CNT 4714: Enterprise Computing Spring 2014

Installing and Configuring Apache and PHP

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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.



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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 5.5.10. It was declared stable on March 6, 2014 and features the Zend Engine 2, which provides further increases in speed and functionality. You can download the latest version of PHP at <u>www.php.net</u>. For more details on the Zend Engine 2 see <u>www.zend.com</u>.
- Today more than 240 million web sites and more than 2.1 million web servers utilize PHP technology.



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 HTML documents. This allows the document author to write HTML in a clear, concise manner, without having to use multiple print statements, as is necessary with other CGI-based languages.



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Introduction to PHP (cont.)

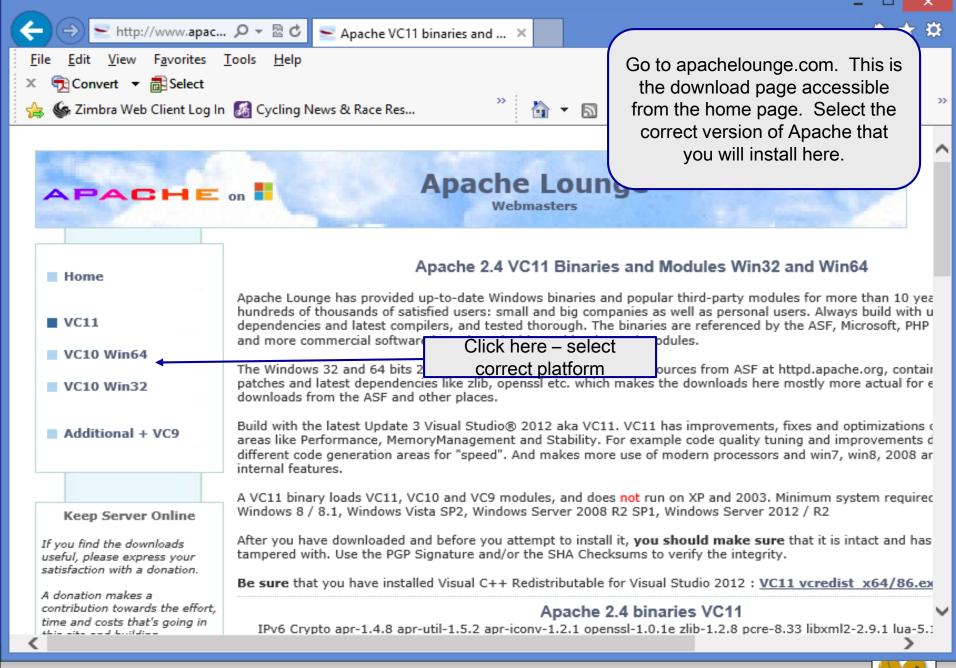
- PHP script file names usually end with .php, although a server can be configured to handle other file extensions.
- To run a PHP script, PHP must first be installed on your system.
- Although PHP can be used from the command line, a Web server is required to take full advantage of the scripting language. We will utilize the Apache HTTP Server available from <u>www.apachelounge.com</u>. (Note: this is not the same web site where you downloaded the Tomcat server you've already used.) The version that I am using is 2.4.6V10 which is not available directly from Apache. Apache's versions of the HTTP server utilize an older legacy version (VC6) of the Microsoft Visual C++ Studio compiler and are not compatible with current versions of PHP.
- Although there are several different packages that bundle PHP with MySQL and various HTTP servers, as IT majors you need to experience the set-up and integration of this type of software, so I will show you how to setup the Apache HTTP Server and integrate both PHP and MySQL into it.



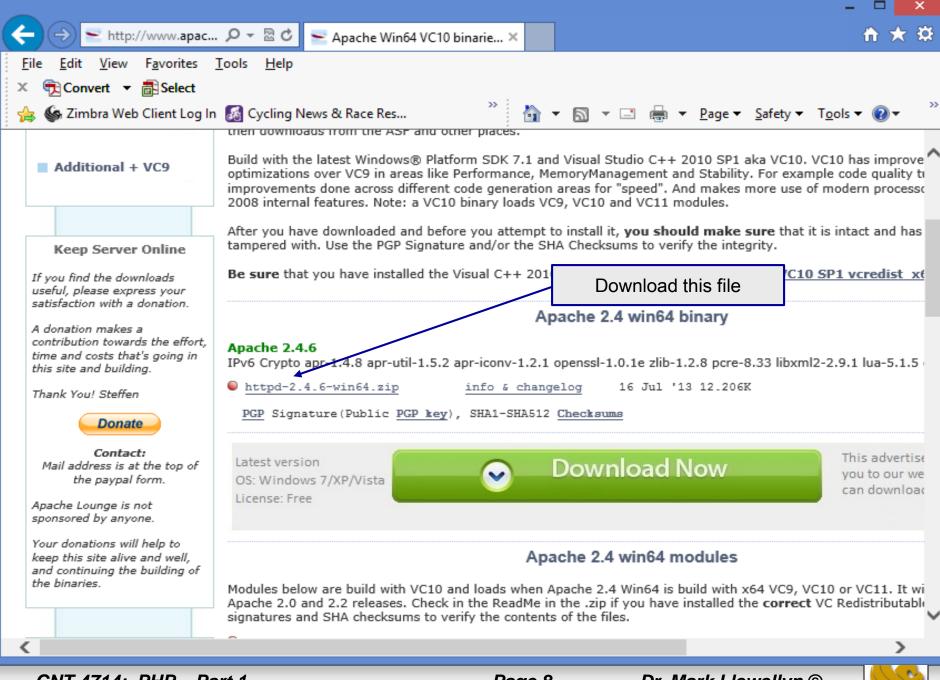
Installing Apache HTTP Server

- The version of the Apache HTTP server that I am illustrating is 2.4.6V10 (a 2.4.9V11 version is also now available and should also work fine, but I personally have not used this version yet) and it is available for download from <u>www.apachelounge.com</u>.
- There are several steps to go through in getting this server installed and configured to interpret PHP scripts. The remainder of these notes step you through this process.
- Note that I am doing the install on a 64-bit Windows machine running Windows 8. If you are installing on a different platform be sure to get the correct versions of all of the necessary files and check for compatibility.





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15 July 2013

Apache Lounge Distribution

Apache 2.4.6 win64 VC11 update3

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IPv6 and Crypto enabled, apr-1.4.8 apr-util-1.5.2 apr-iconv-1.2.1 openssl-1.0.1e zlib-1.2.8 pcre-8.33 libxml2-2.9.1 lua-5.1.5 expat-2.1.0

Original Home: httpd.apache.org Win64 binary by: Steffen Mail: info@apachelounge.com Home: www.apachelounge.com Note that this is the README file from the Apache2.4.6VC11 version. The same holds true for the Apache2.4.6V10 version in that you need to install this Visual Studio update before going any further.

Build with Visual Studio® 2012 Update 3 (VC11) x64

Be sure you have installed the Visual C++ Redistributable for Visual Studio 2012 Update 3.
 Download and install, if you not have it already, from:

http://www.microsoft.com/en-us/download/details.aspx?id=30679

Loads 2.4 Win64 modules VC9 or VC10.

Minimum system required

Windows 7 SP1 Windows 8 / 8.1 Windows Server 2008 R2 SP1 Windows Server 2012 / R2 Windows Vista SP2 Use this link to download and install the latest Visual C++ Update



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19 items

CNT 4714: PHP - Part 1

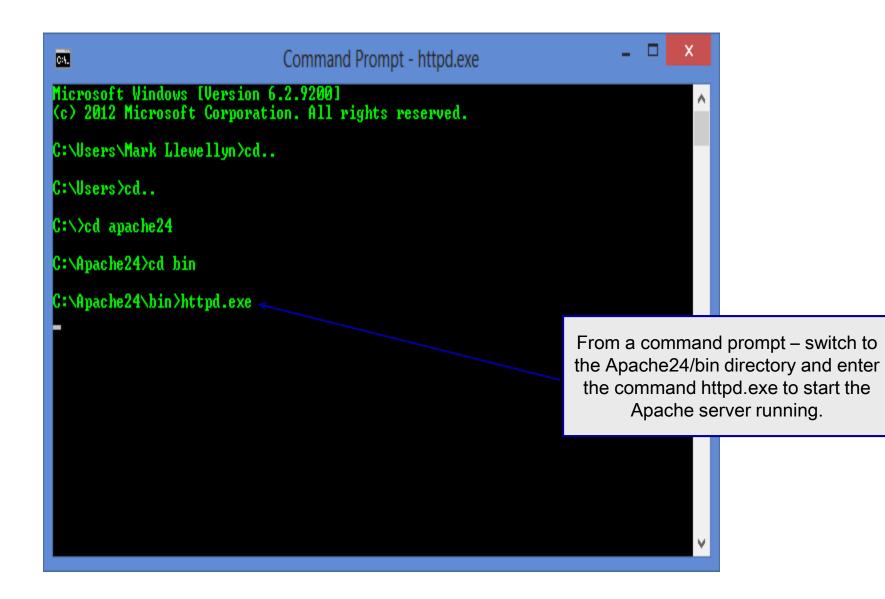
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Installing And Configuring Apache (cont.)

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58 #Listen 80	will override the default port and set it to					
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60	port 8081. Note that Tomcat is listening					
61 #	on port 8080, so this will avoid any port					
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-	64 # To be able to use the functionality of a module which was built as a DSO you					
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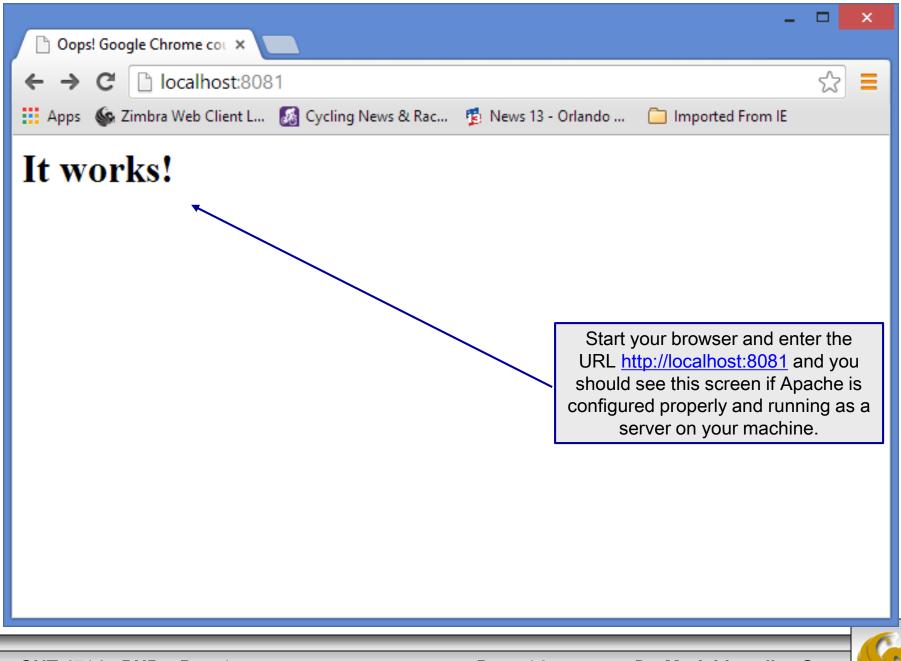
Installing And Configuring Apache (cont.)

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211	#		Edit the conf/	http.conf	file and		
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218	#ServerName www.example.com:80						
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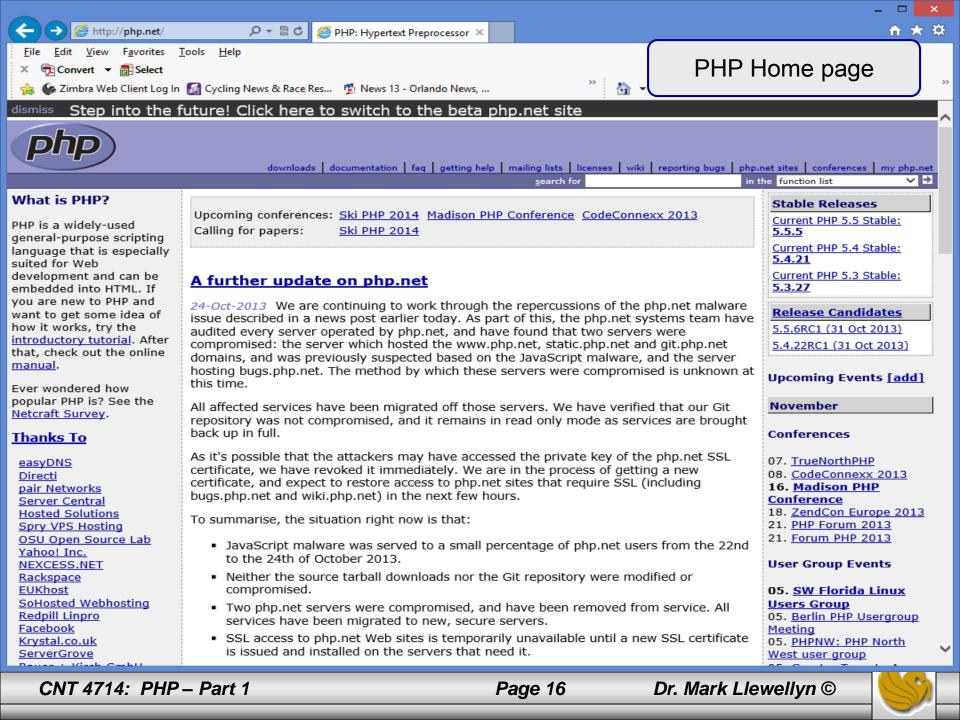
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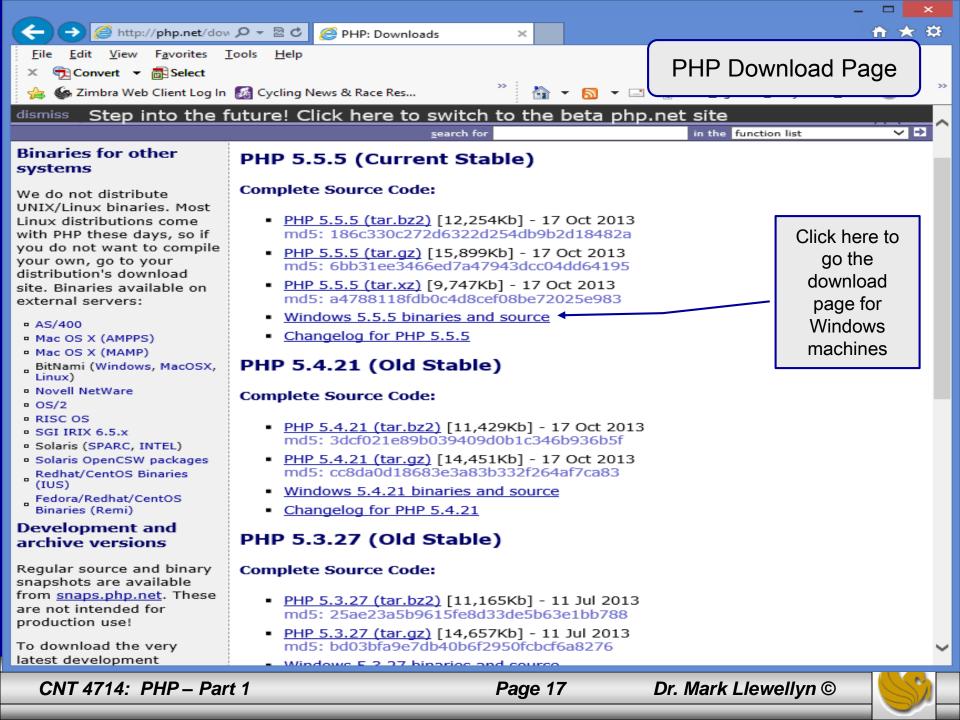


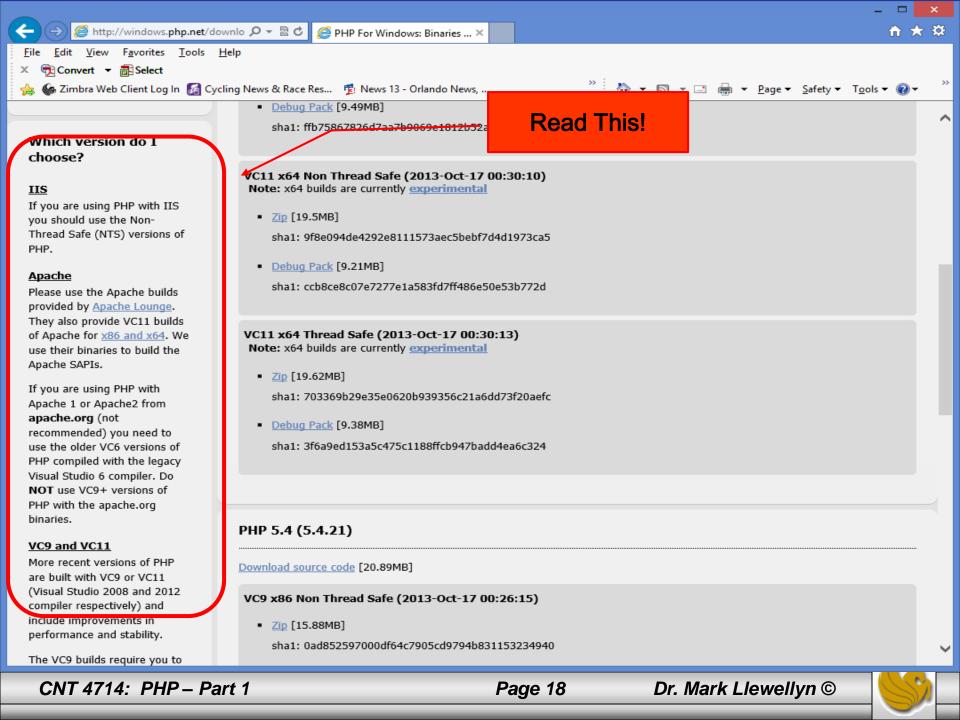
Installing and Configuring PHP

- The current stable version of PHP (PHP 5.5.10 can be downloaded from <u>www.php.net</u>.
- Note that since we are using Apache 2.4.6V10 HTTP Server that we will need to be sure and install the correct version of PHP which will be 5.5.x (I'm illustrating with 5.5.5), older versions of PHP will not work properly with the newer versions of Apache. There is a way to make Apache work with older PHP scripts, but for now, we are not interested in having our server exhibit this capability.
- Newer versions of PHP are built using VC9 or VC11 (Visual Studio 2008 or 2012 versions).
- Click on the downloads link at the top of the PHP home page and select the proper format for your machine. (See next page.)
- Then download PHP to your machine and install it using the instructions beginning on page 17.

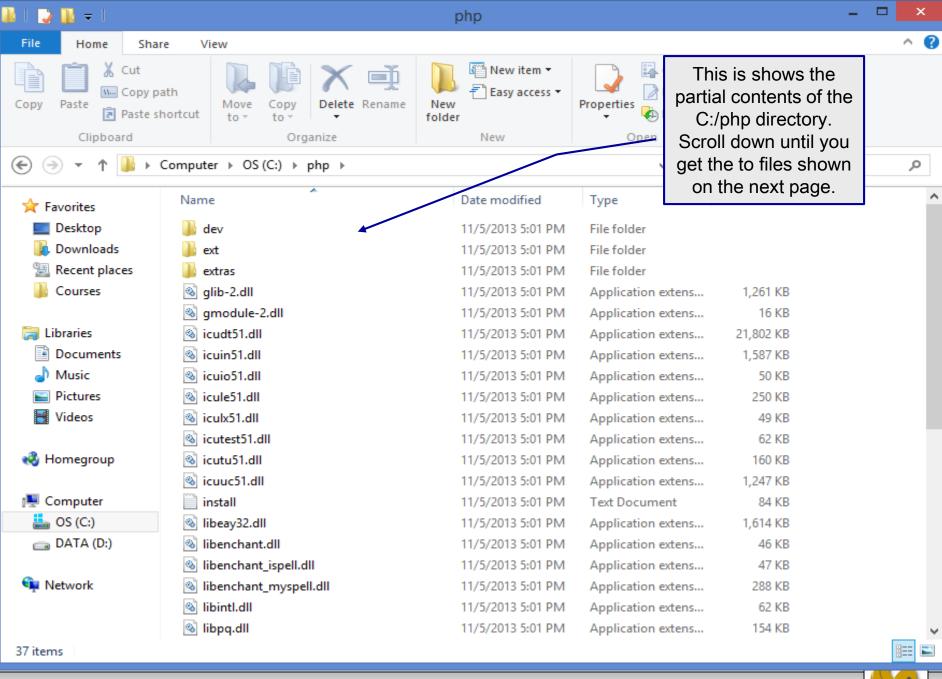








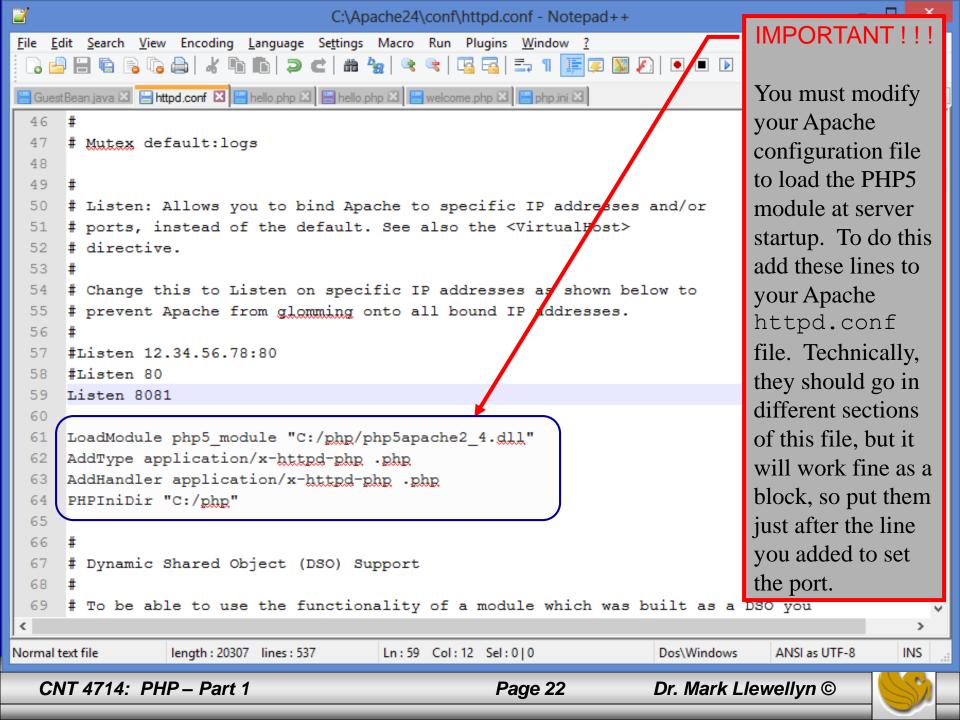
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Which version do I choose? <u>JIS</u> If you are using PHP with IIS you should use the Non- Thread Safe (NTS) versions of PHP.	 VC11 x64 Non Thread Safe (2013-Oct-17 00:30:10) Note: x64 builds are currently experimental Zip [19.5MB] sha1: 9f8e094de4292e8111573aec5bebf7d4d1973ca5 Debug Pack [9.21MB] sha1: ccb8ce8c07e7277e1a583fd7ff486e50e53b772d 	Scroll down this page to get to the proper version for Click here to go the download page for Windows machines
Apache Please use the Apache builds provided by <u>Apache</u> <u>Lounge</u> . They also provide VC11 builds of Apache for <u>x86 and x64</u> . We use their binaries to build the Apache SAPIs.	VC11 x64 Thread Safe (2013-Oct-17 00:30:13) Note: x64 builds are currently experimental Zip [19.62MB] sha1: 703369b29e35e0620b939356c21a6dd73f20aefc Debug Pack [9.38MB] 	
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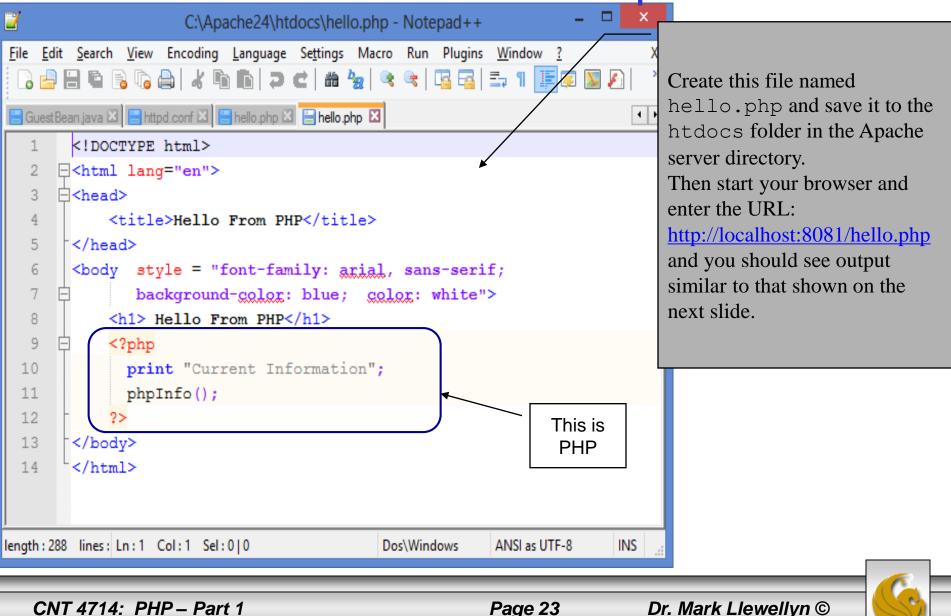
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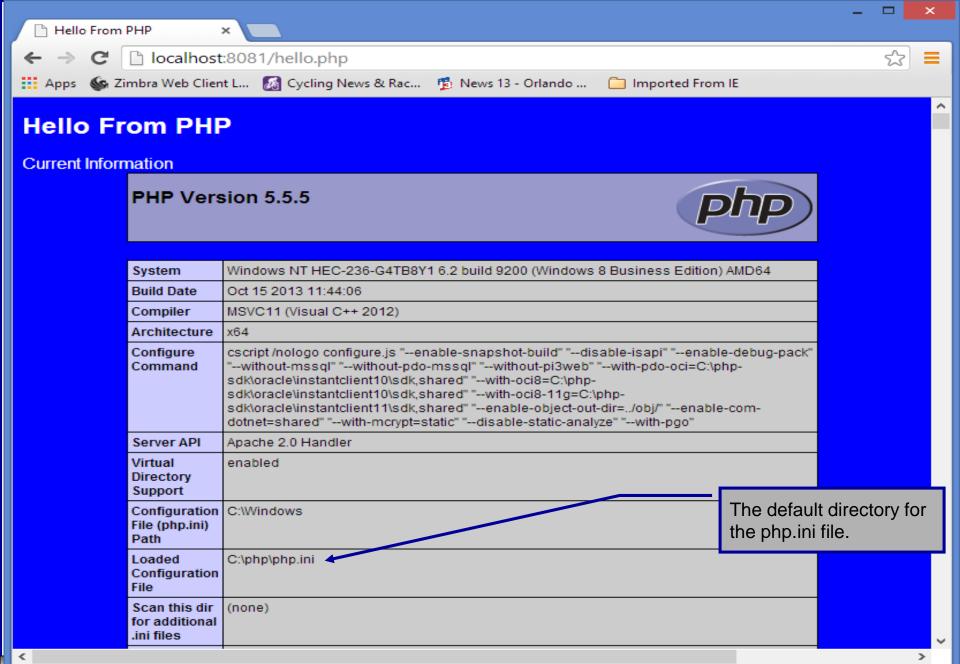
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A PHP Test Example



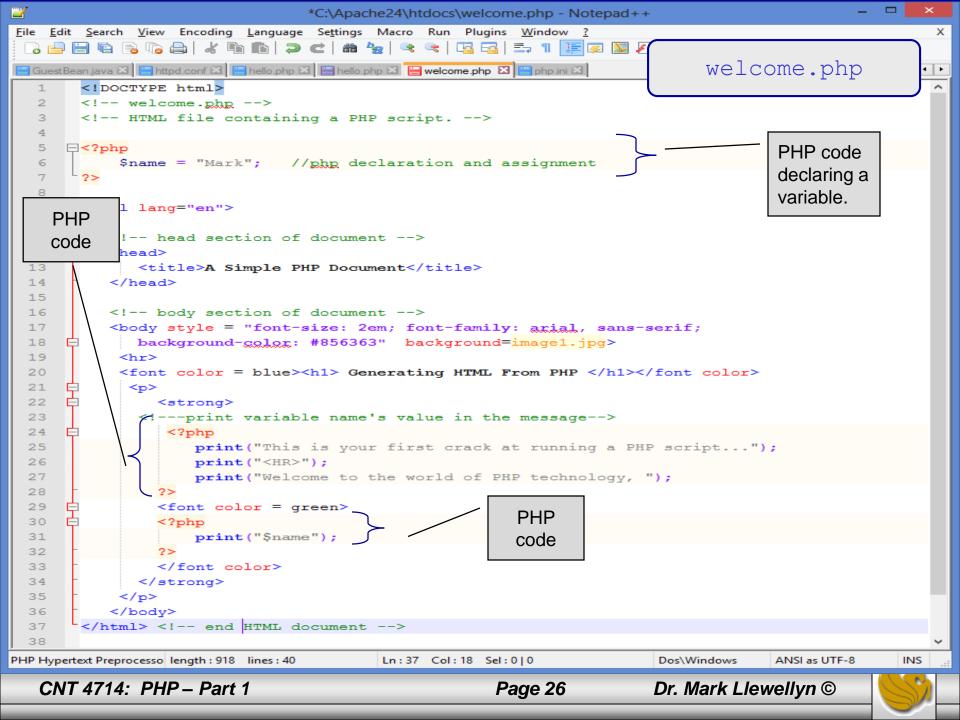


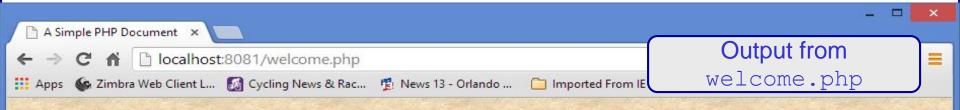
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A Second PHP Example

- The following two pages illustrate another simple PHP "hello world" program.
- In PHP, code is inserted between the scripting delimiters **<?php** and **?>**. PHP code can be placed anywhere in HTML markup, as long as the code is enclosed in these scripting delimiters.
- Place all of your HTML and PHP files inside the htdocs directory of the Apache server directory.







Generating HTML From PHP

This is your first crack at running a PHP script...

Welcome to the world of PHP technology, Mark



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Viewing Client/Server Environment Variables

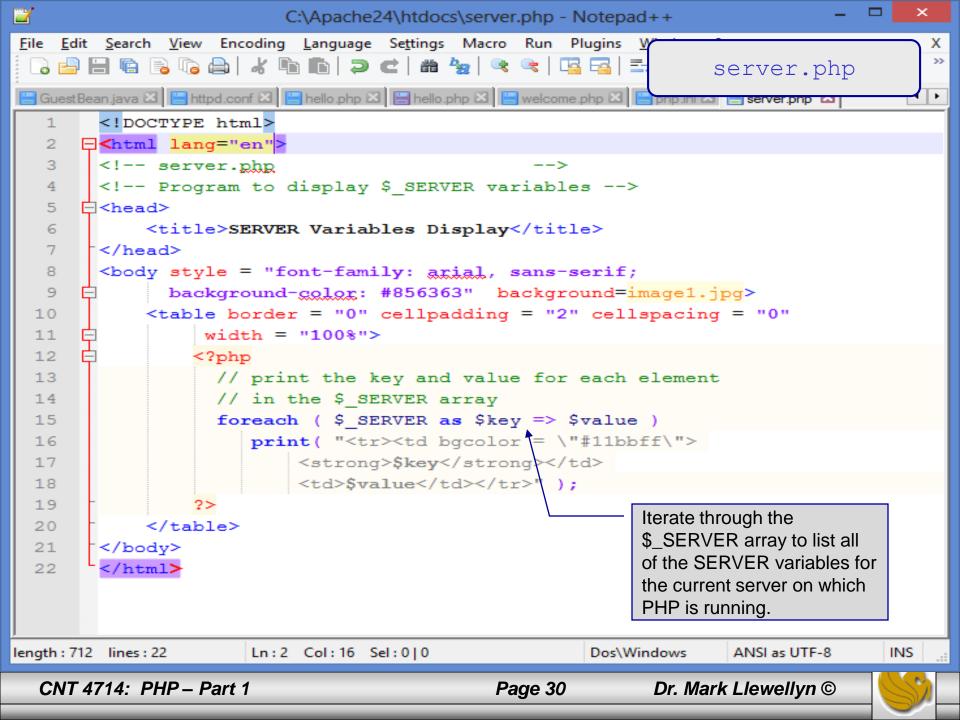
- Knowledge of a client's execution environment is useful to system administrators who want to provide client-specific information.
- Environment variables contain information about a script's environment, such as the client's web browser, the HTTP host and the HTTP connection.
 - The table on the next page summarizes some of the superglobal arrays defined by PHP.
- The HTML document on page 27 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 Variables Display ×		Output from
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HTTP_HOST	localhost:8081	
HTTP_CONNECTION	keep-alive	
HTTP_ACCEPT	text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;q=0.	.8
HTTP_USER_AGENT	Mozilla/5.0 (Windows NT 6.2; WOW64) AppleWebKit/537.36 (KHTML, lik	ke Gecko) Chrome/33.0.
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