CNT 4714: Enterprise Computing Spring 2010

Introduction to PHP – Part 1

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Introduction to PHP

- PHP is officially known as PHP: Hypertext Preprocessor and is very rapidly becoming the most popular server-side scripting language for creating dynamic web pages.

- PHP was created in 1994 by Rasmus Lerdorf (who currently works for Linuxcare, Inc. as a senior open-source researcher) to track users at his Web site. Lerdorf originally called it Personal Home Page Tools in a package he released in 1995. It eventually became an Apache Software Foundation project.

- PHP2 featured built-in database support and form handling. In 1997, PHP3 was released and featured a new parser which substantially increased performance and led to an explosion in PHP use.

Introduction to PHP (cont.)

- PHP4 featured the Zend Engine and was considerably faster and more powerful than its predecessors and further enhanced the popularity of PHP.

- The current release is PHP 5.3.0 and features the Zend Engine 2, which provides further increases in speed and functionality. You can download the latest version of PHP at www.php.net. For more details on the Zend Engine 2 see www.zend.com.

- Today more than 17 million domains utilize PHP technology.

- All of the examples we'll be looking at use the latest stable version of PHP which is 5.3.0 and was released June 30, 2009.

Introduction to PHP (cont.)

- The power of the Web resides not only in serving content to users, but also in responding to requests from users and generating Web pages with dynamic content.

- Interactivity between the user and the server has become a crucial part of Web functionality. While other languages can also perform these functions, PHP was written specifically for interacting with the Web.

- PHP code is embedded directly into XHTML documents. This allows the document author to write XHTML in a clear, concise manner, without having to use multiple `print` statements, as is necessary with other CGI-based languages.

Introduction to PHP (cont.)

- PHP script file names usually end with `.php`, although a server can be configured to handle other file extensions.

- To run a PHP script, PHP must first be installed on your system. Download PHP 5.3.0 from www.php.net. (Most recent version is 5.3.0.)

- Although PHP can be used from the command line, a Web server is required to take full advantage of the scripting language. I would suggest the Apache server available from www.apache.org. (Note: this is not the Tomcat server you've already used.) Current version is 2.2.11 which is a new major version change from the previous 2.0.xx versions (mostly in the areas of security).

- The easiest way to get this setup is to use WAMP Server. The current version of this is WAMP 2.0 which automatically loads and configures Apache 2.2.11, MySQL 5.1.36 and PHP 5.3.0 This is how I'll show you to get it set-up. Go to www.wampserver.com.
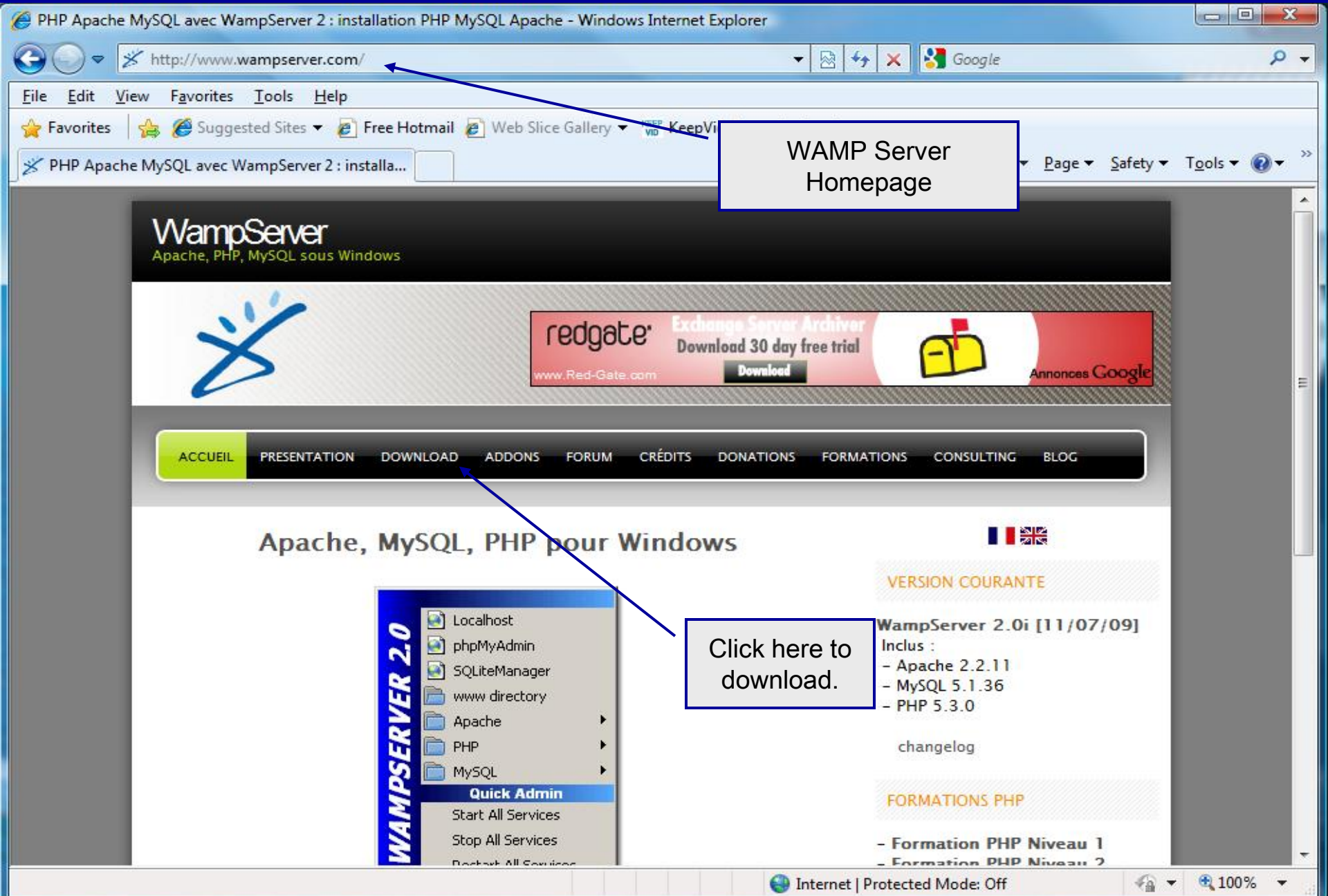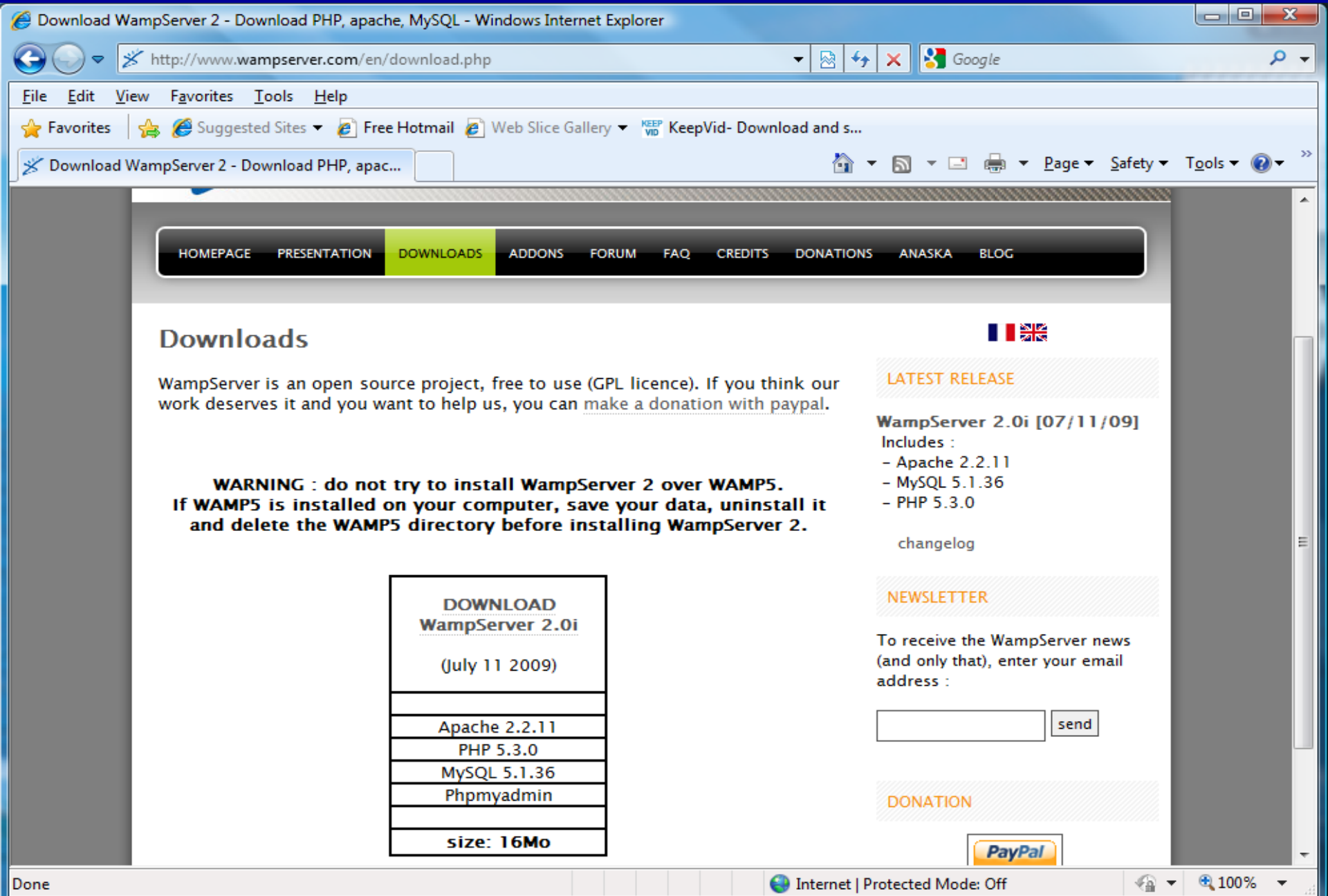
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Downloads

WampServer is an open source project, free to use (GPL licence). If you think our work deserves it and you want to help us, you can make a donation with paypal.

WARNING : do not try to install WampServer 2 over WAMP5.
If WAMP5 is installed on your computer, save your data, uninstall it and delete the WAMP5 directory before installing WampServer 2.

DOWNLOAD WampServer 2.0i
(July 11 2009)
Apache 2.2.11
PHP 5.3.0
MySQL 5.1.36
Phpmyadmin
size: 16Mo

LATEST RELEASE

WampServer 2.0i [07/11/09]
Includes :
– Apache 2.2.11
– MySQL 5.1.36
– PHP 5.3.0

changelog

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WAMPSERVER Homepage

Page   Safety   Tools

WampServer

Version 2.0 **Version Française**

Server Configuration

Apache Version : 2.2.11

PHP Version : 5.3.0

Loaded Extensions :

Core	bcmath	calendar	com_dotnet
ctype	date	ereg	filter
ftp	hash	iconv	json
mcrypt	mysqlnd	odbc	pcre
Reflection	session	SPL	standard
tokenizer	zip	zlib	libxml
dom	PDO	Phar	SimpleXML
wddx	xml	xmlreader	xmlwriter
apache2handler	gd	mbstring	mysql
mysqli	pdo_mysql	pdo_sqlite	mhash

MySQL Version : 5.1.36

Done   Internet | Protected Mode: Off   100%
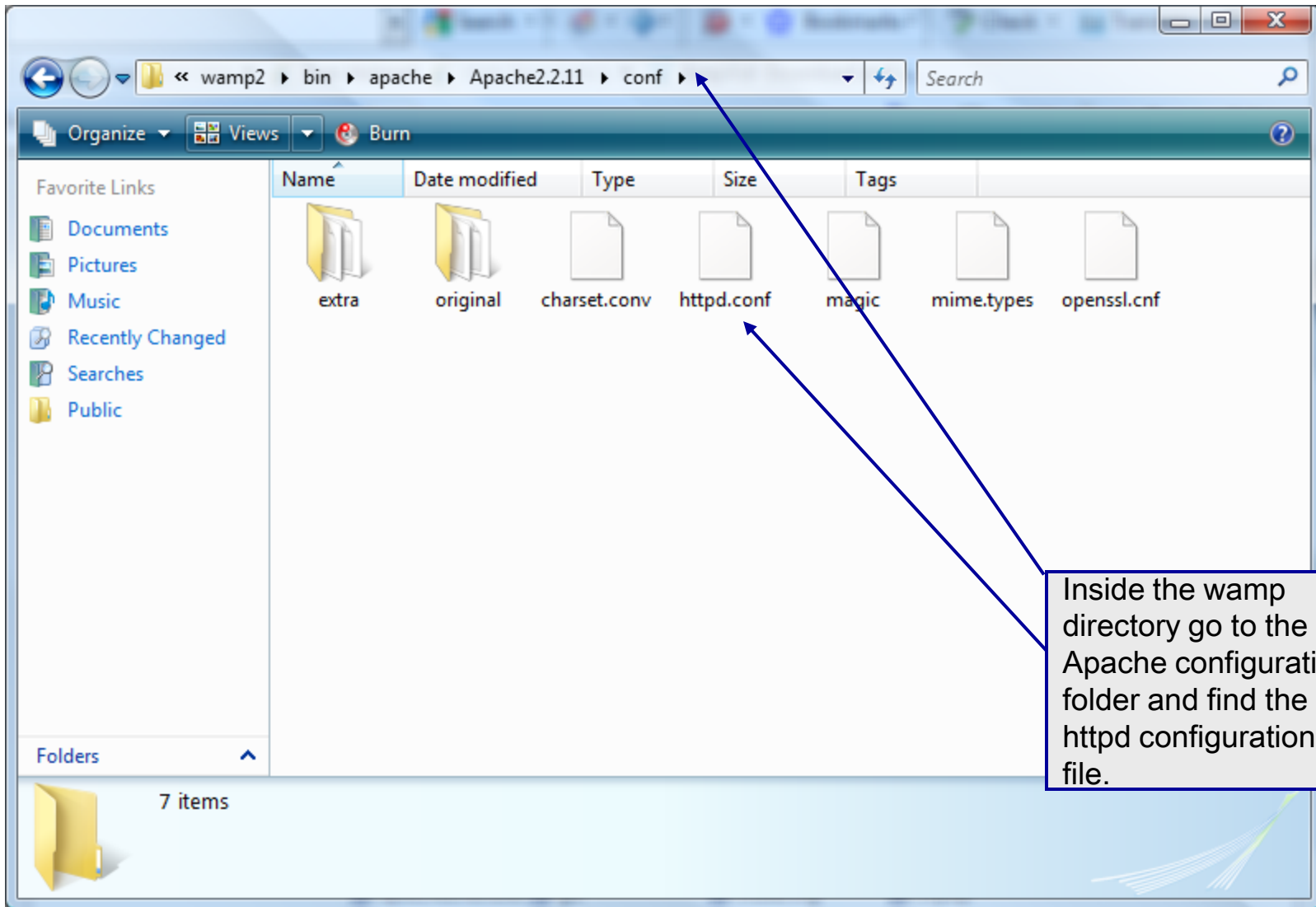
Inside the wamp directory go to the Apache configuration folder and find the httpd configuration file.

```
# ServerRoot: The top of the directory tree under which the server's
# configuration, error, and log files are kept.
#
# Do not add a slash at the end of the directory path.  If you point
# ServerRoot at a non-local disk, be sure to point the LockFile directi
# at a local disk.  If you wish to share the same ServerRoot for multip
# httpd daemons, you will need to change at least LockFile and PidFile.
#
ServerRoot "c:/wamp2/bin/apache/apache2.2.11"

#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default. See also the <VirtualHost>
# directive.
#
# Change this to Listen on specific IP addresses as shown below to
# prevent Apache from glomming onto all bound IP addresses.|
#
#Listen 12.34.56.78:80
#Listen 80
Listen 8081


#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding `LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by `httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
```
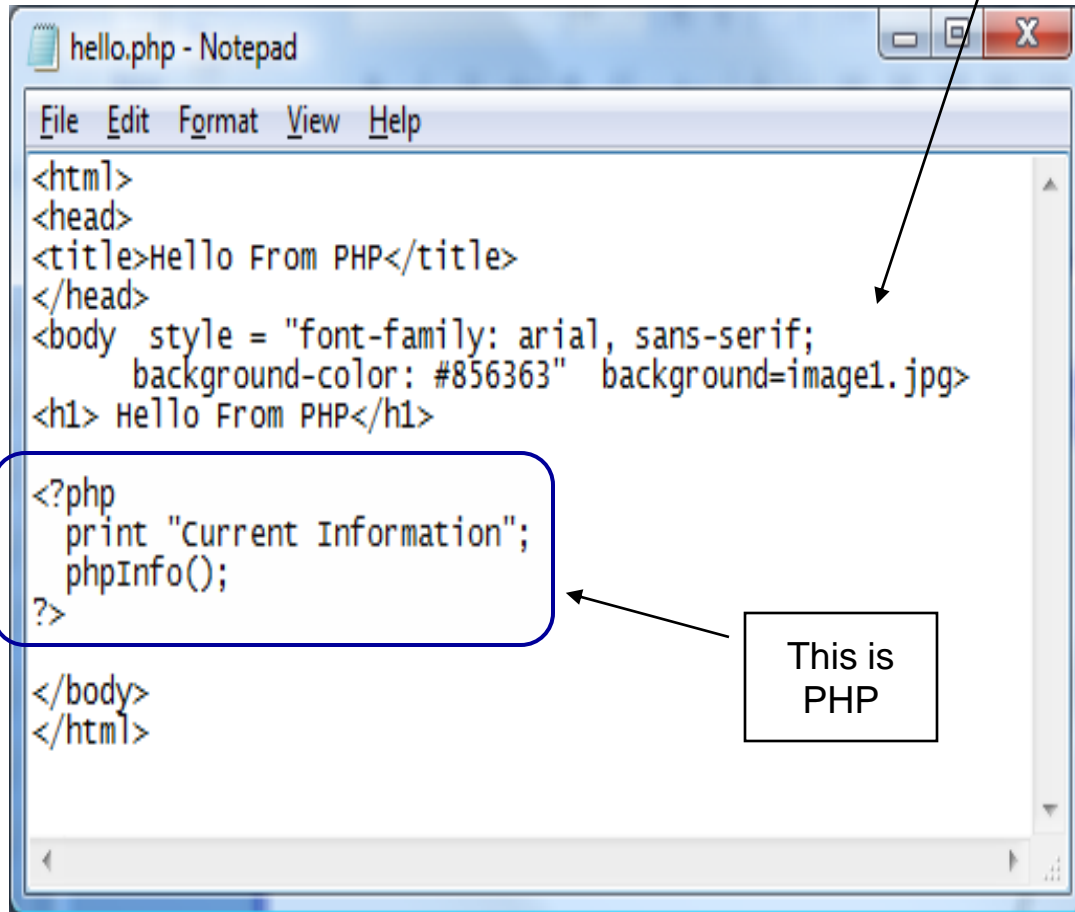
Edit the `httpd` configuration file to have the Apache server listen on port 8081 instead of port 80 as is the default case.

A PHP Test Example

```
hello.php - Notepad

File  Edit  Format  View  Help

<html>
<head>
<title>Hello From PHP</title>
</head>
<body  style = "font-family: arial, sans-serif;
       background-color: #856363"  background=image1.jpg>
<h1> Hello From PHP</h1>

<?php
  print "Current Information";
  phpInfo();
?>

</body>
</html>
```

This is PHP

Create this file named `hello.php` and save it to the `www` folder in the WAMP server. Then start the WAMP server, enter the URL: http://localhost:8081/hello.php and you should see output similar to that shown on the next slide.

Hello From PHP - Opera

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http://localhost:8081/hello.php   Search with Google

Hello From PHP

Current Information

PHP Version 5.3.0

System	Windows NT 9VQ2JH1-PC 6.0 build 6001 (Windows Vista Business Edition Service Pack 1) i586
Build Date	Jun 29 2009 21:23:30
Compiler	MSVC6 (Visual C++ 6.0)
Architecture	x86
Configure Command	cscript /nologo configure.js "--enable-snapshot-build" "--disable-isapi" "--enable-debug-pack" "--with-pdo-oci=D:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8=D:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8-11g=D:\php-sdk\oracle\instantclient11\sdk,shared" "--with-enchant=shared"
Server API	Apache 2.0 Handler
Virtual Directory Support	enabled
Configuration File (php.ini) Path	C:\Windows
Loaded Configuration File	C:\wamp2\bin\apache\Apache2.2.11\bin\php.ini
Scan this dir for additional .ini files	(none)
Additional .ini files parsed	(none)
PHP API	20090626
PHP Extension	20090626

The default directory for the php.ini file. Set by WAMP.

View (100%)

A First PHP Example

• The following two pages illustrate a simple PHP "hello world" program.

• In PHP, code is inserted between the scripting delimiters **<?php** and **?>**. PHP code can be placed anywhere in XHTML markup, as long as the code is enclosed in these scripting delimiters.

• Place all of your XHTML and PHP files inside the WAMP www directory.

welcome.php Example

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">

<!-- welcome.php -->
<!-- XHTML file containing a PHP script. -->

<?php
    $name = "Mark";    //php declaration and assignment
?>

<html xmlns = "http://www.w3.org/1999/xhtml">

    <!-- head section of document -->
    <head>
        <title>A Simple PHP Document</title>
    </head>

    <!-- body section of document -->
    <body style = "font-size: 2em">
     <hr>
     <font color = blue><h1> Generating HTML From PHP </h1></font color>
      <p>
```

PHP code declaring a variable.

welcome.php Example

```
    <strong>
      <!---print variable name's value in the message-->
        <?php
            print("This is your first crack at running a PHP script...");
            print("<HR>");
            print("Welcome to the world of PHP technology, ");
        ?>

            <font color = green>
            <?php

                    print("$name");

            ?>
            </font color>
    </strong>
  </p>
</body>
</html> <!-- end XHTML document -->
```
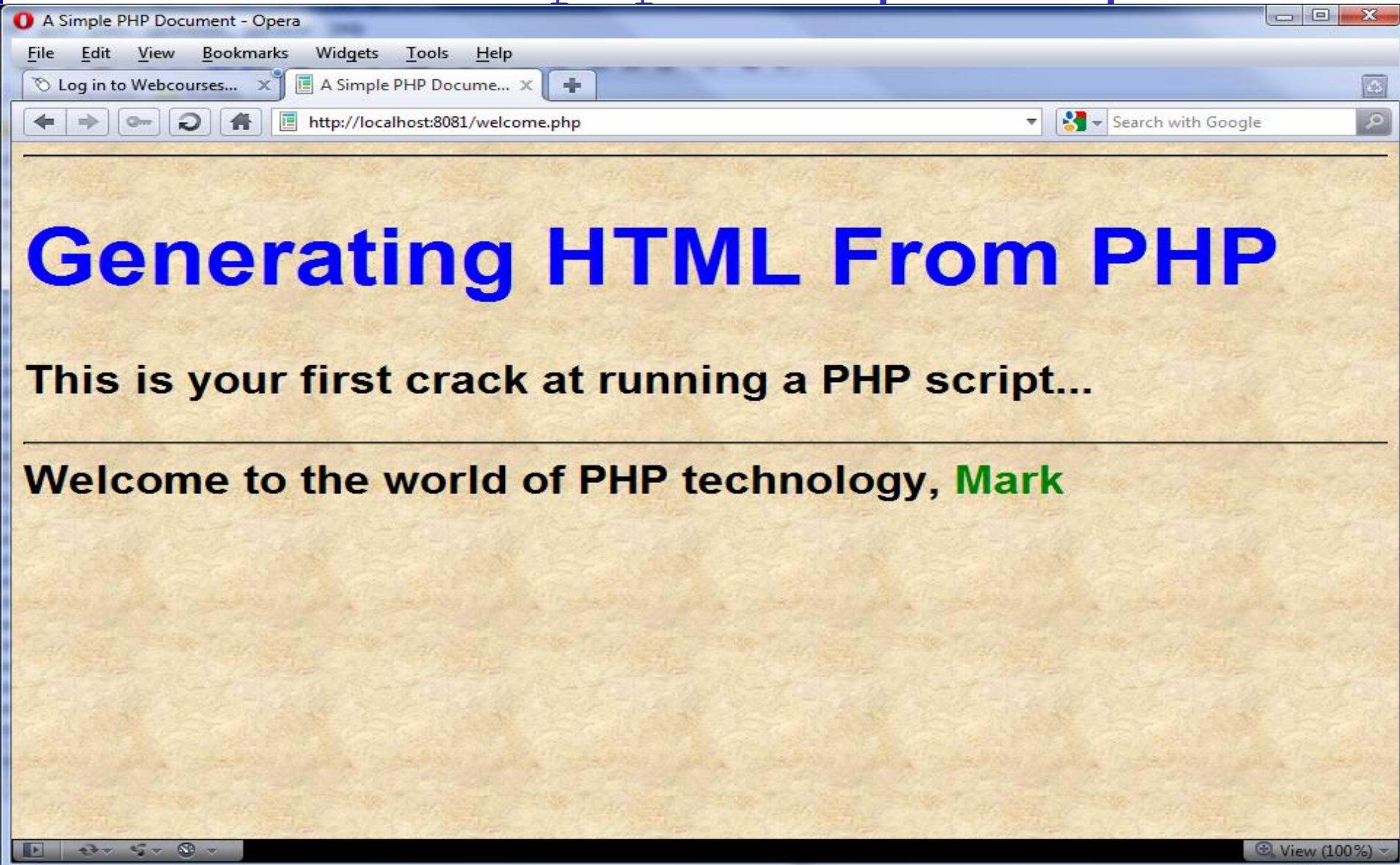
PHP
code

PHP
code

Viewing Client/Server Environment Variables

- Knowledge of a client's execution environment is useful to system administrators who want to provide client-specific information.

- Environment variables contain information about a script's environment, such as the client's web browser, the HTTP host and the HTTP connection.

  - The table on the next page summarizes some of the superglobal arrays defined by PHP.

- The XHTML document on page 19 displays the values of the server's environment variables in a table. PHP stores the server variables and their values in the $_SERVER array. Iterating through the array allows one to view all of the server's environment variables.

Some Superglobal Environment Arrays

Variable Name	Description
$_SERVER	Data about the currently running server.
$_ENV	Data about the client's environment.
$_GET	Data posted to the server by the get method.
$_POST	Data posted to the server by the post method.
$_COOKIE	Data contained in cookies on the client's computer.
$GLOBALS	Array containing all global variables.

server.php Example

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<!-- server.php              -->
<!-- Program to display $_SERVER variables -->
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>
    <title>SERVER Variables Display</title>
  </head>

  <body style = "font-family: arial, sans-serif;
    background-color: #856363"  background=image1.jpg>

    <table border = "0" cellpadding = "2" cellspacing = "0"
      width = "100%">
    <?php
      // print the key and value for each element
      // in the $_SERVER array
      foreach ( $_SERVER as $key => $value )
        print( "<tr><td bgcolor = \"#11bbff\">
          <strong>$key</strong></td> <td>$value</td></tr>" );
    ?>
    </table>
  </body>
</html>
```

Iterate through the $_SERVER array to list all of the SERVER variables for the current server on which PHP is running.

SERVER Variables Display - Opera

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http://localhost:8081/server.php

HTTP_USER_AGENT	Opera/9.80 (Windows NT 6.0; U; en) Presto/2.5.22 Version/10.51
HTTP_HOST	localhost:8081
HTTP_ACCEPT	text/html, application/xml;q=0.9, application/xhtml+xml, image/png, image/jpeg, image/gif, image/x-xbitmap, */*;q=0.1
HTTP_ACCEPT_LANGUAGE	en-US,en;q=0.9
HTTP_ACCEPT_CHARSET	iso-8859-1, utf-8, utf-16, *;q=0.1
HTTP_ACCEPT_ENCODING	deflate, gzip, x-gzip, identity, *;q=0
HTTP_COOKIE	PHPSESSID=34agr037m0ns6uvqr2qad7ncr5
HTTP_COOKIE2	$Version=1
HTTP_CONNECTION	Keep-Alive, TE
HTTP_TE	deflate, gzip, chunked, identity, trailers
PATH	C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;;C:\Windows\System32\WindowsPowerShell\v1.0\;C:\Program Files\MySQL\MySQL Server 5.1\bin;C:\Program Files\QuickTime\QTSystem\
SystemRoot	C:\Windows
COMSPEC	C:\Windows\system32\cmd.exe
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
WINDIR	C:\Windows
SERVER_SIGNATURE	
SERVER_SOFTWARE	Apache/2.2.11 (Win32) PHP/5.3.0
SERVER_NAME	localhost
SERVER_ADDR	127.0.0.1
SERVER_PORT	8081
REMOTE_ADDR	127.0.0.1
DOCUMENT_ROOT	C:/wamp2/www/

View (100%)