

Setting up a PHP development environment for Dreamweaver

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Note: This article was originally written by Charles Nadeau for Dreamweaver CS3 and updated by David Powers for Dreamweaver CS4.

This tutorial describes how to set up a PHP development environment on a Windows or a Macintosh computer for building PHP web applications with Adobe Dreamweaver and a MySQL database server.

Setting up a PHP development environment for Dreamweaver requires a web server (such as Apache or IIS), PHP, and a MySQL database. Although you can install all three separately, it's usually much simpler to use an all-in-one solution, such as XAMPP for Windows or MAMP for Mac OS X.

This setup tutorial shows you how to complete the following tasks:

- Install and run a web server as well as a PHP application server on your local computer
- Install the MySQL database server on your local computer
- Define a PHP site
- Import data into MySQL and create a MySQL user account for your web application
- Connect to a sample database

Requirements

To complete this tutorial you will need to install the following software and files:

Dreamweaver CS4

Try Buy

XAMPP (if you have Windows)

Download

MAMP (if you have Mac OS X)

Download

Note: Adobe does not provide technical support for third-party products such as XAMPP and MAMP referenced in this article.

Sample files:

adc_php_demo.zip (ZIP, 2K)

Set up PHP for Windows

PHP pages need to be processed through a web server. So, to develop with PHP in Dreamweaver, you need access to a PHP-enabled web server and the MySQL database. It's also useful to have a graphical interface to

MySQL. You can install all of them independently, but the quickest and easiest way is to use an all-in-one solution, such as *XAMPP*.

This section describes how to install XAMPP on your Windows computer. This installs the Apache web server, MySQL, and a MySQL front end called *phpMyAdmin* in a single operation. All three components are open source software that you can use for developing, testing, and deploying web applications—and they are free!

If you're a Mac user, see *Set up PHP for Mac OS X*.

This section covers the following topics:

Before you start

Install XAMPP

Start the servers

Secure the database

Test the PHP installation

Before you start

XAMPP installs the Apache web server, which listens for requests on port 80. This is the default port used by most web servers, including Microsoft Internet Information Services (IIS). Only one web server at a time can listen on port 80. If you have installed IIS on your computer to develop with ASP or ASP.NET, you *must* stop the IIS web server before installing XAMPP.

If you want to test ASP, ASP.NET, and PHP without stopping and starting web servers to switch between them, you can install PHP to run on IIS. The official Microsoft IIS site has separate instructions for installing PHP on *IIS6 (Windows XP)* and *IIS7 (Vista)*. After installing IIS, skip to the instructions on how to *install MySQL and phpMyAdmin separately*.

The following instructions assume that you don't have a web server installed on your computer, or that you intend to stop IIS when running PHP in Apache.

Install XAMPP

In Vista, you need to be logged into an Administrator account. If User Access Control (UAC) is enabled in Vista, you always need to run XAMPP from the same account. Otherwise, the XAMPP control panel won't have sufficient privileges to control Apache.

1. Go to the *Apache Friends website* and download XAMPP for Windows. Choose the Basic package installer.
2. Close all applications on your computer, and double-click the installer package you downloaded.

Note: If UAC is enabled on Vista, you will see a warning about not installing XAMPP in `C:\Program Files`. You can ignore this warning, because the default installation location is `C:\xampp`.

3. Accept the default installation location and click Next. This opens the dialog box shown in Figure 1.

The default options, shown in Figure 1, are fine for most people.

Note: Select the options to install Apache and MySQL as services if you want them to run automatically each time you start the computer. Running Apache and MySQL as services seems to be the most reliable option on Vista. If you're not sure, choose the options shown here. XAMPP makes it easy to install them as services later.

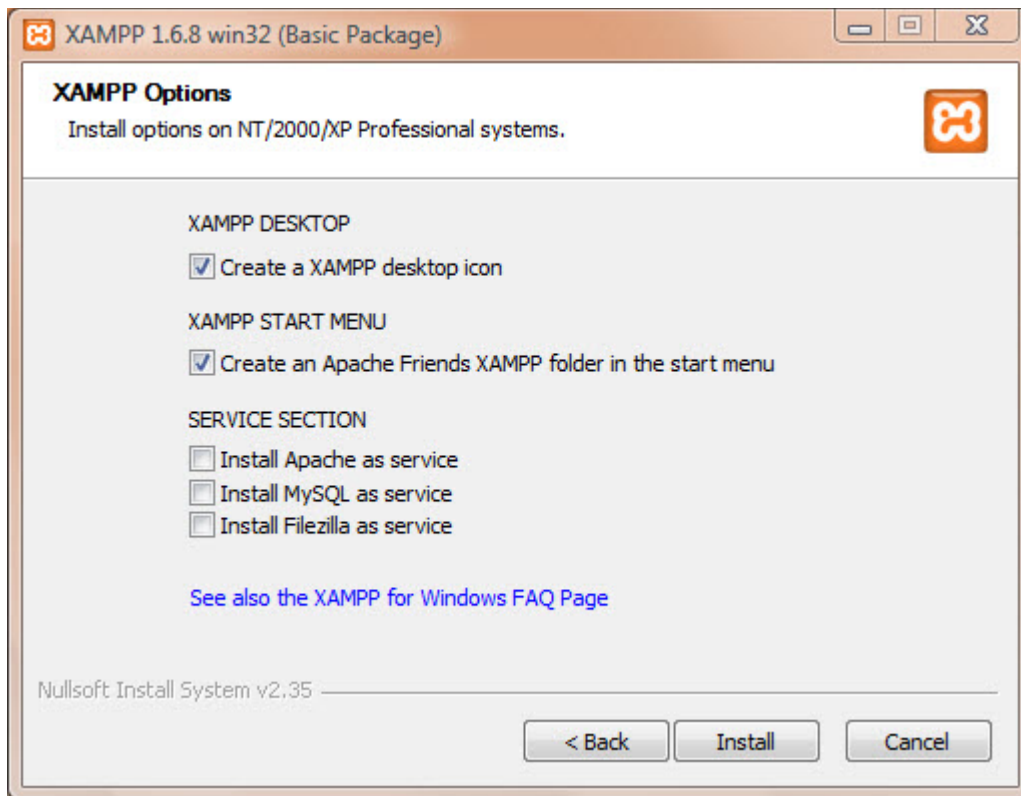


Figure 1. These are your XAMPP installation options.

4. Click Install after you have made your choices. The installation process takes a few minutes, because there are many files to unpack.
5. At the end of the installation process, you're asked if you want to start the XAMPP control panel. Click Yes.

Start the servers

To start the Apache and MySQL servers, click the Start button alongside Apache and MySQL in the XAMPP control panel. MySQL usually starts very quickly, but it might take a little longer (less than a minute) for Apache to start. Confirmation that they have started successfully is displayed alongside, and the label on the Start buttons changes to Stop, as shown in Figure 2.

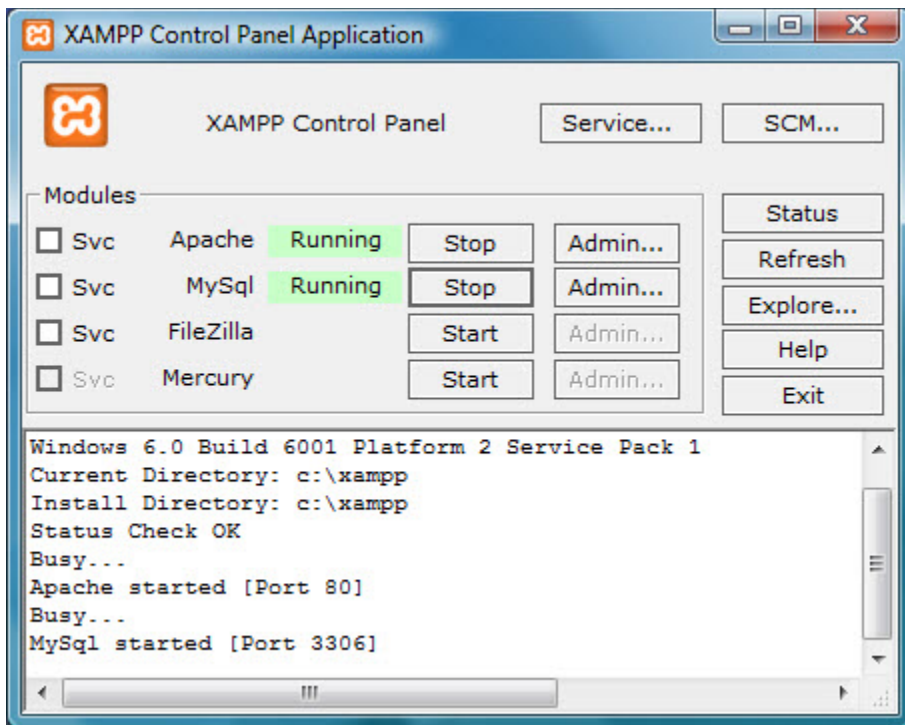


Figure 2. Start and stop the servers in the XAMPP control panel.

Note: If a Windows Security alert pops up asking whether to keep blocking the program mysql or apache, choose Unblock for both programs.

Note the following in case of errors:

- If Apache fails to start, make sure you are logged into your computer with an Administrator account. Selecting the option Run as administrator in Vista usually does not give sufficient privileges to start the web server.
- If Apache reports an error on startup, double-click the file `C:\xampp\apache\logs\error.log` in Windows Explorer, and scroll to the bottom of the file to read any error messages.
- The error log for MySQL is located in the `C:\xampp\mysql\data` folder. It's in a file that uses the same name as your computer followed by an `.err` file name extension. To open it, double-click its icon, and select Notepad when prompted to select a program to use.

If you want to enable Apache or MySQL as Windows services so they start automatically, select the Svc check box alongside each one. (FileZilla and Mercury are FTP and mail programs, which are not required to develop with PHP in Dreamweaver. They are not covered in this article.)

Secure the database

To secure the database:

1. Launch a browser and type **http://localhost/** into the address bar.
2. If everything has been correctly installed, you should see a web page offering a choice of languages. Select the language you want to use.
3. The menu on the left of the following welcome screen gives you web-based access to various parts of XAMPP, including security configuration options.

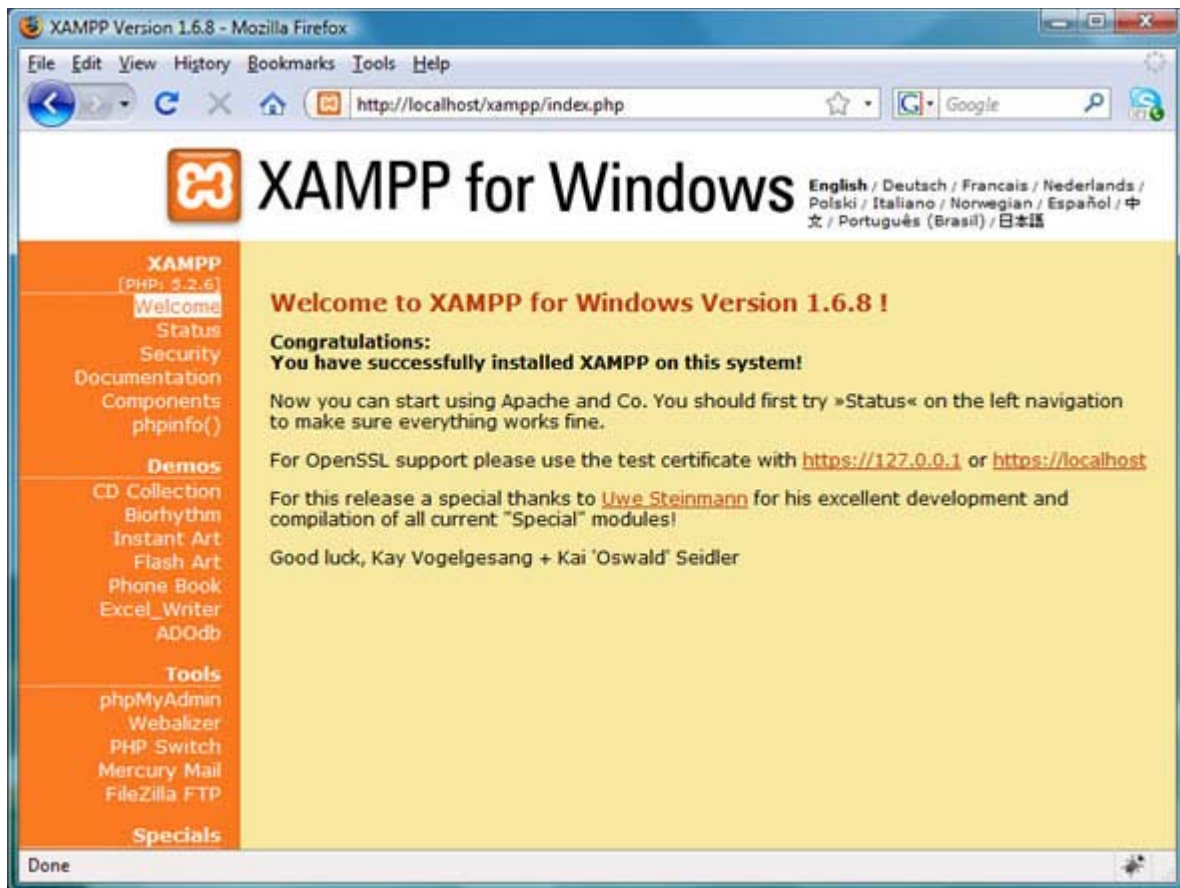


Figure 3. The XAMPP welcome screen.

4. Click Security in the menu on the left of the screen. This opens a new browser window or tab with a report on the current security status of your installation. Scroll down below the status report, and click the following link: <http://localhost/security/xamppsecurity.php>.

This displays the screen shown in Figure 4, which prompts you to create a password for the MySQL superuser, root.

Note: Even if you are the only person using the computer, it's good practice to password protect the MySQL database.



Figure 4. Setting the MySQL root password.

5. Enter your chosen password in both fields. It can contain special characters, but should not have any spaces.

Note: Immediately below the password fields is a pair of radio buttons that determine how phpMyAdmin connects to MySQL as the root superuser. The default is to store it in a cookie. If you select http, you will be prompted for your root password every time you access phpMyAdmin.

If you're worried about forgetting the password, you can select the Safe plain password check box to store it in a plain text file. How much of a security risk this represents depends on who else has access to your computer.

6. After making your choices, click the Password changing button.
7. Click Security in the menu on the left of the screen.

The status report still shows that PHP is not running in "safe mode" and marks this as insecure. This is *not* a problem. You should not run PHP in safe mode unless you need to reproduce conditions on your hosting server. Some hosting companies run shared hosting accounts in safe mode, but it is considered unnecessarily restrictive and will be removed from future versions of PHP.

After installing XAMPP and securing the database, test the PHP installation as described in the following section.

Test the PHP installation

1. Close the XAMPP security window or tab, and return to the welcome screen (see Figure 3).
2. Click phpinfo() in the menu on the left of the screen. You'll see the page shown in Figure 5.

PHP Version 5.2.6	
System	Windows NT DAVID-VISTA 6.0 build 6001
Build Date	May 2 2008 18:01:20
Configure Command	cmd /c "php --enable-snapshot-build" --with-gd=shared --with-extra-includes=C:\Program Files (x86)\Microsoft SDK\Include;C:\PROGRA~2\MICROS~2\VC98\ATL\INCLUDE;C:\PROGRA~2\MICROS~2\VC98\INCLUDE;C:\PROGRA~2\MICROS~2\VC98\MFC\INCLUDE" --with-extra-libs=C:\Program Files (x86)\Microsoft SDK\Lib;C:\PROGRA~2\MICROS~2\VC98\LIB;C:\PROGRA~2\MICROS~2\VC98\MFC\LIB"
Server API	Apache 2.0 Handler
Virtual Directory Support	enabled
Configuration File (php.ini) Path	C:\Windows
Loaded Configuration File	C:\xampp\apache\bin\php.ini
PHP API	20041225
PHP Extension	20060613
Zend Extension	220060519

Figure 5. PHP configuration information.

Congratulations! You now have a working installation of PHP, MySQL, and phpMyAdmin. Although this screen might feel like information overload at this stage, it contains a wealth of information about your PHP setup. Return to this screen whenever you need to check how PHP is configured.

Note: You can display the same information by creating a PHP file containing the following script and loading it into a browser:

```
<?php phpinfo(); ?>
```

The next page deals with installation on Mac OS X, so skip to page 5 to *learn how to define a PHP site in Dreamweaver* or return to Part 1 of the tutorial series *Creating your first dynamic site in Dreamweaver* (if that's where you started).

Set up PHP for Mac OS X

PHP pages need to be processed through a web server. So, to develop with PHP in Dreamweaver, you need access to a PHP-enabled web server and the MySQL database. It's also useful to have a graphical interface to MySQL.

The Apache web server and PHP are preinstalled in Mac OS X. However, they're not enabled by default. Moreover, the preinstalled version of PHP lacks a lot of useful features, and you need to install and configure

MySQL separately. Unless you're very comfortable working with the command line in Terminal, it's much easier to install the all-in-one solution *MAMP*.

This section describes how to install MAMP on your Mac. This installs the Apache web server, MySQL, and a MySQL front end called *phpMyAdmin* in a single operation. All three components are open source software that you can use for developing, testing, and deploying web applications. What's more, they're free.

Note: You can also purchase a license for a commercial add-on called MAMP PRO. This makes it easier to organize your sites. However, the free version is perfectly adequate for developing PHP pages with Dreamweaver, so MAMP PRO is not covered here.

If you're a Windows user, see *Set up PHP for Windows*.

This section covers the following topics:

Before you start

Install MAMP on your Mac

Test and configure MAMP

Before you start

Instead of using the preinstalled version of Apache, MAMP installs a separate version in a different location on your hard disk. This makes it easier to uninstall everything by simply dragging the MAMP folder to the trash if you decide you no longer want MAMP on your computer. MAMP also avoids conflicts with the preinstalled version of Apache by using a non-standard port (8888) to listen for requests for web pages.

To make it easier to deploy your PHP pages on the Internet, it's a good idea to configure MAMP to use the standard port for web servers (80). Instructions for how to do this are given later, but you should first check that the preinstalled version of Apache is not running.

1. Open System Preferences, and select Sharing in Internet & Network.
2. Make sure that Web Sharing is *not* selected.
3. As long as MySQL has never been installed on your computer, you're good to go.

Note: If you prefer to use the preinstalled version of PHP in Mac OS X 10.5, follow *the tutorial on my website*. Then skip to the instructions on how to *install MySQL and phpMyAdmin separately*.

Install MAMP on your Mac

To install MAMP on your Mac:

1. Go to the *MAMP download page* and select the link for MAMP & MAMP PRO. This downloads a disk image that contains both the free and commercial versions.
2. When the download completes, you will be presented with a license agreement. You must click Agree to continue with mounting the disk image.
3. When the disk image is mounted, drag the MAMP folder onto the shortcut icon for Applications as indicated by the arrow (see Figure 6).

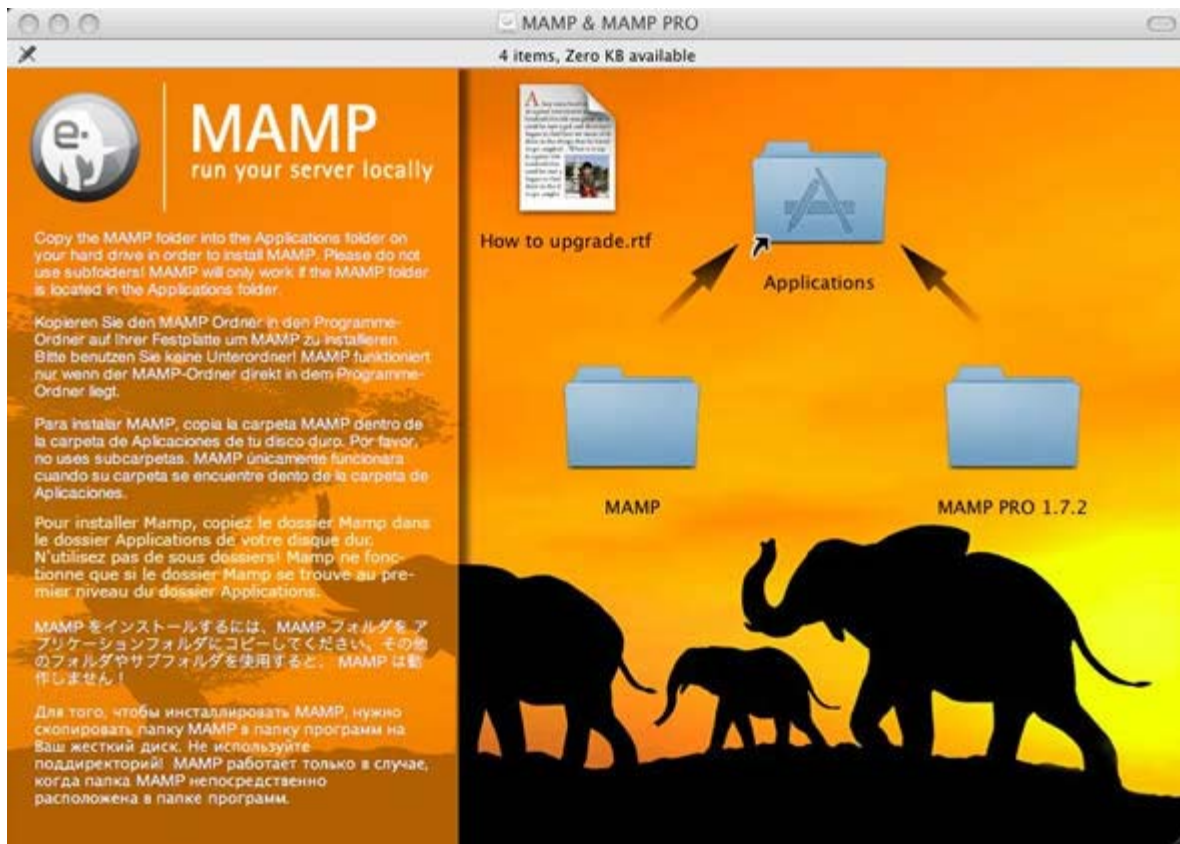


Figure 6. Installing MAMP from the disk image.

4. Verify that MAMP has been copied to your Applications folder, and eject the disk image.

For the purposes of this article, you need to install only the free version of MAMP. The commercial version is an add-on that you can add later if you want to use its advanced features. To learn more about the commercial version, visit the *MAMP PRO website*.

Test and configure MAMP

To test and configure MAMP:

1. Double-click the MAMP icon in `Applications/MAMP`.
2. After a few moments, your default browser should launch and present you with a page welcoming you to MAMP. Note that the URL in the browser address bar begins with `http://localhost:8888`. The `:8888` string after `localhost` indicates that the web server is listening for requests on the non-standard port 8888.
3. Minimize the browser and locate the MAMP control panel, which should be running on your desktop. The green lights alongside Apache Server and MySQL Server indicate that both servers are running (see Figure 7).



Figure 7. The MAMP control panel.

- Click the Preferences button, and select Ports at the top of the panel that opens. The panel shows that Apache and MySQL are running on ports 8888 and 8889, respectively (see Figure 8).

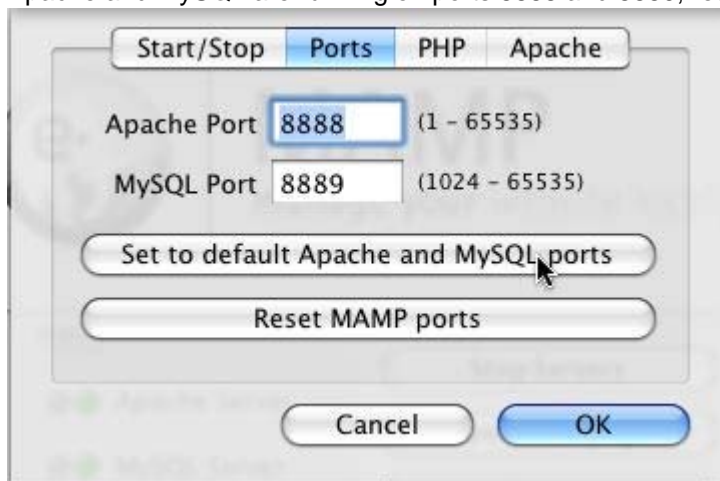


Figure 8. Changing the MAMP ports.

- Click Set to default Apache and MySQL ports, as shown in Figure 8. The numbers change to the standard ports: 80 for Apache and 3306 for MySQL. This will make your development with Dreamweaver easier.

Note: If, for any reason, you want to change back to the non-standard MAMP ports, open this panel and click Reset MAMP ports.
- Click OK and enter your Mac password when prompted.

MAMP stops and restarts both servers.
- When both lights are green again, click Open start page. This reloads the MAMP welcome page into your browser. This time, the URL should have :80 after localhost. Because port 80 is the default, the addition of :80 is unnecessary, but it serves as a reminder that you have changed the MAMP settings.
- Click the phinfo link in the MAMP menu. You should see the page shown in Figure 9.

PHP Version 5.2.6	
System	Darwin Mactel.home 9.5.0 Darwin Kernel Version 9.5.0: Wed Sep 3 11:29:43 PDT 2008; rootxnu-1228.7.58~1/RELEASE_I386 i386
Build Date	Jul 24 2008 08:29:01
Configure Command	'./configure' '--with-mysql=/Applications/MAMP/Library' '--with-apxs2=/Applications/MAMP/Library/bin/apxs' '--with-gd' '--with-jpeg-dir=/Applications/MAMP/Library' '--with-png-dir=/Applications/MAMP/Library' '--with-zlib' '--with-freetype-dir=/Applications/MAMP/Library' '--prefix=/Applications/MAMP/bin/php5' '--exec-prefix=/Applications/MAMP/bin/php5' '--sysconfdir=/Applications/MAMP/conf/php5' '--with-soap' '--with-config-file-path=/Applications/MAMP/conf/php5' '--enable-track-vars' '--enable-bcmath' '--enable-ftp' '--enable-gd-native-ttf' '--with-bz2=/usr' '--with-ldap' '--with-mysql=/Applications/MAMP/Library/bin/mysql_config' '--with-sqlite' '--with-ttf' '--with-t1lib=/Applications/MAMP/Library' '--enable-mbstring=all' '--with-curl=/Applications/MAMP/Library' '--enable-dbx' '--enable-sockets' '--enable-bcmath' '--with-imap=shared,/Applications/MAMP/Library/lib/imap-2006i' '--enable-soap' '--with-kerberos' '--enable-calendar' '--with-pgsql=shared,/Applications/MAMP/Library/pg' '--enable-dbase' '--enable-exif' '--with-libxml-dir=/Applications/MAMP/Library' '--with-gettext=shared,/Applications/MAMP/Library' '--with-xsl=/Applications/MAMP/Library' '--with-pdo-mysql=shared,/Applications/MAMP/Library' '--with-pdo-pgsql=shared,/Applications/MAMP/Library/pg' '--with-mcrypt=shared,/Applications/MAMP/Library' '--with-openssl'

Figure 9. PHP configuration information.

Congratulations! You have a working installation of PHP, MySQL, and phpMyAdmin. Although this screen might feel like information overload at this stage, it contains a wealth of information about your PHP setup. Return to this screen whenever you need to check details of the way PHP is configured.

Note: You can display the same information by creating a PHP file containing the following script and loading it into a browser:

```
<?php phpinfo(); ?>
```

Now that you have a PHP testing environment on your computer, you can skip to the section *Define a PHP site in Dreamweaver* so you can start developing, or return to Part 1 of the tutorial series *Creating your first dynamic site in Dreamweaver* (if that's where you started).

Install MySQL and phpMyAdmin separately

The instructions on this page apply only if you decide to use IIS as your web server on Windows or if you use the preinstalled versions of Apache and PHP on Mac OS X. If you installed XAMPP or MAMP, skip to the next page where you'll learn how to *define a PHP site in Dreamweaver*.

This section covers the following topics:

Install MySQL in Windows

Install MySQL on a Mac

Install phpMyAdmin

Note: The current version of PHP (5.2.8) does *not* support MySQL 5.1. You must install MySQL 5.0.

Install MySQL in Windows

This section describes how to download and install the MySQL 5.0 Community Edition database server on your Windows computer.

Note: The instructions in this section apply to the "Windows Essentials" installer for MySQL 5.0. For other versions, please see the MySQL documentation for possible differences in the installation procedure. You need to be logged into Windows in an Administrator account. In Windows Vista, it is advisable to disable User Access Control (UAC) temporarily during installation.

1. Download the Windows Essentials installer from the Windows Downloads category on the MySQL download page:

<http://dev.mysql.com/downloads/mysql/5.0.html#win32>

You'll find different versions for 32-bit and 64-bit systems. The correct version for 32-bit Windows is Windows Essentials (x86).

2. Double-click the MSI file you downloaded and follow the onscreen instructions.

Note: Select Typical Install when prompted.

3. When the setup wizard is done, select the Configure the MySQL Server Now option on the setup wizard's last page and click Finish to run the configuration wizard.

Note: If you missed the option in the setup wizard, you can open the configuration wizard by selecting Start > All Programs > MySQL > MySQL Server 5.x > MySQL Server Instance Config Wizard.

4. In the MySQL Server Instance Configuration Wizard, make the following choices:

- For configuration type, select Detailed Configuration.
- For server type, select Developer Machine.
- For database usage, select Non-Transactional Database Only.
- For the number of concurrent connections, select Decision Support(DSS)/OLAP.
- For networking options, accept the default settings.
- For the default character set, accept the default setting.
- For the Windows options, select both options: Install As Windows Service and Include Bin Directory in Windows Path.
- For security options, enter a root password and confirm it.

5. Click Execute to configure your database server.

The next step is to *install phpMyAdmin*, a graphical front end for MySQL. The instructions follow the next section, which shows Mac users how to install MySQL.

Install MySQL on a Mac

This section describes how to download and install the MySQL 5.0 Community Edition database server on your Mac.

Note: The instructions in this section apply to the package format (DMG) installer of MySQL 5.0 for the Mac. For other versions, refer to the readme file that comes with the installer for possible differences in the installation procedure.

1. Download an installer package from the "Mac OS X (package format) downloads" category on the MySQL download page:

<http://dev.mysql.com/downloads/mysql/5.0.html#macosx-dmg>

Be sure you select the correct version for your operating system and processor. If your Mac has an Intel processor, select the package marked "x86."

2. Double-click the DMG file you downloaded to mount the disk image and display its contents.
3. Double-click the `mysql-standard-x.x-x.pkg` file and follow the onscreen instructions.

Note: If you have an Intel Mac, you may see the following error message in the destination disk selection dialog box: "You cannot install this software on this disk. (null)." If this error occurs, click the Go Back button once to return to the previous screen, and then click Continue to advance to the dialog box again. You should now be able to choose the destination disk.

4. After the installation of the database server is complete, install a button to start and stop the database server by double-clicking the `MySQL.prefPane` file in the installation disk image, and then follow the onscreen instructions.

This small installer places a stop and start button in your system preferences to control the server. The button can be accessed through a new MySQL icon under the Other category in the System Preferences dialog box.

5. Click the MySQL icon in System Preferences, and click Start MySQL Server. Enter your Mac password when prompted. After a few moments, the MySQL preference pane should report that MySQL is running.
6. Close the MySQL preference pane.

A new installation of MySQL is not password-protected, so you need to set a password for the administrative superuser called `root`.

7. Select Applications > Utilities to launch Terminal.
8. Enter or paste the following instruction at the command prompt: `/usr/local/mysql/bin/mysql -uroot`

The MySQL command prompt appears:

```
mysql>
```

9. Switch to the main database that contains details of user accounts and privileges by typing **use mysql;** followed by Return.

Note: All commands typed at the MySQL command prompt must end with a semicolon followed by Return. If you forget to type the semicolon before pressing Return, type the semicolon at the command prompt and press Return again.

10. Now enter the command to set the password for the root superuser, using your own password in place of "secret."

```
UPDATE user SET password = PASSWORD('secret') WHERE user = 'root';
```

11. Next, remove anonymous access to MySQL:

```
DELETE FROM user WHERE user = '';
```

Note: The quotes before the semicolon are two single quotes with no space in between.

12. Tell MySQL to update the privileges table:

```
FLUSH PRIVILEGES;
```

13. Exit the MySQL monitor by typing **exit**; followed by Return. This ends your session with the MySQL monitor. It does *not* shut down the MySQL server.

Note: Installing a standalone version of MySQL on Mac OS X 10.5 often results in an error message that PHP cannot connect to MySQL. There are several ways to solve this problem. One of the easiest is to create a symlink (alias) so that PHP finds the connection socket, `mysql.sock`, where it expects it to be. Open Terminal, and enter the following command followed by Return:

```
sudo ln -s /tmp/mysql.sock /var/mysql/mysql.sock
```

Enter your Mac password when prompted.

From now on, all your interaction with MySQL will be through Dreamweaver or phpMyAdmin, which you'll install next.

Install phpMyAdmin

Since phpMyAdmin is PHP based, all that's needed to install it is to download the files, unzip them to a website in your local testing environment, and create a simple configuration file. phpMyAdmin 3 requires a minimum of PHP 5.2 and MySQL 5.0. If you are running earlier versions, you must install phpMyAdmin 2.

1. Go to <http://www.phpmyadmin.net> and download the version you require.
2. Unzip the downloaded file. It will extract the contents to a folder called `phpMyAdmin-x.x.x`, where `x` represents the version number.
3. Highlight the folder icon, and cut it to your clipboard. On Windows, paste it inside your web server root (with IIS, this is normally `C:\Inetpub\wwwroot`). If you're on a Mac, put the folder in `Macintosh HD:Library:WebServer:Documents`.
4. Rename the folder you have just moved to **phpmyadmin**.
5. Create a new subfolder called **config** within the `phpmyadmin` folder.
Windows users skip to step 7. Mac users continue with step 6.
6. On Mac OS X, use Finder to locate the `config` folder you have just created. Press `Cmd+I` to bring up an Info panel.
7. In Ownership & Permissions, expand Details, and click the lock icon so that you can make changes to the settings. Change the setting for Others to Read & Write. Close the Info panel.

8. Open a browser, and type the following into the address bar:
<http://localhost/phpmyadmin/setup/index.php>. (If installing phpMyAdmin 2, the address should be <http://localhost/phpmyadmin/scripts/setup.php>.)
9. Ignore any warning about the connection not being secure. This warning is intended for server administrators installing phpMyAdmin on a live Internet server.
10. Click the Add button in the Servers section. This loads a form with most of the necessary information already filled in. Check the following settings:
 - Server hostname: **localhost**
 - Server port: Leave blank unless your web server is running on a nonstandard port, such as 8080
 - Server socket: Leave blank
 - Connection type: **tcp**
 - Authentication type: **config**
 - User for config auth: **root**
 - Password for config auth: Enter your MySQL root password
11. Scroll down to the Actions field, and click Add. You'll see two buttons labeled Add. Make sure you click the one that has a Cancel button alongside.

The next screen will probably warn you that you didn't set up a phpMyAdmin database, so you won't be able to use all the phpMyAdmin features. This is not important. You can set up one later if you decide to use the advanced features of phpMyAdmin.
12. Scroll down to the Configuration section near the bottom of the page, and click Save.
13. Open the config folder in Explorer or Finder. You should see a new file called `config.inc.php`. Move it to the main `phpmyadmin` folder. The official instructions tell you to delete the `config` folder, but this isn't necessary in a local testing environment.

Now that you have a PHP development environment, you're ready to define a PHP site in Dreamweaver, as described on the next page.

Define a PHP site in Dreamweaver

Because PHP files need to be processed by a web server, you need to tell Dreamweaver where the testing server is located. You also need to tell Dreamweaver the correct URL to use when testing your files. This tutorial assumes that you have established a local testing environment on your computer as described in the preceding pages.

In theory, you can locate your files anywhere on your computer, and Dreamweaver will copy them to the testing server when you use Live view, Live Data view, or Preview in Browser. However, this results in two identical copies of every file; instead it's common practice to store project files in a folder inside the root of the testing server, which is what you'll do in this tutorial.

This section covers the following topics:

Specify a working folder

Specify a testing server for Dreamweaver

You can also see video tutorials for *Windows* and *Mac OS X* users that guide you through this process.

Specify a working folder

To specify a working folder:

1. In Dreamweaver, select Site > New Site. The Site Definition dialog box appears with the Local Info category selected on the left. (*Note:* If the Basic tab is showing, click the Advanced tab.)
2. In the Site Name text box, enter the name of your web application, for example, **MyWebApp**. This name identifies the project in Dreamweaver.
3. Click the folder icon next to the Local Root Folder text box and browse to your testing server's document root. The location depends on your operating system and PHP installation choice. If you installed XAMPP and MAMP, following the instructions on pages 2 and 3 of this tutorial, the document root is:

- On Windows: `C:\xampp\htdocs`
- On Mac OS X: `Applications:MAMP:htdocs`

Note: If you chose the alternative installation options mentioned earlier, the document root is:

- Windows (separate Apache installation): Look for a folder called `htdocs`
- Windows IIS: `C:\Inetpub\wwwroot`
- Mac OS X (preinstalled Apache): `Library:WebServer:Documents`

4. Create a new folder inside the web server's document root, and give it the name of your site, for example, **MyWebApp**. Select the folder you have just created as your Local Root Folder.

Note: The name should not include any spaces or special characters. You should never use spaces or special characters in folder or file names for a website, because they cause problems on most PHP servers.

5. In the HTTP address text box enter **`http://localhost/MyWebApp`**.
6. Select the Links relative to Document option. This is the most reliable setting for a PHP site.
Note: Selecting the Links relative to Site root option results in Dreamweaver using a PHP function called `virtual()`, which can cause problems with PHP include files on some servers. If you use site-root-relative links and encounter problems with Dreamweaver server behaviors, you need to replace any instances of `virtual()` in the code Dreamweaver creates with `require_once()` and a relative link.
7. Leave the Site Definition dialog box open. You will specify your testing server next.

Specify a testing server for Dreamweaver

To specify a testing server:

1. In the Site Definition dialog box, click Testing Server in the Category list on the left. (*Note:* If you can't see the Testing Server item, verify that the Advanced tab is selected in the Site Definition dialog box.) The Testing Server screen appears.
2. Select PHP MySQL from the Server Model pop-up menu.
3. Select Local/Network from the Access pop-up menu.

Dreamweaver displays the local root folder you specified in the Local Info category in Step 3 in the previous section. Leave the folder unchanged.

4. In the URL Prefix text box, enter the URL you would enter in a web browser to request a page in your web application.

For example, if you followed the folder naming suggestions in this tutorial, then the correct URL prefix is:
`http://localhost/MyWebApp/`.

The URL prefix should always specify a folder, rather than a particular page on the site. Also, be sure to use the same capitalization you used when you created the folder.

5. Click OK to define the site and dismiss the Site Definition dialog box.
6. Click Done to dismiss the Manage Sites dialog box.

The next step is to create a MySQL database and user account.

Create a MySQL database and user account

MySQL is not a single database, but a database management system. You create individual databases within MySQL. The superuser, root, has complete control over all databases, so it's necessary to set up user accounts with restricted privileges to prevent unauthorized users gaining access to other people's data.

In this section, you'll use the phpMyAdmin front end to MySQL to create a database, import sample data, and create a MySQL user account. The instructions assume that you have installed XAMPP on Windows, MAMP on a Mac, or that you have created your own PHP testing environment with a web server, PHP, MySQL, and phpMyAdmin.

This section covers the following topics:

Create a new database and import data

Create a MySQL user account

Create a new database and import data

To perform this task:

1. Verify that your web server and the MySQL server are running: Enter **`http://localhost/phpmyadmin/`** into your browser address bar and load the page.

If you installed XAMPP in Windows, enter **root** as the username, and then your MySQL root password when prompted.

You should see a phpMyAdmin welcome screen similar to the one shown in Figure 10.



Figure 10. The phpMyAdmin main screen

Note: The default list of databases shown in the menu on the left of the screen is slightly different in XAMPP and MAMP, but this is not important.

Note also that at the time of writing this article, both XAMPP and MAMP were still using version 2 of phpMyAdmin, even though version 3 had been released several months earlier. Version 3 is required only for MySQL 5.1. Otherwise, the functionality is identical, although there are some differences in the user interface.

2. Enter **adc_demo** in the text box labeled "Create new database" and click the Create button.

Note: When choosing names for databases and database columns (fields), do not use spaces or hyphens; use only alphanumeric and underscore characters (for example, feedback_demo). Although phpMyAdmin accepts such characters, they require special handling and are likely to cause problems. It's also a good idea to use lowercase throughout, because the Windows version of MySQL automatically converts names to lowercase and treats them as case-insensitive. Most PHP sites are hosted on Linux servers, which are case-sensitive. If your names include uppercase characters, everything will break when you upload your web application from Windows to a Linux server.

Note: You can ignore the Collation pop-up menu, unless you are using a language other than English. Collation determines the sort order of records. The default setting is fine for English.
3. When phpMyAdmin reports that the adc_demo database has been created, click the Import tab at the top of the page.
4. In the File to import section, click the Browse button alongside the Location Of The Text File text box and select `adc_demo.sql` from the ZIP file that you downloaded on page 1 of this tutorial.
5. Click the Go button at the bottom of the page. This imports dummy data into the database.
6. Leave phpMyAdmin open, as you will continue using it in the next section.

Note: The dummy data consists of just two tables: customers and products, which should now be listed in the phpMyAdmin menu on the left of the screen. You can inspect the data by clicking the table name, and then selecting the Browse tab at the top of the page. Each table contains only two records. The purpose is simply to demonstrate how to import data with phpMyAdmin.

Create a MySQL user account

The root superuser should be used only for administrative tasks inside phpMyAdmin, because it has the power to wipe out all of your data. After data has been deleted, *you cannot restore it!* There is no equivalent of the Windows Recycle Bin or Mac Trash in MySQL. So, the next task is to create a MySQL user account with restricted privileges. The following instructions show you how to create an account that has access only to the `adc_demo` database.

1. Click the icon that looks like a little house at the top left of the phpMyAdmin screen to return to the original welcome screen (shown above in Figure 10).
2. Click the Privileges link on the welcome page.
3. Click Add a new user (roughly halfway down the page).
4. In the User name text box, enter **adctest**.
5. From the Host drop-down menu, select Local. This enters **localhost** in the text box alongside, restricting the user to your local test environment.
6. Type a password in the Password field, and retype it in the field immediately below.
7. Leave the rest of the page unchanged, and click the Go button at the bottom of the page.
8. The next screen confirms that the new user has been added. The Global privileges section gives the user account the same privileges on all databases. For the purposes of this tutorial, you're going to limit the user to the feedback database, so scroll down to the Database-specific privileges section.
9. Select the database name from the pop-up menu, as shown in Figure 11.

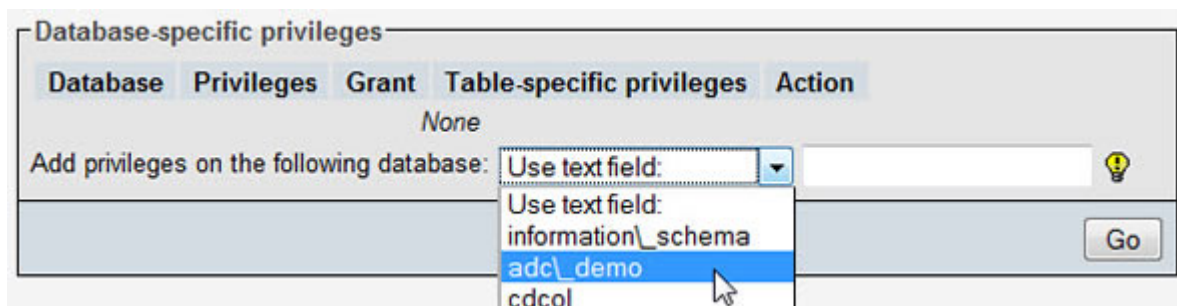


Figure 11. Limiting a MySQL user account to a specific database

Note: The underscore in the database name is preceded by a backslash. In certain circumstances, the underscore can be used as a wildcard character in MySQL, and the backslash is needed here to ensure that the underscore is treated as a literal character. However, this is an exceptional case. Normally, you should *not* precede the underscore in database, table, or column names with a backslash.

10. This opens a page where you can set the user's privileges for the selected database. For a web application, only four privileges are normally required: SELECT, INSERT, UPDATE, and DELETE. Select them and click the Go button (see Figure 12).

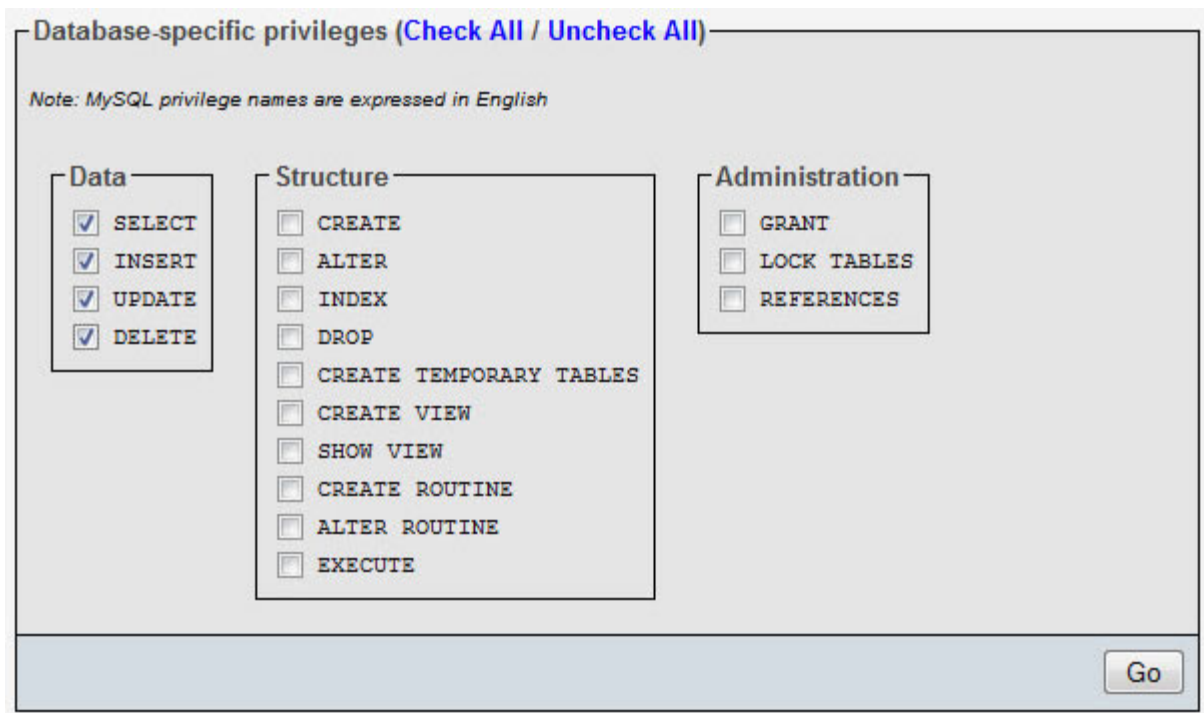


Figure 12. Setting user privileges for a web application

You now have a MySQL user account ready to access the feedback database. In the next section, you'll learn how to create a MySQL connection in Dreamweaver.

Connect to the database

This section describes how to create a connection in Dreamweaver to the sample feedback database.

1. In Dreamweaver, create a new PHP page in your site and save it as `index.php`.
2. In the Databases panel (select Window > Databases), click the Plus (+) button on the panel and select MySQL Connection from the pop-up menu.

The MySQL Connection dialog box appears.

3. Enter **connTest** as the connection name.
4. In the MySQL Server field, enter **localhost**.
5. In the User name field, enter **adctest**.
6. Type the password you chose for the the `feedback_user` account in the Password field.
7. In the Database field, enter **adc_demo**.

Note that you don't need to precede the underscore with a backslash here. It was inserted by phpMyAdmin in *the previous section* (see Figure 11) only because phpMyAdmin uses a query that permits wildcard characters.

8. Click Test.

Dreamweaver attempts to connect to the database. If the connection fails, do the following:

- Double-check the server name, user name, and password.

- Check the settings for the folder Dreamweaver uses to process dynamic pages (see *Specify a testing server for Dreamweaver*).
 - Verify that the web and MySQL servers are both running.
 - Temporarily disable any firewall or security program. If the connection works, you need to configure the security program to permit communication between Dreamweaver and MySQL.
9. Click OK. The new connection appears in the Databases panel.
 10. Expand the connTest connection, and then expand the Tables branch. You'll see the tables in the database (see Figure 13).

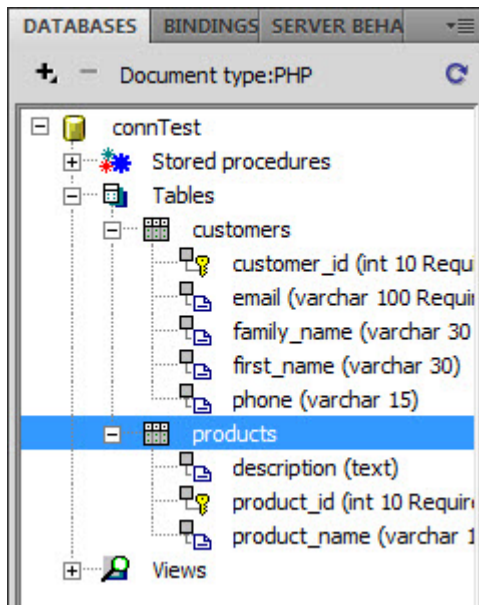


Figure 13. The Databases panel showing the tables.

11. Select File > Save to save your changes.

Congratulations! Your PHP development environment and site is now set up and you are ready to start developing PHP web applications in Dreamweaver.

Where to go from here

This tutorial has shown you how to set up a PHP development environment, define a PHP site, and connect to a MySQL database. Defining the site and testing server, and establishing a MySQL connection are fundamental to developing PHP web applications in Dreamweaver. You are now ready to start experimenting with Dreamweaver server behaviors to select, insert, update, and delete database content in a website.

For more articles and tutorials on developing for PHP using Dreamweaver, visit the *Web application development page* in the Dreamweaver Developer Center. If you're new to building PHP applications in Dreamweaver, step through the tutorial series *Creating your first dynamic site in Dreamweaver*.

About the authors

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