

Manage Your Money with Simple Invoices

by Michael Badger | May 2010 | MySQL e-Commerce Open Source PHP

Simple Invoices provides freelancers, non-profits, and small business a user-friendly way to bill customers and track invoices. It's an application for people who don't want the hassle of larger accounting programs, such as GNU Cash, Quicken, or Quickbooks.

This article on Simple Invoices by **Michael Badger**, author of [Scratch 1.4 Beginner's Guide](#) and [Zenoss Core Network and System Monitoring](#), provides an alternative to bulky accounting programs and the haphazard system of managing individual files by providing an intuitive web-based invoicing system. Because it's open source project, you enjoy free access to your software and your invoicing data.

As a freelancer I have one primitive motive. I want to do work and get paid. Getting paid means I need to generate invoices and keep track of them. I've tried to manage my invoices via spreadsheets and documents, but keeping track of my payments in a series of disconnected files is a fragile and inefficient process. Simple Invoices provides a solution to this.

Simple Invoices is a relatively young project, and working with it requires that you're willing to do some manual configurations and tolerate the occasional problem.

To work with and install the application, you need to be familiar with running a web server on OS X, Windows, or Linux. The next section, [Web Server Required](#) provides some out of the box server packages that allow you to run a server environment on your personal computer. It's point and click easy and perfect for an individual user.

Not up for running a web server, but still need to find a reliable invoicing application? No problem. Visit www.simpleinvoices.com for a list of hosted solutions.

Let's get started.

Simple Invoices is a web application that requires Apache, PHP, and MySQL to function. Even if you're not a system administrator, you can still run a web server on your computer, regardless of your operating system. Windows users can get the required software by installing WAMP from www.wampserver.com. OS X users can install MAMP from www.mamp.info. Linux users can install Apache, MySQL, and PHP5 using their distribution's software repositories.

The database administrative tool, phpMyAdmin makes managing the MySQL database intuitive. Both the WAMP and MAMP installers contain phpMyAdmin, and we'll use it to setup our databases.

Take a moment to setup your web server before continuing with the Simple Invoices installation.

Our first step will be to prepare the MySQL database. Open a web browser and navigate to <http://localhost/phpmyadmin>. Replace localhost with the actual server address. A login screen will display and will prompt you for a user name and password. Enter the the root login information for your MySQL install.

MAMP users might try root for both the user name and password. WAMP users might try root with no password. If you plan on keeping your WAMP or MAMP servers installed, setting new root passwords for

your MySQL database is a good idea, even if you do not allow external connections to your server.

After you log in to phpMyAdmin, you will see a list of databases on the left sidebar; the main content window displays a set of tabs, including **Databases**, **SQL**, and **Status**.

Let's create the database.

1. Click on the **Privileges** tab to display a list of all users and associated access permissions.
2. Find the **Add a New User** link and click on it. The **Add New User** page displays.
3. Complete the following fields:
 - i. **User Name**: enter **simpleinvoices**
 - ii. **Host**: select **Local**
 - iii. **Password**: specify a password for the user; then retype it in the field provided
 - iv. **Database for User**: select the **Create database with same name and grant all privileges** option
4. Scroll to the bottom of the page and click the **Go** button.

This procedure creates the database user and the database at the same time. If you wanted to use a database name that was different than the user name, then could have selected **None** for the **Database for user configuration** and added the database manually via the **Databases** tab in phpMyAdmin.

If you prefer to work with MySQL directly, the SQL code for the steps we just ran is (the ******* in the first line is the password):

```
CREATE USER 'simpleinvoices'@'localhost' IDENTIFIED BY '***';
GRANT USAGE ON *.* TO 'simpleinvoices'@'localhost' IDENTIFIED BY
'***' WITH MAX_QUERIES_PER_HOUR 0 MAX_CONNECTIONS_PER_HOUR 0
MAX_UPDATES_PER_HOUR 0 MAX_USER_CONNECTIONS 0;CREATE DATABASE
IF NOT EXISTS `simpleinvoices`;
GRANT ALL PRIVILEGES ON `simpleinvoices`.* TO 'simpleinvoices'@'
localhost';
```

Now that the database is setup, let's download the stable version of Simple Invoices by visiting www.simpleinvoices.org and following the Download link. The versions are identified by the year and

version. At the time of this writing, the stable version is 2010.1.

Unzip the Simple Invoices download file into a subdirectory on your web server. Because I like to install a lot of software, I like to keep the application name in my directory structure, so my example installation installs to a directory named `simpleinvoices`. That makes my installation available at `http://localhost/simpleinvoices`. Pick a directory path that makes sense for you.

Not sure where the root of your web server resides on your server? Here are some of the default locations for the various server environments:

- WAMP – `C:\wamp\www`
- MAMP – `/Applications/MAMP/htdocs`
- Linux – `/var/www`

Linux users will need to set the ownership of the `tmp` directory to the web user and make the `tmp` directory writable. For an Ubuntu system, the appropriate commands are:

```
chown -R www-data tmp
chmod -R 775 tmp
```

The command syntax assumes we're working from the Simple Invoices installation directory on the web server. The web user on Ubuntu and other Debian-based systems is `www-data`. The `-R` option in both commands applies the permissions to all sub-directories and files. With the `chmod` command, you are granting write access to the web user.

If you have problems or feel like being less secure, you can reduce this step down to one command: `chmod -R 777 tmp`.

We're almost ready to open the Simple Invoices installer, but before we go to the web browser, we need to define the database connections in the `config/config.ini` file.

At a minimum, we need to specify the `database.params.username` and `database.params.password` with the values we used to setup the database. If you skip this step and try to open Simple Invoices in your web browser, you will receive an error message indicating that your `config.ini` settings are incorrect.

The following screenshot shows the relevant settings in `confi.ini`.

```
; Simple Invoices configuration file
; - refer http://www.simpleinvoices.org/config for all options

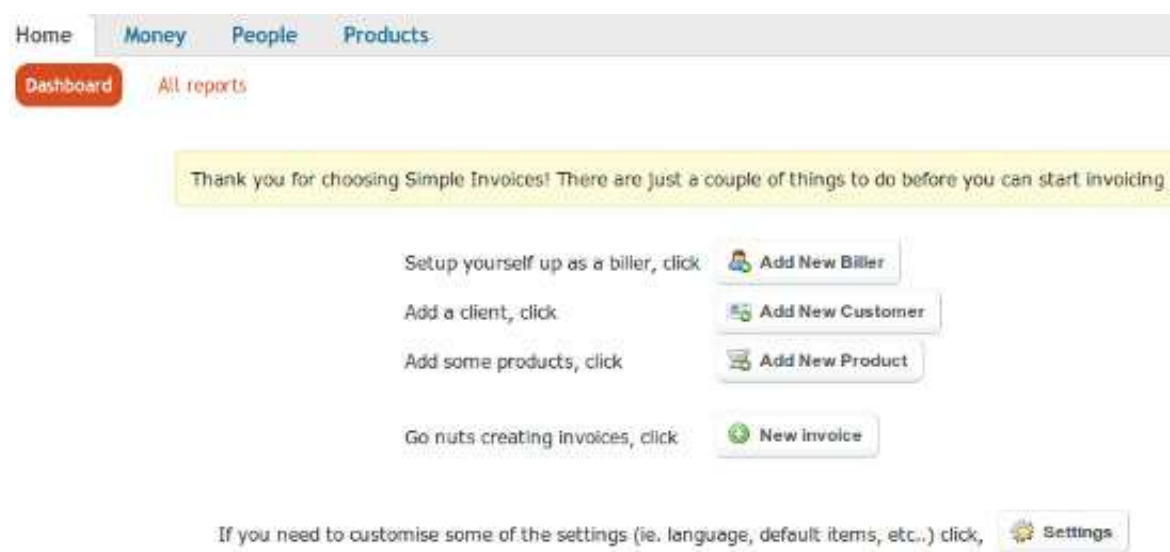
; Production site configuration data
[production]
database.adapter           = pdo_mysql
database.utf8              = true
database.params.host      = localhost
database.params.username  = simple_test
database.params.password  = ***
database.params.dbname    = simple_test
database.params.port      = 3306

authentication.enabled    = false
```

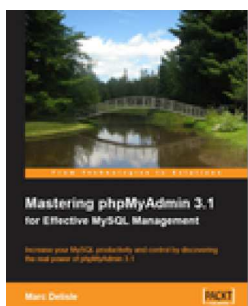
Now, we're ready to start Simple Invoices and step through the graphical installer.

1. Open a web browser and navigate to your installation (for example: <http://localhost/simpleinvoices>). **Step 1: Install Database** will display in the browser.
2. Review the database connection information and click the **Install Database** button. **Step 2: Import essential data** displays.
3. Click the **Install Essential Data** button to advance the installation. **Step 3: Import sample data** displays.
4. We can choose to import sample data or start using the application. The sample data contains a few example billers, customers, and invoices. We're going to set all that up from scratch, so I recommend you click the **Start using Simple Invoices** button.

At this point the Simple Invoices dashboard displays with a yellow note that instructs us to configure a biller, a customer, and a product before we create our first invoice. See the following screenshot.



*You might notice that the default access to Simple Invoices is not protected by a username and password. We can force authentication by adding a user and password via the **People > Users** screen. Then set the `authentication.enabled` field in `config.ini` equal to `true`.*



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Think of a biller as someone who makes the sale, does the work, or gets credit for the invoice. More than one biller is allowed. In my system, I have one biller defined for the work I do as a freelancer and one biller defined for selling honey.

To create a biller, click on the **Add New Biller** button from the dashboard. You can also click on the People tab and navigate to **Billers > Add New Biller**. The only required field is the **Biller Name**. Most of the fields in the **Add Biller** screen are self explanatory, but if you do have a question, click on the question mark next to the field label to display help text.

The following screenshot shows the Create Biller screen.

The **Custom** fields enable you to associate up to four additional properties for each biller. For example, if each biller had a website, then you could assign the label "Website" to Custom field 1. Custom fields are defined in **Settings > Custom Fields**.

Logo file allows you to select a logo for each biller. On the invoice, the default positioning for the logo is in the top-left. To make a logo appear in the drop-down list, copy the image file to the *template/invoices/logos* directory.

Invoice footer defines custom footer text that can be included on each invoice associated with the biller.

After you enter information about the biller, click the **Save** button. After saving the biller, a list of billers will display for review or editing. You can also reach the list of billers by navigating to **People > Billers**.

From the **People** tab, navigate to **Customers > Add New Customer**. The only required field on page is the **Customer Name**. Enter as many details as you need to and click **Save** to add the customer.

Again, you see a list of custom fields. These custom fields are different than the custom fields available for billers. All told, Simple Invoices lets you define four custom fields for each of the following: billers, customers, products, and invoices.

Before you can create an invoice, Simple Invoices requires that you define a product. The products you define do not need to follow any particular rules; they just need to make sense to you and your business.

Example products might include, honey, consulting, or web design.

To create a product, select the Products tab and select **Add Product**. The **Description** field is the only required field; however, you can set a per unit price, tax rate, and up to four custom fields.

To view all the products, select the **Manage Products** button from the **Products** tab.

Finally, we're ready to create an invoice.

Now that we have a biller, a customer, and a product we have everything we need to create an invoice. To create an invoice, navigate to the **Money** tab and select **New Invoice**.

The biggest choice to make on this screen is whether or not you use an **Itemised Style** or **Total Style** invoice. **Itemised Style** is the default choice, but you can it by clicking on the **Total Style** hyperlink at the top of the page.

The style of your invoice depends on your personal preferences and what you are generating an invoice for. An itemised invoice allows you to specify several products or services, and if you specify a price and tax rate for your product, the invoice will automatically calculate the total for each item based on the quantity you specify in the invoice.

See the following screen shot for an example of an itemised invoice.

Home Money People Products

Invoices **New Invoice** Itemised Payments Sales Report

Itemised Style Total Style

Biller: Bryantown Mill Farm

Customer: Fritz

Date (YYYY-MM-DD): 2010-05-11

Quantity	Item	Tax	Unit Price
4	8oz Jar of Honey	No Tax	4.99

Add new row Show details

Notes

B / [bold] [italic] [list] [undo] [redo] [close]

Have you hugged a honeybee today?

Invoice Preference: Invoice

Want more fields

Save Cancel

The Total Style invoice provides a description of the services and allows you to enter the amount owed in the **Gross field** and select a **tax** rate.

Taxes keep coming up. We've avoided the tax discussion for as long as possible. Let's take a look at how Simple Invoices can add the appropriate taxes for our individual locales.

The default installation of Simple Invoices includes several taxes and rates, available by navigating to **Settings > Tax Rates**. It would be a good idea to clean up this list to reflect the tax burden you bear in your part of the world.

To change the description, rate, or status of any rate, click on the **Edit** button in the **Action** column. Make your changes and click **Save**.

Though taxes are often calculate as a percentage of the total invoice, we can use the Tax Rates feature to add a flat rate fee onto an invoice. Some examples where you might charge a flat rate fee include an expedited processing fee, a handling charge, or a penalty.

When you edit a rate, notice that the Rate field has two values: a number and a drop-down list to select either percentage or currency. Select your currency symbol for a flat rate fee.

The following screenshot shows an example of a flat fee tax.

Products Settings

System Preferences Custom Fields **Tax Rates** Edit Invoice Preferences Payment Types Backup Databases

Description

Rate \$

Enabled

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Now that we know what types of invoices we can create and we have the correct tax rates defined, let's finish our first invoice and prepare it for delivery. Go back to the **Add Invoice** screen and complete an invoice by selecting the appropriate style, biller, and customer. Save the invoice when done.

When you save the invoice, a **Quick View** summary displays. This view is not suitable for sending to your customer, but it gives you some interesting details, including the final cost of the invoice with all taxes calculated. At the bottom of the screen, you see a summary of the total money this customer has paid and owes you. See the following screen shot.

The screenshot shows the 'Quick View' screen for an invoice. At the top, there are navigation tabs: Home, Money, People, and Products. Below these are buttons for Invoices, Quick View, New Invoice, Payments, and Sales Report. A yellow bar contains action buttons: Print Preview, Edit, Process Payment, Export to PDF, Export as .xls, Export as .doc, and Email.

Invoice Summary:

Invoice No.: 1
 Invoice date: May 4, 2010

Billier: Bryantown Mill Farm

Customer: Fritz

Qty	Item	Unit Cost	Price
4	8oz Jar of Honey	\$4.99	\$19.96

Gross \$19.96
Invoice Amount \$19.96

Financial status
 Invoice 1
 Total: \$19.96 Paid: \$0.00 Owing: \$19.96 Age: 0 days

Customer Account
 Total: \$19.96 Paid: \$0.00 Owing: \$19.96

Now, we're ready to export the PDF and see, for the first time, our finished invoice. From the yellow bar that runs across the top of the **Quick View** screen, you can choose to export the invoice to PDF, DOC, or XLS formats. You can also find the export options in the **Actions** column in the **Invoices** list on the **Money** tab.

If you get a fatal error that says the allowed memory size is exhausted when exporting to PDF, then you need to increase the memory limit for PHP by following these steps:

1. Find and edit the *php.ini* file for your server. The location varies depending on your operating system. On a Linux server, try */etc/php5/apache2*.
2. Under the Resource Limit section of the *php.ini*, change *memory_limit = 16M* to *memory_limit = 96M*
3. Save the change.
4. Restart apache and export the PDF again.

This increases the memory limit to 96MB and should eliminate any memory errors exporting the PDF.

Export an invoice now, if you haven't already done so, and let's look at it. The following screenshot shows a sample invoice.

		Invoice	
Invoice Summary			
Invoice No.:	1		
Invoice date:	05/04/10		
Total:	\$19.96		
Paid:	\$0.00		
Owing:	\$19.96		
Bill:	Bryantown Mill Farm		
Website:	www.bryantownmill.com		
Customer: Fritz			
Qty	Item	Unit Cost	Price
4	8oz Jar of Honey	\$4.99	\$19.96
		Gross	\$19.96
		Invoice Amount	\$19.96
Details			
<i>Payment is to be made within 14 days of the invoice being sent</i>			
Electronic Funds Transfer			
Account name H. & M. Simpson			
Account number: 0123-4567-7890			

As you review the invoice carefully, you should notice the **Details** section has default payment information does not make any sense; therefore, we need to change it. And depending on where up live, you might need to change the currency symbol.

Close the generated invoice and go back to Simple Invoices. Our next step is to refine the text of the invoice.

1. From the **Settings** tab, select **Invoice Preferences** to display a list of preferences.
2. Edit the invoice by clicking the **Edit** button in the **Action** column.
3. Change the values on the preferences as you see fit using the default values as a guide.
4. Save your changes and export your invoice again. The invoice automatically updates to reflect your changes.

You can create an infinite number of invoice preferences to accommodate a variety of situations based on products, customer, biller, or payment method. For example, some customers may pay by wire transfer while you expect other customers to pay by cash.

By defining an invoice preference for each scenario, you can select the appropriate preference when creating an invoice. That will create an invoice with the correct details.

Simple Invoices includes a few other default invoice preferences to let you track estimates, quotes, and generate receipts. Though we won't cover them here, they're worth exploring.

Exporting the invoices to popular document formats is not the only option we have for delivering our invoices. We can use Simple Invoices to email the invoice directly to the customer.

To send an invoice via email, you need to define your outgoing email server information in Simple Invoices' *config.ini*. The following screen shot shows the relevant email configuration fields and my example is

configured to send via Gmail.

If you're unsure what values you need to send email, consult your email or web hosting provider. The following table provides an overview of the available settings.

Value	Description
email.host	The outgoing mail server address.
email.smtp_auth	Enter "true" if the outgoing mail server requires authentication.
email.username	If <i>email.smtp_auth</i> = <i>true</i> , then specify your user name.
email.password	The corresponding password for email.username.
email.smtpport	The default smtp port is 25. SSL uses 465 and TLS uses 587.
email.secure	No protocol is entered by default, but ssl and tls are valid values.
email.ack	Set to true to attach a read receipt to the email.

A complete description of all the *config.ini* settings can be found at www.simpleinvoices.org/config.

See the following screen shot for an example email settings screen.

```

email.host           = smtp.gmail.com
email.smtp_auth     = true
email.username      = mcbadger@gmail.com
email.password      = *****
email.smtpport      = 465
email.secure        = ssl
email.ack           = false

```

After the *config.ini* is properly configured for your email server, you can send an invoice via email by clicking

on the **email** icon, located in the **Action** column from the **Invoice** list. The following screenshot shows the email details.

The screenshot shows a web interface for sending an invoice as a PDF via email. The interface includes a navigation menu with 'Home', 'Money', 'People', and 'Products' tabs. Below the navigation menu are buttons for 'Invoices', 'New Invoice', 'Payments', and 'Sales Report'. The main content area is titled 'Email Invoice 1 to Customer as PDF' and contains a form with the following fields:

- Email From:** mcbadger@gmail.com
- Email To:** mike@badgerfiles.com
- Email BCC (Blind Carbon Copy):** mcbadger@gmail.com
- Subject:** Invoice from Bryantown Mill Farm is attached

Below the subject field is a text area for the message content, which contains the text: "I hope you enjoy your honey!" and "Mike". At the bottom of the form is a green button labeled "Email" with a checkmark icon.

If you set the email preferences for the biller and the customer, those values are populated in the **Email Invoice** screen. Modify the text of the email as needed and click the **Email** button. If the email sent successfully, you will be redirected to a confirmation screen.

This error indicates your mail server settings are not correct: *Mailer Error: Language string failed to load: connect_host*. Double check your *config.ini* settings and try again.

Processing payments lets us apply a payment from a customer against an invoice so we can keep a running tally of outstanding balances and we can document the date we received payment. Simple Invoices will show the age of outstanding invoices, which helps you keep track of who owes you money.

Not processing payments will result in all of your invoices showing outstanding balances, which is not helpful for tracking who still owes you money.

To process a payment:

1. Select **Invoices** from the **Money** tab.
2. Each invoice in the list has an icon for **Process Payment** in the **Actions** column. Click on it.
3. Enter a description of the payment, if appropriate.
4. Click the **Save** button.

The following screen shot shows the Process Payment page.

Home	Money	People	Products
Invoices	New Invoice	Payments	Process
		Sales Report	

Invoice ID	1	Total	19.96
Billier	Bryantown Mill Farm	Paid	0.00
Customer	Fritz	Owing	19.96
Amount	<input type="text" value="19.96"/>		
Date (YYYY-MM-DD)	<input type="text" value="2010-05-04"/>		
Payment Type/Method	<input type="text" value="Cash"/>		
Note	<input type="text"/>		

That completes our quick tour of Simple Invoices core feature – invoices. Don't forget to check out some of the other features, such as reports and expense tracking.

Happy billing.

Develop and deploy SOAP and RESTful Web Services



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About the Author :

Micheal Badger is a technical communicator with a history of helping others to use their computer software and technology. For fun, Michael reads computer books and blogs about technology. When he finally decides to disconnect, he spends his spare time fishing, growing pigs, raising honeybees, and tending the family.

Michael also wrote Zenoss Core Network and System Monitoring, a step-by-step guide to configuring the open source IT monitoring software application.

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