briain Gomez and the authors of PHP-GETTEXT Danilo Segan and Nico Kaiser their php class to enable the translations to work (albeit more slowly than the gettext library functions) is bundled with webERP so translations will still work even though gettext is not installed.

The gettext translation files are held in the locale directory, under this directory there are sub-directories for each locale, a five character code representing the language to be used. eg en for English an underscore and then another two character code in capitals for the local version of the language eg US for USA - so the full locale code becomes en\_US. For english of the Great British variety - the full locale code is then en\_GB - this is the default language that webERP is written in. The locale for this code needs to be installed on the web-server - all locales installed can be inspected using the command line `#locale -a` on a linux web server.

New directories will need to be made up if a translator wishes to have a local version for their language. Under the locale directory the five character locale abbreviation code directory there is a further sub-directory called LC\_MESSAGES - this is where the translation files exist. There are two files in each of these directories:

1. **messages.po**. This file contains all the strings to be translated. This is the only file of concern for translators
2. **messages.mo**. This is a binary machine searchable translation file used by gettext. The .mo file is automatically produced by a gettext utility (msgfmt.exe or msgfmt in \*nix) using the messages.po file (the syntax from a command window is `msgfmt.exe messages.po`). The main effort is required to get the .po file translated - the .mo file is easily and happily created by the webERP project admin if required.

Any text editor can be used to edit the .po file (GNU Emacs contains specific functionality for editing .po files there is a special PO-Mode) - there is also a utility called [Poedit - Gettext Translations Editor](#) which is often recommended by translators.

### Understanding the messages.po File

The translation is performed by translating the strings in the messages.po file into the other language. It is important to work on the most recent messages.po file from the locale/en\_GB-utf8/LC\_MESSAGES/ directory in the SVN. This can be downloaded from [the subversion repository](#)

The messages.po is made up of sections

E.g. for a French translation file

```
#: AccountGroups.php:8 index.php:890
```

```
msgid "An example string in English that needs to be translated"
```

```
msgstr="Une chaîne d'exemple en anglais qui doit être traduite"
```

the line #: AccountGroups.php:8 index.php:890

means that the string following is used in the AccountGroups.php script on line 8 and the index.php script on line 890. It could be useful to understand the context of where the script is used. Strings that are used several times throughout the application only need to be translated once. In some cases the #: line showing where the string is used can be quite an extensive list of scripts.

```
msgid "An example string in English that needs to be translated"
```

this line is the english string which is to be substituted by the text in msgstr. If the value of msgstr is empty - "", gettext will return the english string.

The effort of the translation is to edit the messages.po file and enter the language translation within the inverted commas of the msgstr. All that is required then is to take the messages.po file from the en\_GB-utf8/LC\_MESSAGES folder and edit it with translations for your language.

Make a copy and edit the file provided entering the translations for the strings labelled msgid in the string labelled msgstr. Although every attempt has been made to avoid it, watch out for html strings embedded inside the strings the html will also be required in the translated string. Also the translation file header information - with the translators details so that you are accorded proper recognition for your contribution.

A new folder under webERP/locale/ needs to be created with the locale abbreviation for your language - note that webERP requires utf-8 locales - some examples:

1. fr\_FR.utf8 - French
2. en\_US.utf8 - English US
3. de\_DE.utf8 - German

say you are creating a German translation you need to create the folder

webERP/locale/de\_DE.utf8

and the folder below this called LC\_MESSAGES

webERP/locale/de\_DE.utf8/LC\_MESSAGES

## The Languages Array

To allow the language to be selected it must exist in the webERP \$LanguagesArray this is an array of all available languages that webERP has been translated into and is maintained by webERP in the file

/webERP/includes/LanguagesArray.php

This array as as it's key the locale code for the language for British English the locale code is en\_GB.utf8 - and for each element there is a sub-array of the following named elements for each key in the Languages Array

1. LanguageName - written in the target language - so that native speakers of that language will recognise it in the list

2. WindowsLocale - this is the name of the locale under Microsoft Windows operating system - not the ISO system
3. DecimalPoint - this is the character that the language uses as a decimal point
4. ThousandsSeperator - this is the character that the language uses as the thousands seperator

The characters in this array for the selected locale are used by the functions used throughout webERP in the includes/MiscFunctions.php file for locale\_number\_format() to display numbers in an appropriate format for the selected language.

e.g.

1. \$LanguagesArray['en\_GB.utf8']['LanguageName'] = 'English United Kingdom';
2. \$LanguagesArray['en\_GB.utf8']['WindowsLocale'] = 'english-uk';
3. \$LanguagesArray['en\_GB.utf8']['DecimalPoint'] = '.';
4. \$LanguagesArray['en\_GB.utf8']['ThousandsSeperator'] = ',';

## Indian Numbering System

Many people in India speak English but want to see numbers formatted in Indian Numbering System. The Indian Numbering System uses separators differently from the Arabic Numbering System; besides the three least significant digits of the integer part, a comma divides every two rather than every three digits, thus:

- Arabic Numbering System: 1,234,567,890
- Indian Numbering System: 1,23,45,67,890

Having a record in the LanguagesArray.php and an empty folder under ~/locale/en\_IN.utf8 allows us to have English (British) language --no strings translated as there is no matching strings in a messages.mo-- but the number format in Indian Numbering System. See [MiscFunctions.php](#) in Manual, New Scripts, Directory Structure.

## The .po File Header

The .po file starts with some initial comments which should also be completed

"SOME DESCRIPTIVE TITLE", - should be replaced with **webERP - LANGUAGE Translation File** - where LANGUAGE is the language being translated into

# FIRST AUTHOR , YEAR. - should be your name and email address - with the year of the work being done

### **Project-Id-Version**

Should be webERP - version number

### **PO-Revision-Date**

This is the date of your last entries in the file

### **Last-Translator**

This is your name and email address for users of this language to contact should some translations be unclear



## **Content-Type**

Replace `CHARSET' with UTF-8 this characters set has characters for all languages and webERP is written with care to handle mutli-byte characters (because utf-8 character set contains so many characters several bytes must be used to uniquely identify each character correctly).

## **Content-Transfer-Encoding**

Set this to 8bit

## **Administration**

Once this exercise has been completed the file must be returned to the project administrator: [submissions@weberp.org](mailto:submissions@weberp.org) for the .mo file to be created. The new directory will be returned in a zip file for extraction from the webERP directory. The language will then be added to the webERP system for the benefit of other users as well.

Upon logging into the system each time the system sets the language used by looking up the user information to see what language they have set, The user can change which language is set by clicking on their user name at the top left which brings up User Settings. Changing the language setting will activate the new language right away upon saving the change. Only languages for which there is a directory under the locale directory are allowed to be selected by users.

## **Other Resources**

[The GNU gettext manual](#)

## **Translation Utilities**

webERP comes bundled with some on-line tools for adminstering translations - there are some issues with maintaining translations using these facilities - in particular certain characters cause problems for the scripts and character encodings can be lost. It is therefore NOT recommended to use these except for ad-hoc maintenance where a backup of the most recent messages.po is held elsewhere. The recommended procedure for maintaining translations are discussed above and the remainder of this narrative is depreciated.

The following explains how to use the language translation utilities provided with webERP for the purpose of adding languages and maintaining their translations.

In general before using the utilities you need to click on your user name at the top left in order to access user preferences. Select the language to translate and click on Modify. The language utilities all use the currently selected user language. If the language you wish to use is not there then a new translation can be initiated with the 'Add a New Language' utility - see below. By default a new install of webERP will only have the english - en\_GB available. The most recent submitted language packs are available from the [sourceforge webERP page](#)

Translations are maintained from the utilities menu - this does not have its own link on the main menu since it is an area that only the system administrator should be able to access. Unauthorised modification of translation files is therefore discouraged. The utlities menu is Z\_index.php - so you can modify the URL on the main menu by prefixing it with Z\_ - this brings up the utilities menu - only if you have system

administrator permissions on your user account. The link to 'Maintain Language Files' is where the translations are managed.

There are four translation utilities available:

- Rebuild the System Default Language File
- Add a New Language to the System
- Edit a Language File Header
- Edit a Language File Module

Note that the discussion about what the system does is intended for those handling the system and its files. It is not necessary to understand if you are only dealing with translation.

## Rebuild the System Default Language File

The system has one default language file. When a new language is created it makes a copy of this file for itself that can be edited for that language. The rebuilding this system default language file consists of it looking through every system code file (script) in order to create a new system default language file. In this way, any modifications or additions to strings will be contained within the newly created file. This can be done before creating a new language in order to start with the very latest strings.

## Add a New Language to the System

Use this utility to create a new language. It is important to recognise that only languages that have appropriate locale files on your web-server can be added. The language identifier must match with the language files on the web-server. Enter the language in the form `xx_XX` where the first two characters are the lower case standard code for the language such as `en` for English and the last two are the upper case standard code for the country such as `US` for United States. This example would be `en_US`. The underscore must separate the language and country for a total of 5 characters. The Proceed button must be clicked after entering the language in order for it to be created. The system then creates a new language directory under the locale directory and an `LC_MESSAGES` directory under this new language directory. Then, in this new `locale/xx_XX/LC_MESSAGES` directory it copies across the Default Language file (`messages.po`). Initially there are no translations in the new `messages.po` file.

Once the new language has been created, to use the language translation utilities to maintain the new translation you must change to the new language. To change language, the user name shown at the top left of all webERP screens is clicked on and the drop down box should now show the new language created above. Select the new language to enable you to operate with the translation utilities.

It is not necessary to know about the structure of the language file if using the translation tools provided. The details below are presented for information purposes only. The language file - `messages.po` consists of:

- A header, containing details of the translator and of critical importance the character set required to represent the letters in the language.
- Message identification strings that start with `msgid` then the english string that is to be translated surrounded by quotation marks. The scripts in which the string occurs are noted above each `msgid` statement

- Message strings such as msgstr "" - in a new messages.po these are all "". The job of translating requires that the msgstr be entered for the language to represent the text in the msgid string.

## Edit a Language File Header

The language file header can be modified using this utility. One important reason for modifying the header is to modify the charset to what is suitable for the locale. For en, the charset is usually set to 8829-1 or something like that. After editing the various areas of the header make sure to click on Enter Information at the bottom in order to save the changes.

## Edit a Language File Module

The majority of the translation work is done with this utility. First select the language you wish to edit and then there is a choice of modules. For a complete translation of the entire system all of the modules must be completed. Many prefer to do index.php and includes/header.inc first in order for the main menu to be in their language. From that point, the most important modules can be done first or all can be done alphabetically. Some memorable system should be used though in order to remember which modules still need translating in subsequent sessions.

Once the language and module have been selected then click on Proceed. A handy interface comes up with all of the strings listed that are within that module and beside them an area to enter your translation of that string. On the right is a list of the line number where the string occurs in the code within the module. After entering some translations click on Enter Information in order to save all changes.

If there has been some development work on your version of webERP it is possible to merge any new strings that have been created by the developers with the existing language file and create a new messages.po that contain all the strings required by the system. If some messages still come up in English but they don't appear when editing the module for that screen then you know you must Merge the existing messages.po with any new messages. To ensure all strings are extracted by the gettext utility it is important to ensure that the "Rebuild the System Default Language File" is run first. Then from the "Edit a Language File Module" screen click on the "Refresh Messages With Latest Strings" - this merges the newly creates master messages.po file created by the Rebuild with your existing translations.

# Special Utilities

Any of these programs should only be run by the individual in the business who is allocated the task of administering the system, who has a thorough understanding of the system. If in doubt seek advice. Many of these utilities perform major changes to the database and it is always advisable to have a backup before attempting to run one. All these utilities have a page security setting of 15 by default (see security schema).

The Utility menu is a separate module so access can be turned off to hide these utility script links by turning off the Utilities module in user settings. All utility pages are prefixed with a Z\_.

## Change A Customer Code

This page requires the entry of an existing customer code and the new customer code. The system checks to see the new code entered doesn't already exist and that the code entered for the existing customer does exist. If all is well then the customer code data is changed in all tables throughout the system that refer to the customer code.

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours, when others are using the system.

## Change A Customer Branch Code

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours, when others are using the system.

## Change A Supplier Code

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours, when others are using the system.

## Change A Stock Category Code

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours, when others are using the system.

## Change An Inventory Item Code

This page requires the entry of an existing stock code and the new stock code. The system checks to see the new code entered doesn't already exist and that the code entered for the existing item does exist. If all is well then the stock code data is changed in all tables through-out the system. Sales analysis, stock movements, stock locations, Bills of Material, parent and component items, sales order details and purchase order details as well as the Stock Master, pricing and shipment charges.

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours, when others are using the system.

## Change A GL Account Code

**WARNING:** Due to the extensive changes taking place throughout the database this utility should not be run during normal operating hours when others are using the system.

## Change A Location Code

## Translate Item Descriptions

This utility uses the Google Translator API to automatically translate item descriptions (short and long part descriptions).

It translates from the item description in the default language (It was set up in \$DefaultLanguage in config) to the languages to maintain translations for item descriptions (They were set up in Main Menu > Setup > General Setup Options > System Parameters > General Settings). It only translates descriptions of items that are current (stockmaster.discontinued=0).

It requires a Google Translator API Key (more info in <https://cloud.google.com/translate/>) to allow automatic translations.

See also: In Inventory (aka "Stock"), Review Translated Descriptions.

## Update costs for all BOM items, from the bottom up

## Re-apply costs to Sales Analysis

This utility allows a period to be selected for which the current standard cost is applied to the quantities recorded in the sales analysis as sold to re-calculate the cost of goods sold.

It is important to realise that this will destroy the integrity of the matching general ledger journals created at the time of invoicing and that the GL cost of sales will no longer match with the sales analysis cost of sales.

However, occasionally incorrect cost data that has made a monkey of the sales analysis and general ledger can only be rectified by running this utility.

## Copy Authority of GL Accounts from one user to another

This utility allows you to copy access rights to general ledger accounts from one user to another. This utility overwrites all the access rights of the destination user.

If you need to change a specific GL account access permissions for users, see: GL Account Authorised Users.

If you need to change a specific user access permissions to GL accounts, see: User Authorised GL Accounts.

## Check debtor receipts allocations

### Debtors Balances By Currency Totals

This script is an utility to show debtors balances in total by currency.

### Suppliers Balances By Currency Totals

This script is an utility to show suppliers balances in total by currency.

### Make Stock Locations

If the inventory database is imported from some other system, the stock location records can be created for all locations currently defined by running the script Z\_MakeStockLocns.php. Inventory items will not appear on searches during entry of sales orders until their corresponding inventory locations records exist.

### Repost General Ledger from Period

This script Z\_RePostGLFromPeriod.php clears the actual data in the table ChartDetails - that contains the movements in each GL account, the movements are then re-calculated by setting all GLTrans to unposted and re-running the posting of all these transactions. This is a desperate measure that should only be undertaken in an extreme situation. Maybe a corrupt database or system crash etc that caused an out of balance trial balance.

### Maintain Language Files

We use **gettext** as the internationalization and localization (i18n) system to write a multilingual program. The most commonly used implementation of gettext is GNU gettext, released by the GNU Project in 1995 as a free software implementation of the system.

Source code is first modified to use the GNU gettext calls. This is done by wrapping strings that the user will see in the gettext function. To save typing time, and to reduce code clutter, this function is commonly aliased to `_`, so that the PHP code:

```
echo gettext('Maintain Language Files');
```

would become:

```
echo _('Maintain Language Files');
```

Comments (starting with `///`) placed directly before strings thus marked are made available as hints to translators by helper programs.

## Rebuild the System Default Language File

This script **Z\_poRebuildDefault.php** runs **xgettext** on the sources to produce a .pot (*Portable Object Template*) file, which contains a list of all the translatable strings extracted from the sources. The resultant system default language file (.pot file) is saved in the **.../locale/en\_GB.utf8/LC\_MESSAGES/messages.po** path.

## Add a New Language to the System

This script **Z\_poAddLanguage.php** adds a new language to the system, by creating a new language file (.po file) from the system default language file (.pot file).

## Edit a Language File Header

## Edit a Language File Module

## Edit Remaining Strings For This Language

## Download messages.po file

## Download messages.mo file

# EDI

EDI stands for electronic data interchange - the electronic transmission of transaction information between trading partners. There are numerous standards for the encoding of such transactions the most widely used being UN/EDIFACT and its derivative EANCOM implementation. In fact many industry groups use the standard formats in slightly different ways and some businesses within the industry use the industry standard slightly differently again. So ultimately, the standards are really only a framework for what the actual messages look like. In implementing EDI in webERP, some flexibility in the format of messages to be sent and received is available. EDI messages are created in flat files in the directory specified in config.php for EDI outgoing messages and a log of the EDI messages sent is retained also. The messages can be sent either as an email attachment to the customer supplied email address or via ftp to a customer supplied ftp server address - using the ftp username and password provided by the customer.

## EDI Setup

To enable EDI transactions for a customer, first select the customer from the Select Customer link on any page, then click the link - Customer EDI Configuration. This page allows selection of the type of transactions that are to be transmitted electronically currently only invoices/credit notes and orders are available. Each must be specifically enabled to activate them. Each customer must have their:

- EDI reference that they are identified by
- Transport mechanism and address to which the invoice/credit note messages are to be sent - either email as a file attachment or via ftp (file transfer protocol)

If the transport mechanism is to be ftp - this must be compiled into PHP with the flag -enable-ftp, most windows PHP installations have this by default now. Additional fields for the ftp server username and password will also be required.

To activate EDI polling for invoices to send the script EDISendInvoices.php must be run as a scheduled job - using cron or some other scheduling system -see automating sales reports. It can also be run from the utilities menu Z\_index.php with debugging output.

To activate EDI polling for orders to be entered as received the script ???? must be run as a scheduled job using cron or some other scheduling system.

## Sending EDI Invoices

EDI messages are made up of segments which must appear in a certain order. Since customers will require EDI invoices in slightly different formats, the exact format can be defined in the table EDIMessageFormat. This table has a record for each customer invoice line and the sequence when it must appear in the message. The field line text in this table can include any of the predefined EDI invoice variables surrounded by "[" and "]" to denote them as a variable to be replaced with the appropriate value as follows:

### EDI Invoice Detail Section

EDITransNo	The unique EDI transaction number
InvOrCrd	Whether the transaction is an invoice or a credit - the value of this variable is an EANCOM defined number, 388 for a tax invoice and 381 for a credit note



TransNo	The transaction number of invoice or credit
OrigOrDup	Whether the transaction is a duplicate or original sending the value of this variable is an EANCOM defined number 7 for a duplicate and 9 for an original
TranDate	The transaction date in the format CCYYMMDD
OrderNo	The original order number - only for invoices
CustBranchCode	The customer's internal code for the branch
CompanyEDIReference	The customer's EDI reference code
BranchName	The branch name
BranchStreet	
BranchCity	
BranchState	
TaxAuthorityRef	The businesses Tax Authority reference number
DatePaymentDue	The due date for this transaction
TaxTotal	The total amount of tax on the transaction

#### **EDI Invoice Detail Section - for the lines on the transaction**

LineNumber	
StockID	The webERP item code
CustStockID	The customer's internal code for the item
ItemDescription	
QtyInvoiced	Quantity invoiced or credited
LineTotalExclTax	The total for the line excluding tax
UnitPrice	Unit price for the item
LineTaxAmount	The tax applicable to the line

#### **EDI Invoice Summary Section**

NoLines	The total number of lines on the invoice/credit
TotalAmountExclTax	Total amount of the transaction excluding tax
TotalAmountInclTax	Total amount of the transaction including tax
NoSegments	The total number of segments in the transaction this is required as a control check in the summary

There is therefore great flexibility in how the messages are defined. The variables for the summary and heading sections can be used in any section. The detail section variables can only be used in the detail section.

Most customers will require that the branch to which the invoiced goods are delivered to, be identified using the customer's coding system. It is therefore important to ensure that the customer's branch code is actually entered against the webERP branch record. The variable CustBranchCode is retrieved from the branch record and if it is not entered then the EDI transaction will fail.

Some customers may also require the item code to be their item code, not the webERP item code. The variable CustStockID is derived from the cross reference table EDIItemMapping which would need to contain a cross reference record for each item that they may buy.

The script that creates the EDI invoices (EDISendInvoices.php) should be run automatically in the background as a scheduled task. It first gets a list of all customers who should receive EDI invoices (or credit

notes) - as determined in the settings of their DebtorsMaster record. Then the script goes through each customer returned in turn to get any invoices or credits that have not already been sent. A flat file is created for all the customers invoices and credits and sent to the customer using the transport, address and other parameters defined in the customer edi setup page - recorded against their DebtorsMaster record. There is a link to enable the script to be run manually - the browser will also show the output of the EDI message.

# Development – Foundations

Creating new scripts.

## Directory Structure

The scripts that make up the system are separated into several directories. However, the main bulk of the webERP scripts are in the top level directory.

- The top level directory contains all the scripts that are called directly from links in the system. A fundamental design criteria was to avoid the casual and perhaps novice PHP programmer having to examine code in many different files to obtain an understanding of the logic. The developer will rarely need to look beyond the main root directory of the webERP scripts and the includes directory.
- Scripts or portions of scripts that are included in one or more of the main scripts are held in the includes/ sub-directory. Many of these includes are used in a way similar to functions.
- A number of sub-directories under the includes directory are worthy of note, in particular the php-plot directory contains the php-plot class (by Miguel de Benito Delgado and others - maintained as a separate project) which is the code used by webERP to create charts for sales analysis inquiries. The php-gettext class (by Danilo Segán) is used by webERP to attempt to translate using the files under the locale directories where php binary gettext libraries are not installed. In practise it is much better to have gettext libraries installed when operating webERP in a multi-language installation. Also, the TCPDF class which is a derivative of Olivier Plathey's FPDF class developed by Nicola Asuni that enables pdf files to be created by webERP using the utf-8 character set and CID fonts - this allows webERP to create lightweight pdf files where the fonts for all languages are bundled by adobe acrobat reader. Although this class is maintained as a separate project there have been some modifications to this class by Javier de Lorenzo-Cáceres that allow CID fonts to be mapped correctly. This class is a very large collection of files and it has been trimmed significantly for the webERP distribution excluding all the TCPDF documentation and examples.
- The scripts to create the database are held under the sql directory. Underneath this directory there is currently only a mysql directory since only the mysql RDBMS is supported. Previously there was a pg directory for postgres sql scripts. Under the mysql subdirectory of the sql directory - are sql scripts created by mysqldump. There is a script to create a new installation with only minimal data to start a new system off - weberp-new.sql. There is also a script to make a demo system - weberp-demo.sql.
- The locale directory contains all the different language translations installed. Only the en\_GB.utf8 language is installed by default. Many other language packs can be downloaded and installed under this directory. Under the locale directory each of the languages must be under a directory name that matches to a locale installed on the web-server. Under this directory the LC\_MESSAGES directory contains two files the messages.po - which contains the translations and a messages.mo that is compiled as a binary indexed file for looking up the translations as fast as possible using the gettext functionality for internationalisation of applications
- Documentation is under the doc/ sub-directory where this manual is under the Manual subdirectory of the doc directory. Manuals specific to a given language/locale are under the locale/ and language sub-directory
- The api directory contains all of the api scripts

- The xmlrpc directory contains the XML-RPC client and server code required for the api - webERP uses a class created by G. Giunta for this purpose - the whole tree of this XML-RPC class
- The Numbers directory contains the PEAR class for converting numbers to words - this code is used by the cheque writing code in webERP. The PEAR installation of the class is not required since PEAR adds a lot of overhead to PHP it is not required as a dependency to use webERP and so this code is bundled with webERP.
- The install directory is where the minimal installer scripts are held - these can be deleted if required after installation. Only when the file config.php does not exist - in a new installation will the scripts in this directory be used.
- The flags directory contains small images of national flags appropriate to the ISO 4217 currency code abbreviations - each file is named by the ISO code .jpg these are displayed on the currencies form in webERP.
- FPDF directory is an extension to the TCPDF pdf creation class that allows other pdf files to be concatenated onto pdfs created from the system - this class is created and maintained as a separate project by Setasign - Jan Slabon. webERP allows user selectable document(s) to be appended to invoices - this functionality requires this class and the files under this directory
- Formatting style sheets are held under the css - see the themes section under getting started above. Under the css directory there is a directory tree for each of the themes that come with the distribution. To create a new theme simply copy one of the existing directory trees over to a new one under the css directory - it will automatically be able to be selected as a new theme by webERP.
- The javascripts directory contains just one file that is included in the HEAD section of each webERP script and contains all the javascript used by webERP
- the reportwriter directory contains the sql report writer used with webERP - this contribution from Dave Premo - the author of Phreebooks does not follow any of the conventions of the rest of webERP but adds important functionality to webERP. There is a whole other directory structure under the reportwriter directory and the code is more difficult to follow. Happily Dave wrote some good help to enable it to be used

Construction of new scripts should make use of the following building blocks that are used throughout the system.

## **session.php**

This page must be included and has the following functions:

- Establishes a session if none already exists and checks that an authorised user is logged in - if so it checks that the user is authorised for the specific page being called, based on the value of \$PageSecurity.
- It in turn includes the scripts:
- config.php - this script contains the details required to connect to the database.
- The GetConfig.php script ensures that all system variables defined and stored in the database are retrieved and available to the system as SESSION variables. The GetConfig.php reads the companies table in the database that contains just a single company record. It also reads the config table in the database - which contains all the system configuration parameters - these are stored in session variables to avoid round trips to the database with every page. The developer needs to study these

parameters which are explained in the SystemParameters.php page from Setup --> Configuration Settings

- ConnectDB.inc - this script (which in turn include includes/ConnectDB\_mysql.inc or includes/ConnectDB\_mysqli.inc - historically includes/ConnectDB\_Postgres.inc was also an option) initiates a connection to the database and contains all the database abstraction functions. When interacting with the database, only functions defined in this script are used, not the mysql specific functions, since a change in database would be otherwise be difficult to effect. By using this file, only the functions in this script need to be modified for any other database to be used.
- LanguageSetup.php - this sets the locale and handles the fall-back to php-gettext if the local gettext libraries are not available on the web-server

## header.php

This file should be included after the variable \$Title has been set to the name of the page. This file relies on config.php being already loaded, so session.php (which in turn includes config.php) must be included before header.php. The code in this script has the following functions:

- Includes the javascript functions used in scripts from the file javascripts/MiscFunctions.js
- Sets up the normal system banner with the links to the menu, item selection, customer and supplier selection pages.
- Sets the style sheet used throughout the system - by referencing the theme directory to use for css

## footer.php

This file contains the small logo, company name and copyright notice with the closing "" tags.

## config.php

The variables in config.php are available to all of tcripts that have included session.php. There are not many now most of the configuration is stored in the database using the config table. However, the variables that give the software the information to connect to the database such as database user, password and host, together with the database type - dbtype - in fact only mysql is supported but there are two libraries that can be used the mysqli and the old mysql functions. There are a couple of other variables including the timezone, \$RootPath which is the directory where the web server holds the system files. Also the php error\_reporting code.

Having started the page with session.php and header.php - and then finishing with footer.php much of the work to ensure a consistent look and feel is already done.

## An Example webERP Script Template

Following from the discussion of the key component scripts of webERP, the general form of a webERP script would look like the following:

```
<?php
```

```
/* session.php is the script that brings in session
 * management, database management, and performs
 * any other housekeeping tasks related to the running
 * of webERP. and so should be included right at the
 * top of every script.
```

```

*/
include('includes/session.php');

/* A title for the script must be assigned prior to
 * including the header.php script
 */
$title = _('Simple webERP Script');

/* The $ViewTopic variable should be set to the name
 * of the manual page for this functionality and the
 * $BookMark variable is the place in that manual page
 * specifically for this functionality
 */
$ViewTopic = 'SimpleScript';
$BookMark = 'GeneralTopics';

/* The header.php file sends all the http headers needed,
 * links in the style sheets and downloads any javascript
 * files that are needed. It also draws the header on the
 * screen. Must be included before any output is sent to
 * the browser.
 */
include('includes/header.php');

if (!isset($_POST['Submit'])) {
/* In this section should go the code to validate the data
 * submitted in the form, and if all is well it should
 * post that data to the database. If there is more than
 * one table to be updated that transactions should be used
 * in order to maintain the database integrity.
 * If the form does not validate then its processing can just
 * fall through to the next section, but show any required
 * messages.
 */
}

/* This section is where any of the display code goes.
 * Typically this will contain a table of the existing data,
 * and a form for entry of new details.
 */

/* Finally we must include footer.php to draw the footer on
 * the screen, display any error messages, and close off the
 * html tags in the page.
 */
include('includes/footer.php');
?>

```

## PDFStarter.php

The only time when it is not appropriate to include session.php or header.php is when a pdf script is to be created. Here the file PDFStarter.php contains the initiation of the session and the check for proper user authentication and authorisation for the specific page using the \$PageSecurity variable which must be defined before PDFStarter.php is included. Normally, config.php and ConnectDB.inc are included separately (and before PDF\_starter\_ros.inc) in PDF scripts. PDF report scripts all make use of the FPDF class by Olivier Plathey but previously a different class was used so there is an extension to this which translates the calls to the old pdf class to the FPDF class. Probably better to write new scripts using the FPDF syntax.

## Database Abstraction - ConnectDB.inc

Whilst the system has been developed using MySQL it has always been envisaged that users should not be forced to use MySQL - in keeping with open source principles. For this reason all requests of the database are made via abstraction functions in ConnectDB.inc. This policy has been rigorously maintained and developing extensions to the system which do not conform to this scheme would destroy the portability currently available between databases. Instead of using the PHP database specific functions then the functions defined in ConnectDB\_mysql.inc should be used

- `$DB_result_handle = DB_query($sql,$db,$ErrorMessage="", $DebugMesage="", $InsideATransaction=0)`
- `$NumberOfRowsReturned = DB_num_rows($DB_result_handle)`
- `$QueryResultNamedElementArray = DB_fetch_array($DB_result_handle)`
- `$QueryResultArray = DB_fetch_row($DB_result_handle)`

The full list of functions should be reviewed from the file includes/ConnectDB\_mysql.inc - which contains the mysql specific abstraction functions. Only these functions should be used in other scripts. Care has been taken to ensure that standards compliant SQL is used throughout, to ensure any database conversion issues are minimal. SQL specific to any RDBMS even mysql should be avoided in favour of generic standards compliant SQL. There are instances where mysql specific SQL has been used such as INTERVAL and SHOW TABLES - these are historical.

## DateFunctions.inc

This script holds a number of functions for manipulating dates used throughout the system - these functions all depend upon the system configuration for SESSION['DefaultDateFormat']. Amongst the most useful:

- *DateDiff* - calculates the difference between two dates has parameters for the number of days, weeks or months.
- *FormatDateForSQL* converts a date in the format specified by \$DefaultDateFormat in config.php to the format required for SQL - yyyy-mm-dd.
- *ConvertSQLDate* - Converts a date in SQL format yyyy-mm-dd to the date defined in config.php \$DefaultDateFormat
- *GetPeriodNo* - Gets the period number for a given date by looking up the date in the period table - it creates new periods as necessary to ensure a valid period is returned.

## SQL\_CommonFuctions.inc

This script has some common functions used throughout the system - in particular:

- *GetNextTransNo* - that retrieves the next transaction number for a given transaction type - see the table systypes for a list of the valid transaction type codes.

## MiscFunctions.php

This script holds miscellaneous functions:

`locale_number_format($Number, $DecimalPlaces=0)`

Displays numbers in locale of the user. See [Indian Numbering System](#) in Manual, Multilanguage, Technical Overview.





# API Function reference

api\_branches.php  
api\_currencies.php  
api\_customers.php  
api\_customertypes.php  
api\_debtortransactions.php  
api\_errorcodes.php  
api\_glaccounts.php  
api\_glgroups.php  
api\_glsections.php  
api\_holdreasons.php  
api\_locations.php  
api\_login.php  
api\_paymentterms.php  
api\_php.php  
api\_purchdata.php  
api\_salesareas.php  
api\_salesman.php  
api\_salesorders.php  
api\_salestypes.php  
api\_session.inc  
api\_shippers.php  
api\_stock.php  
api\_stockcategories.php  
api\_suppliers.php  
api\_taxgroups.php  
api\_webERPsettings.php  
api\_workorders.php  
api\_xml-rpc.php

# API Tutorial

## API - Getting Started

webERP comes with a simple to use and flexible API that allows client programs to access webERP in a safe and secure manner. If you wish to write an application that accesses webERP, either to post transactions, or to extract information, then you should use the API, rather than try to access the webERP database directly, as the API makes sure that the integrity of the data is maintained. The API is an "*Application Program Interface*", that is intended to expose functionality to external programs. There are currently a number of low level functions it exposes to enable external applications to retrieve data and to update or insert data. However the API was structured in a manner that allows other protocols to be used very easily. All that would need to be done to use the SOAP protocol for instance would be to create an `api_soap.php` file with the same functions as the `api_xmlrpc.php` file.

The API uses the XML-RPC protocol to communicate between the client and the server. This was chosen because it is lightweight, simple, and easy to use. The API uses the XML-RPC for PHP - also called the `phpxmlrpc` class from Useful Inc originally developed by Edd Dumbill. This is an external library that is bundled with webERP code ready to run. Whilst the standard PHP XML-RPC extension could have been used, the extension is often not installed by default, so would add another dependency to webERP and complexity for the setup and installation of webERP.

XML-RPC is a protocol to use XML to make RPC - remote procedure calls.

Simply put the XML-RPC call is XML that contains the method of the remote procedure call together with any parameters and their data types and is sent over http as a POST to the XML-RPC server - the server returns an XML payload containing the results of the call. The parameters sent to the methods can contain arrays and associative arrays of data.

The clever thing about XML-RPC is that it is the simplest protocol around for doing web-services. The newer and MUCH more complex SOAP - Simple Object Access Protocol - is quite involved and complicated. is founded on the KISS principle.

In fact the XML-RPC "Server" is just the script `http://www.yourdomain.com//api/api_xml-rpc.php`

There is no daemon background process running continuously to field calls to the "server" it is just a script that is http posted to by the XML-RPC call sending the XML encoded method to be run together with the necessary parameters to the API - the server script runs the API php functions exposed by the `xml-rpc` methods and returns the XML-RPC response as an XML payload. The `phpxmlrpc` class does the packaging converting the PHP variables and arrays to the XML required for the XML-RPC call and also has the functions to convert the XML response into something useable in PHP without having to write the XML parsing routines.

There is one hardcoded parameter that needs to be set in the api before you start to use it. The database name - the company database - to use with the api is defined in the file `api/api_php.php` - the variable:

```
$api_DatabaseName="demo";
```

should be set before attempting to use the API.

It is worthwhile reading a how-to on XML-RPC with PHP which explains in more detail what is going on as a primer for the concepts.

The beauty of XML-RPC is that the client calling the XML-RPC server and performing native functions can be called from any language (with XML-RPC bindings). I have used Vala, Genie and Python. Python particularly has been very straight forward as it has an xmlrpclib bundled with it. Of course a PHP client is also possible and is demonstrated below.

The API help is actually produced by an xml-rpc call to the API using the system.listMethods method (this is a phpxmlrpc method - not a API method). Aother system xml-rpc method of phpxmlrpc class is used to return the details of each method"s parameters required. So the help file not only documents each of the API methods it is itself and illustration of how the API can be used!!

In the narrative below, the word "*Server*" is used to refer to the host webERP installation - in fact the "*server*" this is the script webERP/xml-rpc/api\_xmlrpc.php

The API is configured by default to use the company database weberpdemo, and this is hard coded in the script api/api\_php.php on line 6:

```
$api_DatabaseName="weberpdemo";
```

This database should be changed manually before the API can be used to the company database that you wish the API to access. Note that the API can only work on one company in a webERP installation. This is a limitation of the design.

Below is a simple example of how to use the API.

It is a simple *client* (a consumer of the API) application where the stock quantity for the item DVD-TOPGUN is retrieved from the webERP installation using the API.

```
echo "Test  API";
/* the xmlrpc class can output some funny warnings so make sure notices are turned off
error_reporting (E_ALL & ~E_NOTICE); */

/* include the phpxmlrpc class - see link above - copy the whole directory structure of
the class over to your client application from the /xmlrpc directory */
include ("xmlrpc/lib/xmlrpc.inc");

// assuming your install is on server http://www.yourdomain.com/
$ServerURL = "http://www.yourdomain.com//api/api_xml-rpc.php";
$DebugLevel = 0; //Set to 0,1, or 2 with 2 being the highest level of debug info
$Parameters = array();

/* each parameter needs to be run through xmlrpcval() - to create the necessary xml
required for the rpc call if one of the parameters required is an array then it needs
to be processing into xml for the rpc call through php_xmlrpc_encode()*/
$Parameters["StockID"] = new xmlrpcval("DVD-TOPGUN"); //the stockid of the item we wish
to know the balance for
```

```

//assuming the demo username and password will work !
$Parameters["Username"] = new xmlrpcval("admin");
$Parameters["Password"] = new xmlrpcval("");

$msg = new xmlrpcmsg(".xmlrpc_GetStockBalance", $Parameters);

$client = new xmlrpc_client($ServerURL);
$client->setDebug($DebugLevel);
$response = $client->send($msg);
$answer = php_xmlrpc_decode($response->value());
if ($answer[0] != 0) { //then the API returned some errors need to figure out what went
wrong
    //need to figure out how to return all the error descriptions associated with the
codes
} else { //all went well the returned data is in $answer[1]
    //answer will be an array of the locations and quantity on hand for DVD_TOPGUN so
we need to run through the array to print out
    for ($i=0; $i < sizeof($answer[1]); $i++) {
        echo "" . $answer[1][$i]["loccode"] . " has " . $answer[1][$i]["quantity"] . "
on hand";
    }
}
}

```

To create invoices in you need to use the following methods:

InsertOrderHeader InsertOrderLine - potentially multiple times for all the lines on the order then

InvoiceSalesOrder - to invoice sales orders directly assuming the entire order is delivered - it cannot deal with controlled stock items though. However, it does process invoices in much the same way as standard with updates to the stock quantities dispatched, GL entries and records required to record taxes and sales analysis records.

To create a credit note just a single API call is required:

CreateCreditNote - to create a credit note from some base header data and an array of line items (as an associative array. In the same way as the InvoiceSalesOrder function this does all the same processing as a standard credit note from the interface in .

There are some example scripts on the wiki showing how a number of the API XML-RPC functions are called - these scripts should be put on a web-server outside an installation - all you need to do is edit the config.inc file to give the system your username and password and the URL of your installation you wish to connect to. As always playing with the examples helps to figure out how it all works.

## An Example Client

For this example we will build a small PHP application that will first interrogate webERP for a full list of available stock locations, build them into an HTML drop down list and then allow a user to input a stock item code and return the quantity of stock of that item at the selected location. We will use PHP for simplicity but any language that has an xmlrpc library (just about every language) can be used to write a client.

Firstly we need the xmlrpc library, so we copy the xmlrpc sub-directory from webERP to this new project.

The basic code will look like this, and be saved into a file called index.php:

```

<html>
  <head>
    <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
      "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
  </head>
  <body>
    <form action="index.html" method="post">
      Stock Code:<input type="text" name="StockID" /><br />
      Location:<select name="location">
        <?php // Here will go the available stock locations from webERP?>
      </select><br />
      <input type="submit" name="submit" value="Submit" />
    </form>
  </body>
</html>

```

As its name suggests, the xmlrpc function calls are made by sending an XML file with the function name and the parameters to the server, and receive an XML file back from the server.

To assist with this, the phpxmlrpc library that webERP uses (and we will use as well for our client) contains methods to encode our function call as XML, and to decode the XML that we receive back.

First off we need to include the xmlrpc library in our file, so immediately above the HTML, we need the following:

```

<?php
  include "xmlrpc/lib/xmlrpc.inc";
  $xmlrpc_internalencoding="UTF-8";
  include "xmlrpc/lib/xmlrpcs.inc";
?>

```

To populate the drop down box with the stock locations in it the API function called webERP.xmlrpc\_GetLocationList() is used. This function takes two parameters, a valid userid for the webERP instance, and the password for that user. Using the demo credentials is admin/weberp. Also, the file api\_php.php must have the \$api\_databasename set to whatever the name of the database is on your target webERP installation.

The function to get the inventory locations will look like this, and be at the bottom of the file, within a PHP code section (ie <?php ?>).

```

function GetLocations() {
    //Encode the user/password combination
    $UserID = php_xmlrpc_encode("admin");
    $Password = php_xmlrpc_encode("webERP");

    //Create a client object to use for xmlrpc call
    $Client = new xmlrpc_client("http://localhost/webERP/api/api_xml-rpc.php");

    //Create a message object, containing the parameters and the function name

```

```
$Message = new xmlrpcmsg("webERP.xmlrpc_GetLocationList", array($UserID,  
$Password));
```

The most common error just return no authorization with no information about why this has happened. Most webERP API/XML-RPC calls returns an array containing two elements, the first - `$Response[0]` containing an integer code, and the second the result of the call, if one is expected. If the integer code is zero, this indicates success. Any other code indicates an error. These are the errors and the codes that are returned to represent them:

```
NoAuthorisation - 1  
IncorrectDebtorNumberLength - 1000  
DebtorNoAlreadyExists - 1001  
IncorrectDebtorNameLength - 1002  
InvalidAddressLine - 1003  
CurrencyCodeNotSetup - 1004  
SalesTypeNotSetup - 1005  
InvalidClientSinceDate - 1006  
HoldReasonNotSetup - 1007  
PaymentTermsNotSetup - 1008  
InvalidDiscount - 1009  
InvalidPaymentDiscount - 1010  
InvalidLastPaid - 1011  
InvalidLastPaidDate - 1012  
InvalidCreditLimit - 1013  
InvalidInvAddrBranch - 1014  
InvalidDiscountCode - 1015  
InvalidEDIInvoices - 1016  
InvalidEDIOrders - 1017  
InvalidEDIReference - 1018  
InvalidEDITransport - 1019  
InvalidEDIAddress - 1020  
InvalidEDIServerUser - 1021  
InvalidEDIServerPassword - 1022  
InvalidTaxRef - 1023  
InvalidCustomerPOLine - 1024  
DatabaseUpdateFailed - 1025  
NoDebtorNumber - 1026  
DebtorDoesntExist - 1027  
IncorrectBranchNumberLength - 1028  
BranchNoAlreadyExists - 1029  
IncorrectBranchNameLength - 1030  
InvalidEstDeliveryDays - 1031  
AreaCodeNotSetup - 1032  
SalesmanCodeNotSetup - 1033  
InvalidFwdDate - 1034  
InvalidPhoneNumber - 1035  
InvalidFaxNumber - 1036  
InvalidContactName - 1037  
InvalidEmailAddress - 1038  
LocationCodeNotSetup - 1039  
TaxGroupIdNotSetup - 1040  
ShipperNotSetup - 1041  
InvalidDeliverBlind - 1042  
InvalidDisableTrans - 1043  
InvalidSpecialInstructions - 1044  
InvalidCustBranchCode - 1045  
BranchNoDoesntExist - 1046
```

StockCodeDoesntExist - 1047  
StockCategoryDoesntExist - 1048  
IncorrectStockDescriptionLength - 1049  
IncorrectUnitsLength - 1050  
IncorrectMBFlag - 1051  
InvalidCurCostDate - 1052  
InvalidActualCost - 1053  
InvalidLowestLevel - 1054  
InvalidDiscontinued - 1055  
InvalidEOQ - 1056  
InvalidVolume - 1057  
InvalidKgs - 1058  
IncorrectBarCodeLength - 1059  
IncorrectDiscountCategory - 1060  
TaxCategoriesDoesntExist - 1061  
InvalidSerialised - 1062  
IncorrectAppendFile - 1063  
InvalidPerishable - 1064  
InvalidDecimalPlaces - 1065  
IncorrectLongStockDescriptionLength - 1066  
StockCodeAlreadyExists - 1067  
TransactionNumberAlreadyExists - 1068  
InvalidTranDate - 1069  
InvalidSettled - 1070  
IncorrectReference - 1071  
IncorrectTpe - 1072  
InvalidOrderNumbers - 1073  
InvalidExchangeRate - 1074  
InvalidOVAmount - 1075  
InvalidOVGst - 1076  
InvalidOVFreight - 1077  
InvalidDiffOnExchange - 1078  
InvalidAllocation - 1079  
IncorrectInvoiceText - 1080  
InvalidShipVia - 1081  
InvalidEdiSent - 1082  
InvalidConsignment - 1083  
InvalidLastCost - 1084  
InvalidMaterialCost - 1085  
InvalidLabourCost - 1086  
InvalidOverheadCost - 1087  
InvalidCustomerRef - 1088  
InvalidBuyerName - 1089  
InvalidComments - 1090  
InvalidOrderDate - 1091  
InvalidDeliverTo - 1092  
InvalidFreightCost - 1094  
InvalidDeliveryDate - 1095  
InvalidQuotationFlag - 1096  
OrderHeaderNotSetup - 1097  
InvalidUnitPrice - 1098  
InvalidQuantity - 1099  
InvalidDiscountPercent - 1100  
InvalidNarrative - 1101  
InvalidItemDueDate - 1102  
InvalidPOLine - 1103  
GLAccountCodeAlreadyExists - 1104  
IncorrectAccountNameLength - 1105  
AccountGroupDoesntExist - 1106  
GLAccountSectionAlreadyExists - 1107  
IncorrectSectionNameLength - 1108  
GLAccountGroupAlreadyExists - 1109

GLAccountSectionDoesntExist - 1110  
InvalidPandL - 1111  
InvalidSequenceInTB - 1112  
GLAccountGroupDoesntExist - 1113  
InvalidLatitude - 1114  
InvalidLongitude - 1115  
CustomerTypeNotSetup - 1116  
NoPricesSetup - 1117  
InvalidInvoicedQuantity - 1118  
InvalidActualDispatchDate - 1119  
InvalidCompletedFlag - 1120  
InvalidCategoryID - 1121  
InvalidCategoryDescription - 1122  
InvalidStockType - 1123  
GLAccountCodeDoesntExists - 1124  
StockCategoryAlreadyExists - 1125  
SupplierNoAlreadyExists - 1126  
IncorrectSupplierNameLength - 1127  
InvalidSupplierSinceDate - 1128  
InvalidBankAccount - 1129  
InvalidBankReference - 1130  
InvalidBankPartics - 1131  
InvalidRemittanceFlag - 1132  
FactorCompanyNotSetup - 1133  
SupplierNoDoesntExists - 1134  
InvalidSuppliersUOM - 1135  
InvalidConversionFactor - 1136  
InvalidSupplierDescription - 1137  
InvalidLeadTime - 1138  
InvalidPreferredFlag - 1139  
StockSupplierLineDoesntExist - 1140  
InvalidRequiredByDate - 1141  
InvalidStartDate - 1142  
InvalidCostIssued - 1143  
InvalidQuantityRequired - 1144  
InvalidQuantityReceived - 1145  
InvalidStandardCost - 1146  
IncorrectSerialNumber - 1147  
WorkOrderDoesntExist - 1148  
InvalidIssuedQuantity - 1149  
InvalidTransactionDate - 1150  
InvalidReceivedQuantity - 1151  
ItemNotControlled - 1152  
ItemSerialised - 1153  
BatchNumberDoesntExist - 1154  
BatchIsEmpty - 1155  
NoSuchArea - 1156  
NoSuchSalesMan - 1157  
NoCompanyRecord - 1158  
NoReadOrder - 1159  
NoReadOrderLines - 1160  
NoTaxProvince - 1161  
TaxRatesFailed - 1162  
NoReadCustomerBranch - 1163  
NoReadItem - 1164  
MustBeReceiptOrCreditNote - 1165  
NoTransactionToAllocate - 1166



As you can see error code 1 indicates "NoAuthorisation" which will be the error returned if the user name or password is incorrect and also if the name of the database to be used in the api call is not specified correctly in the file webERP/api/api\_php.php in the variable:

```
$api_DatabaseName="weberpdemo";
```

To catch the errors we create a session variable to hold any error messages that happen, so that we can show the to the user. So the initialisation code at the top of index.php becomes:

```
<?php
include "xmlrpc/lib/xmlrpc.inc";
$xmlrpc_internalencoding="UTF-8";
include "xmlrpc/lib/xmlrpcs.inc";
$_SESSION["Errors"] = array();
?>
```

and then at the bottom of the output we have a loop to output these errors:

```
foreach ($_SESSION["Errors"] as $Error) {
    echo $Error;
}
```

Now we just need to capture that error. We need to put this code at the bottom of the GetLocations() function so that it now reads:

```
if ($ReturnValue[0] == 0) {
    return $ReturnValue[1];
} elseif ($ReturnValue[0] == 1) {
    $_SESSION["Errors"][] = "Incorrect login/password credentials used";
}
```

Now run the index.php script again in your browser and you should get output similar to this:

TODO INSERT MISSING CONTENT/IMAGE

We just need to put this code at the bottom of our other functions, and then they will all be able to catch this error.

Now if we put the proper password back in index.php should work as before.

Now try entering a stock code that you know doesn't exist and see what happens. I entered a part code called "wrong" and this is what I see.

TODO INSERT MISSING CONTENT/IMAGE

This is not very helpful output so we need catch this error. A quick look here shows that error code 1047 is "StockCodeDoesntExist" and this should be returned if the code we entered is wrong. So we need to capture error 1047 in the GetStockQuantity() function. The code at the end of this function now becomes:

```
} elseif ($ReturnValue[0] == 1) {
    $_SESSION["Errors"][] = "Incorrect login/password credentials used";
} elseif ($ReturnValue[0] == 1047) {
    $_SESSION["Errors"][] = "The stock code you entered does not exist";
}
```

So now the function is checking that the user/password is correct and also checking that the stock code is correct and providing useful feedback in the case of any problems. We could go on and check for other errors but this should be enough for now.

To do this we need a function much like the one we used to extract the array of location codes. Here is the full code:

```
function LocationName($LocationCode) {

    //Encode the data items
    $UserID = php_xmlrpc_encode("admin");
    $Password = php_xmlrpc_encode("webERP");
    $Code = php_xmlrpc_encode($LocationCode);

    //Create a client object to use for xmlrpc call and set its debug level to zero
    $Client = new xmlrpc_client("http://localhost/webERP/api/api_xml-rpc.php");
    $Client->setDebug(0);

    //Create a message object, containing the parameters and the function name
    $Message = new xmlrpcmsg("webERP.xmlrpc_GetLocationDetails", array($Code,
$UserID, $Password));

    //Use the client object to send the message object to the server, returning the
response
    $Response = $Client->send($Message);

    //Decode the response and return the array
    $ReturnValue = php_xmlrpc_decode($Response->value());
    if ($ReturnValue[0] == 0) {
        return $ReturnValue[1]["locationname"];
    }
}
```

The first section encodes the parameters as XML. The first two parameters are always the userid/password combination, and for this function call we need a third parameter, which is the code of the location that we require the name of. The second section is identical to the previous function and creates an instance of the XML-RPC client class. The third section then creates an instance of the message class, with the first parameter being the full name of the API function being called, in this case webERP.xmlrpc\_GetLocationDetails, and then the second parameter is an array of the encoded parameters,

(location code, userid, password). This message is then sent to the server, and the response decoded into an array called \$ReturnValue.

As last time the first element of the array signifies whether the function was successful (a zero), or any other integer for an error code. The second element is an associative array of details for that location. The key of each element is the field name for that value. In our case we just want the location name, so we return the element ["locationname"]. If it was the telephone number we were interested in we would just return the ["tel"] element.

Changing the line in the HTML where we fill the drop down box to:

```
echo <option value=" . $LocationCode . "> . LocationName($LocationCode) . "</option>;
```

The full name of the location appears in the drop down the list, but the value returned by the form is still just the code.

All that is left to complete our client, is to type a stock code in the text box, submit the form and return the amount of stock for that code at the chosen location. First we need to insert some PHP code in the HTML to handle the form being sent:

```
if (isset($_POST["submit"])) {  
    echo "The quantity of " . $_POST["StockID"] . " at " . $_POST["location"] . " is :  
    " . GetStockQuantity($_POST["StockID"], $_POST["location"]);  
}
```

As you can see this calls another PHP function - GetStockQuantity() - that retrieves the stock quantity for the required item at the required location. Looking at the API function reference in the manual the API function we require is webERP.xmlrpc\_GetStockBalance. However this time there is a small addition we require as this function returns an array containing the stock balances at all the locations for the given stock item.

The full code for the PHP function is:

```
function GetStockQuantity($StockID, $LocationCode) {  
    //Encode the data items  
    $UserID = php_xmlrpc_encode("admin");  
    $Password = php_xmlrpc_encode("webERP");  
    $StockCode = php_xmlrpc_encode($StockID);  
  
    //Create a client object to use for xmlrpc call and set its debug level to zero  
    $Client = new xmlrpc_client("http://localhost/webERP/api/api_xml-rpc.php");  
    $Client->setDebug(0);  
    //Create a message object, containing the parameters and the function name  
    $Message = new xmlrpcmsg("webERP.xmlrpc_GetStockBalance", array($StockCode,  
$UserID, $Password));  
    //Use the client object to send the message object to the server, returning the  
    response  
    $Response = $Client->send($Message);  
    //Decode the response and return the array  
    $ReturnValue = php_xmlrpc_decode($Response->value());  
}
```

```

    if ($ReturnValue[0] == 0) {
        $Items = $ReturnValue[1];
        for ($i=0; $i < sizeof($Items); $i++) {
            if ($Items[$i]["loccode"]== $LocationCode) {
                return $Items[$i]["quantity"];
            }
        }
    }
}

```

I wont go through this in details as it is mostly the same as the previous functions. The key section is the last:

```

$ReturnValue = php_xmlrpc_decode($Response->value());
if ($ReturnValue[0] == 0) {
    $Items = $ReturnValue[1];
    for ($i=0; $i < sizeof($Items); $i++) {
        if ($Items[$i]["loccode"]== $LocationCode) {
            return $Items[$i]["quantity"];
        }
    }
}

```

Here the RPC returns an array of locations with the stock quantities for each location, and we filter out the location we need.

Showing that we have returned the correct numbers.

# Development Structure

This page will be of interest primarily to developers wishing to get to grips with the system and how the various scripts function. It is very old and possibly outdated in places.

## Sales Orders

Initiation of orders is done from the script :

SelectOrderItems.php

This script contains functionality to select the customer for the order as well as selecting the parts for the order.

The order processing logic revolves around a cart object called Items which is declared as a session variable. It contains an array of LineItem objects, each line item contains all the information about the order line items - I hope predictably! The Items session variable also contains the order header data about customer, currency, sales type etc. The entire order is thus cached in this session variable. Updates to the database for the cached sales order are only effected when the user explicitly commits modifications. This is actually done from the DeliveryDetails.php script.

The SelectOrderItems.php script also allows modifications to pre-existing orders by repopulating the Items session object and the Items-LineItems array directly from the database. Checks are necessary to ensure that changes are sensible.

The script has two ways to select parts to add to an order:

- 1.By selecting the stock category or an extract of the code or description. The user must then hit the search button to initiate the search. The page displays the choice of parts meeting the criteria for selection.
- 2.By entering the part code and quantity directly. This allows quick entry of sales orders, where the user is familiar with the stock codes. The user must hit the quick entry button to initiate the processing of entries in the quick entry grid.

## Pricing

The script looks up the pricing for the customer based on the customer currency and sales type. As many sales types as required can be set up each with its own price list. Where there is no pricing set up for the sales type and currency of the customer then no parts are available for adding to the order.

**Kit set parts** can be entered - these are defined at the stage of the inventory item setup - they are exploded into their components for modification directly in the order. They are a short cut to selecting each individual part where only one part changes. eg a computer with xyz motherboard, case, keyboard, mouse, 256Meg RAM etc. The kitset part could bring all these parts into the order, but then allow deletion of the 256Meg RAM and replacement with the code for 512Meg RAM or whatever modifications are required.

**Assembly parts** can also be entered that refer to underlying component parts but priced at the assembly level. An assembly part is not exploded into its components at the time of order entry like a kitset. It exists in orders and sales analysis records but not for stock quantity records maintained although movement records are created for the assembly parts as well as the components of the assembly.

## Delivery and Freight Charges

Having selected the customer and the line items for the order, the delivery details need to be entered. Depending on the entries in logicworks.ini the freight charge is calculated. There is an option to NOT calculate a freight charge if the total order value is greater than a specific value. The freight calculation is based on the entries made for the various courier companies from the selected stock location to the city of the delivery address entered. If the city is not found in either line 2 or 3 of the delivery address then the script returns an error. Where several courier companies are found then the system selects the one with the least cost based on the total of the kgs on the order or the volume of the order. The freight calculation is a function held in a separate file FreightCalc.php requiring parameters to be passed, the delivery address lines, the from location the volume and weight of the order. The function returns an array containing the BestShipper and the FreightCost. The FreightCalc file is included into the DeliveryDetails.php script. There is therefore a requirement to maintain the volume in cubic meters and weight in kgs for each part and also the scale of freight costs if this functionality is used.

If the data requirement to use this effectively is considered too great, it is possible to disable this freight calculation too in logicworks.ini.

Once the order delivery details are all entered in the DeliveryDetails.php script then the order can be committed to the database. It is entirely cached in the Items session variable to this point and only when the order is placed or changes committed is the session variable cleared and the database updated.

## Finding Sales Orders

Orders can be found using the script:

SelectSalesOrders.php

This script allows a number of ways to find an outstanding sales order.

- 1.By customer - a customer selected from the SelectCustomer.php script can call this script to show only outstanding orders for the customer selected.
- 2.By part - selection of a part is built into the script. The purist would have the SelectProduct functionality separated in a separate script. However I feel that this way makes for a more intuitive user experience.
- 3.An order number can be entered directly.

The SelectSalesOrders.php

script also provides links on the orders returned to allow the order to be modified or invoiced.

Modification of order line items is done in the same script as originally created ... `SelectOrderItems.php` but it is not possible to change a line quantity to a quantity less than is already invoiced, or to delete a line that has some quantity already invoiced.

## Invoicing

An invoice can only be created by first selecting the items to invoice onto a sales order. The order can then be invoiced.

The link to invoice the order from the `SelectOutstandingOrders.php` script shows all the line items on the order that are yet to be invoiced. There is opportunity for the user to alter the quantity to invoice but not the price/discount. There is also opportunity to manually over-ride tax calculations and freight charges.

The `ConfirmDispatch-Invoice.php` script actually processes the invoice within a database transaction creating the `DebtorTrans` record, the `SalesAnalysis` record, the stock movement records updating the location stock records and the sales order delivery details.

To look at the details of a completed order the script:

`SelectCompletedOrder.php`

allows similar selection facilities as the outstanding sales orders searches. This page also shows the quantities on the order that have been delivered and invoiced.

## Accounts Receivable / Debtors Accounts

A customer account consists of a master record ? the branch records set up against the master record and the transactions which require a branch record for invoices and credits but no branch record for receipts. The balance of the account is not held against the master record but is accumulated from the transactions that have an amount not yet allocated. Invoices (`SysTypes TypeID=10`) ie charges are recorded as positives in the `DebtorTrans` table and credits (`SysTypes TypeID=11`) and receipts (`SysTypes TypeID=12`) are recorded as negatives.

## Accounts Receivable Receipts

Since cash comes in for a number of reasons , the most common of which is the payment of invoices , the receipt form allows for entry of GL items as well as customer receipts. The total of which may need to be collated for banking. The allocation of receipts is a separate process completely see below. The script for receipts creates a class to hold all the information about the receipt before it is all accepted. Only then is the database updated with the necessary records to record the receipt and general ledger impact if the debtors link is active.

## Accounts Receivable Allocations

The system is designed so that allocations can only be made by selecting either receipts or credit notes and the available invoices for allocating to are then found. Amounts can be entered against invoices until the whole receipt or credit is allocated. An update option allows the total left to allocate to be recalculated taking into account any amounts entered against invoices already.

NB. Since there is no use of java or client side scripting, there is no way to keep track dynamically of how much is left to allocate.

The allocations script can be called with:

1. No parameters where it will return all the receipts and credit notes that have a balance yet to be allocated to invoices.
2. A customer code - all credits and receipts will show for that customer that are yet to be fully allocated.
3. A transaction type (11 or 12) and transaction number ? this will show the transaction and the amount previously allocated to it with the invoices it was allocated to together with any unallocated invoices. The existing allocations can be modified at will and new allocations made.

## Sales Analysis

All invoices and credit notes create or update sales analysis records. Sales analysis records go down to the part level. There is some duplication of data by maintaining a separate sales analysis table. The rationale for this is:

- Improve the simplicity of required queries to produce sales analysis and hence speed of creation of reports.
- Allow indexing of common fields for analysis in sales analysis to further improve performance of sales analysis queries.
- To remove the dependencies between data tables. If stock movements are purged this could create problems for sales analysis.

Sales analysis reports can be designed for up to four levels of sorting. The report writer is hopefully simple, but offers great flexibility. Report designs can be saved for running later. Reports can be run to output pdf files for printing directly or saving locally for emailing or archiving. Alternatively, reports can be run to create .csv (comma separated values) files for analysis in most spreadsheet applications or import into user databases such as Borand's Paradox or Microsoft Access.

Sales analysis reports are designed and stored as a header record containing the information about the sorting and criteria for selection and detail records defining the columns to show on the report.

Report column definitions allow the period range and type of information to show eg GP, cost, value, quantity. Periods are monthly and maintained invisibly to the user. The period is only ever used for general ledger reporting and for sales analysis. An enquiry page from the report columns definition page allows for easy reference to the period required.

## Purchase Orders

Similar selection facilities exist for purchase orders as do for Sales orders using the script

POSelectOrders.php



this script shows all outstanding orders where there are deliveries yet to be received. A specific supplier or part can be selected to show only purchase orders meeting the criteria selected.

The script also shows links to:

- 1.Modify the order within certain bounds eg cannot reduce a purchase order line quantity below the quantity already received.
- 2.Print the purchase order. This link is disabled if the purchase order has already been printed. Orders can be re-printed but a warning shows that the order has already been printed so that there can be no accidental double printing and sending of an order to a supplier.
- 3.Receive items on the order.

## Inventory

Stock movements are created - depending on the type of stock item - each time a product is invoiced or credited. If an item is credited and written off eg. goods damaged in transit then two stock movements are created:

- 1.To bring the stock item back into stock and record the credit to the customer.
- 2.To write the item off to the selected GL account.

Stock movements are also created when an item is received against a purchase order.

Each time a stock movement is entered the stock quantity at the location is updated.

The stock is therefore fully integrated with sales and purchasing. The only stock transactions that involve direct entry are:

- 1.Stock transfers between locations.
- 2.Stock quantity adjustments.

It is not possible to enter either of these two types of transaction against dummy, assembly or kitset parts since no stock movements or stock quantities exist for these types of parts.

## Stock Inquiries

Selecting a product shows all the options available to operate on the part.

- Stock usage by location
- Stock status showing quantity on hand, quantity on order, quantity demanded and re-order quantity.
- Stock movements by location for defined date range.
- Outstanding sales orders

All inquiries follow a similar format, that allow input of the stock code directly for users familiar with the codes. Alternatively, the enquiry script can be called from the SelectProduct.php script which has all the facilities to be able to select the part required.

# Accounts Payable

Supplier invoices are entered using the script:

SuppInvoice.php

This script must be called with a SupplierID from the SelectSupplier.php page. Once a supplier is passed to the page a new SuppTrans object is created to hold (cache) all the information about the invoice. The SuppTrans class has three arrays one for the GL analysis, one to hold the shipment charges (e.g. freight, cartage and duty) and the third for the Goods Received to be invoiced GRNs ? these could also be items on a shipment.

If the GL link to creditors in the company preferences is set then the amount to invoice must be accumulated from stock items received being invoiced, the shipment charges and the general ledger postings entered. There is no opportunity to enter the total invoice amount manually.

General ledger analysis link only shows if the GL Creditors link is active. This script allows population of the GLCodes array. The page allows a GL code to be entered directly by a user familiar with the GLCodes or to select a code from a select box. Plenty of space for narrative is available too.

The link from the SupplierInvoice.php script to the SuppInvGRNItems.php allows the goods received from the supplier that have not already been invoiced to be selected for invoicing. The quantity received shows for each part together with the quantity already invoiced. The quantity being invoiced is defaulted to the amount received less any amount already invoiced. This can be changed as can the price charged. There are three parameters in logicworks.ini that affect the behaviour of this script. If the parameter to check for over deliveries is set then the remaining two parameters are used to check the proportion that the order is over invoiced by in terms of the quantity invoiced and the price charged respectively.

The total of all lines of goods received being invoiced are accumulated. If the GL link to creditors is active then the order lines and the GL lines are accumulated together to get the total currency amount of the invoice. If the link is not active the currency amount must be entered manually, but the amount must be more than the goods received being invoiced.

The due date of supplier invoices defaults to the date of the invoice entered after applying the terms defined for the supplier. There is an option to create a payment directly from the invoice creation. The payment record created will be for the total of the single invoice.

## Supplier Payments

Records can be created for all due amounts either by using the payment run or using the manual payment entry.

The payment run creates payment records for all payments due to the specified date in the specified currency at the specified exchange rate, from the specified bank account. The allocation records necessary are also created by this process. The payment run calculates the differences on exchange for each invoice settled and updates the invoices for allocated amounts and produces general ledger transactions if the creditors link is active. The bank payment record is also created for bank reconciliation purposes.

Manual supplier payments can be entered by selecting the supplier then the manual payment link. The currency of the supplier is automatically defaulted. However, the rate must be entered and the amount together with any reference.

Manual payments screen called without the SupplierID also allows entry of general ledger analysed payments.

# Contributors – Acknowledgments

The following is a list of known contributors. Many of these people can usually be contacted by posting to the appropriate mailing list. The copyright to the code belongs to these individuals who contributed the code. Collectively this group are referred to as "weberp.org" or the "webERP Project" or the "webERP Developers".

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