

Web Technologies and Programming Lecture 22 Introduction to PHP (Part-1)

Summary of Previous Lecture

- Introduction to jQuery
 - Why use jQuery
- Jquery:
 - Syntax
 - Selectors
 - Element Selectors
 - Class Selectors
 - Events
 - Effects

Summary of Previous Lecture

- DOM
- DOM Objects
 - Window
 - Navigator
 - Location
 - History
 - Document
- XML
- Components of XML

Outline

- Setting the environment
- Overview of PHP
- Constants and Variables in PHP
- PHP strings
- PHP is loose typed language

1. Setting The Environment

- A Web Server
- PHP
- MySql

WAMP Server Windows, Apache, MySQL, PHP

- http://www.wampserver.com/en/
- Editor
 - Macromedia Dreamweaver
 - Adobe Dreamweaver
 - Notepad / Notepad++

1. Setting The Environment...

• Checking WAMP status:



- If this Icon is **Red** or **Orange**, it means it is **not working properly**.

- MSVCR100.dll is missing
 - Install Microsoft Visual C++ 2010 SP1 Redistributable Package
- Port conflict with Skype
- Port conflict with IIS Express (if Visual Studio is installed)

1. Setting The Environment...

- Resolving Port Issues (If there is port issue):
 - Click the icon of WAMP Server
 - Expand Apache section
 - Open httpd.conf file in Notepad
 - Press Ctrl+F and type 80
 - Wherever you find occurrence of 80, change it to 81
 - Save the file
 - Click the icon of WAMP Server and Select Start All Services
 - Open Your Browser, type localhost:81 and it should display homepage of WampServer

1. Setting The Environment...

WampServer						
					Version 2.5 Version Française	
Server Configu	iration					
Apache Version :	2.4.9 - Documentati	on				
PHP Version :	5.5.12 - Documenta	tion				
Server Software:	ftware: Apache/2.4.9 (Win64) PHP/5.5.12					
Loaded Extensions	🌲 apache2handler	🌸 bcmath	🚔 bz2	🌸 calendar	🎓 com_dotnet	
	🚔 Core	🚔 ctype	🚔 curi	🚔 date	🏚 dom	
	🚔 ereg	💼 exif	🚔 fileinfo	🚔 filter	🚔 ftp	
	🗯 gd	gettext	🗯 gmp	🞥 hash	iconv	
	nmap mbash	json	iiDxmi	mostring	mcrypt	
	a openssi	a nysų pore	PDO	🚔 nysqinu	pdo salite	
	har	Reflection	session	shmop	SimpleXML	
	🌲 soap	sockets	SPL	🚔 sqlite3	🚔 standard	
	🚔 tokenizer	🚔 wddx	🌲 xdebug	🚔 xml	🌲 xmireader	
	🚔 xmlrpc	🚔 xmlwriter	🚔 xsl	🚔 zip	🚔 zlib	
MySQL Version	5.6.17 - Documenta	tion				
Tools		Your Projects		Your Aliases		
phpinfo()		Contests		📪 phpmyadmin		
s phpmyadmin		🔁 displaypics		phpsysinfo		
				4 1		

2. PHP: an Overview

- **PHP: Hypertext Preprocessor**
 - Originally called "Personal Home Page Tools"
 - Used to create dynamic web pages
 - Popular server-side scripting technology
 - Open-source
 - » Anyone may view, modify and redistribute source code
 - Platform independent
 - PHP is a widely-used scripting language

2. PHP: an Overview

- What is a PHP File?
 - PHP files can contain text, HTML, CSS, JavaScript, and PHP code
 - PHP code are executed on the server, and the result is returned to the browser as plain HTML
 - PHP files have extension ".php"
 - PHP scripts are executed on the server.

2. PHP: an Overview...

• PHP:

- Interpreted language, scripts are parsed at runtime rather than compiled beforehand
- Compatible with many popular databases
- Popular server-side scripting technology
- Structurally similar to C/C++
- Supports procedural and object-oriented paradigm

2. PHP: What Can PHP Do?

- PHP:
- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can be used to control user-access
- PHP can encrypt data

2. PHP: Why PHP?

- PHP:
- PHP runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP supports a wide range of databases
- PHP is free. Download it from the official PHP resource: <u>www.php.net</u>
- PHP is easy to learn and runs efficiently on the server side

2. PHP: an Overview...



2. PHP: Basic PHP Syntax

- PHP:
- **A PHP script** can be placed anywhere in the document.
- A PHP script starts with <?php and ends with ?>:
- Syntax:
- <?php
 // PHP code goes here
 ?>

2.1 How PHP Fits with HTML

- Embedding PHP in HTML code
- HTML can also be written inside the PHP code
- PHP can also be written as a standalone program with no HTML at all

2.2 Basic Rules of PHP Syntax

- PHP code is denoted in the page with opening and closing tags, as follows:
 - <?php and ?>
 - <? or ?>
 - <script language="PHP">..... </script>
- PHP statements end with a semicolon
- Comments can be added as
 - // for one line comment
 - /* and */ for multiple lines comment

2.2 Basic Rules of PHP Syntax



2.3 Writing and Executing PHP Code

- Open a Notepad/Notepad++ or Dreamweaver File
- Write PHP Code
- Save file with .php extension
- Save all the files in one directory
- Copy this directory in
 - C:\wamp\www\
 - This is the directory from where wampserver access files

2.3 Writing and executing PHP code...

- Start WAMP server
- Go to localhost either by typing localhost in address bar of the browser or by clicking the WAMP sever icon in the toolbar and selecting localhost
- Select your web directory from the list of project on the WAMP server home page
- Select the file to execute

2.3 COMMENTS IN PHP code...

- A comment in PHP code is a line that is not read/executed as part of the program. Its only purpose is to be read by someone who is looking at the code.
- Comments can be used to:
- Let others understand what you are doing
- Remind yourself of what you did Most programmers have experienced coming back to their own work a year or two later and having to re-figure out what they did. Comments can remind you of what you were thinking when you wrote the code
- PHP supports several ways of commenting:

2.3 COMMENTS IN PHP code...

- Example
- <!DOCTYPE html> <html> <body> <?php // This is a single-line comment # This is also a single-line comment /* This is a multiple-lines comment block that spans over multiple lines */ // You can also use comments to leave out parts of a code line \$x = 5 /* + 15 */ + 5;
 - echo \$x;

?>

- </body>
- </html>

2.4 Writing output to the browser

- echo(): is used to write output on the browser
 - echo("Welcome to PHP");
 - echo "Welcome to PHP";
- print(): can also be used to write out put on the browser
 - print("Welcome to PHP");
 - print "Welcome to PHP";
- printf(): can also be used for writing output

2.5 First PHP program



2.5 First PHP program...





Output from PHP Code

2.6 Integrating HTML with PHP

- echo statement outputs whatever it's told to the browser
- It can output not only plain text but also HTML tags
 - echo "<h1> Welcome to the PHP</h1>";

2.6 Integrating HTML with PHP...

• Using quotation marks:

- echo "<h1 style="color:red"> Welcome to PHP</h1>";

- echo "<h1 style='color:red'> Welcome to PHP</h1>";

- echo "<h1 style=\"color:red\"> Welcome to
 PHP</h1>";

2.6 Integrating HTML with PHP...



2.6 Integrating HTML with PHP...



Welcome to PHP!

Welcome to PHP

Welcome to PHP

3. Using CONSTANTS and Variables

3.1 Constants

- A constant is a placeholder for a value that you reference within your code that is formally defined before using it
 - must begin with a letter or an underscore
 - are case sensitive
 - typically they are named using all capital letters
- PHP function define() is used to assign a value to a constant

3.1 Constants

- Parameters:
- *name*: Specifies the name of the constant
- *value*: Specifies the value of the constant
- *case-insensitive*: Specifies whether the constant name should be case-insensitive. **Default is false**

3.1 Constants...



3.1 Constants...



Favourite Game!

My Favourite Game is Cricket

3.2 Constants are Global

- **Constants are automatically global** and can be used across the entire script.
- The example below uses a constant inside a function, even if it is defined outside the function:
- Example:
- <?php define("GREETING", "Welcome to W3Schools.com!");

```
function myTest() {
    echo GREETING;
}
```

```
myTest();
?>
```

- Variables are "containers" for storing information.
- Variables can store data of different types, and different data types can do different things.

- Begin with \$ sign
- First character must be a letter or underscore
- Remaining characters may be letters, numbers or underscores
- Don't need to declare or initialize
- **Case Sensitive (**\$age and \$AGE)
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Data types does not require to be declare explicitly
- Supports
 - Float, Integer, Boolean, String, Array, Object

- PHP has three different variable scopes:
- Local
- A variable declared **within** a function has a LOCAL SCOPE and can only be accessed within that function
- Global
- A variable declared **outside** a function has a GLOBAL SCOPE and can only be accessed outside a function
- Static
- when a function is completed/executed, all of its variables are deleted. However, sometimes we want a local variable NOT to be deleted. We need it for a further job.
- To do this, use the **static** keyword when you first declare the variable

- Data Types Supported by PHP
 - Float (floating point numbers also called double)
 - Integer (-2,147,483,648 and 2,147,483,647)
 - Boolean (TRUE or FALSE.)
 - String
 - Array (An array stores multiple values in one single variable).
 - Object (An object is a data type which stores data and information on how to process that data. an object must be explicitly declared an object must be explicitly declared).





Favourite Player!

My Favourite Player is Shahid Khan Afridi

The gettype() Function

- returns the type of Provided Variable

The settype() Function

- converts a variable to the type specified by type

Get Type Function

<?php echo "<h1>Get Type And Set Type!</h1>"; \$favnum = 10; echo "Right Now, The type is "; echo gettype(\$favnum)."
br>"; settype (\$favnum, "string"); <--- Set Type Function</pre> echo "Now, The type is "; echo gettype(\$favnum);





Get Type And Set Type!

Right Now, The type is integer Now, The type is string

2.2.1 Type Determination

- A number of functions are available for determining a variable's type
 - It will return 1 if conditions satisfies so these are Boolean functions.
 - Syntax:
 - is_name(\$variable_name)

2.2.1 Type Determination

Some of the common functions are:

- is_array()
- is_bool()
- is_float()
- is_integer()
- is_null()
- is_numeric()
- is_string()

2.2.1 Type determination...

<?php

- echo "<h1>Type Determination!</h1>";
- \$favnum = 7;
- \$favstone = "Ageeg";
- echo is integer(\$favnum)."
br>";
- echo is_string(\$favnum)."
br>";
- echo is_integer(\$favstone)."<<u>br</u>>";
- echo is_string(\$favstone)."
br>";

2>

2.2.1 Type determination...



Type Determination!

1

3. PHP Strings

- A string is a sequence of characters, like "Hello world!".
- PHP String Functions
- Now, we will look at some commonly used functions to manipulate strings.
- Get The Length of a String
- The PHP strlen() function returns the length of a string.
- The example below returns the length of the string "Hello world!":
 - <?php echo strlen("Hello world!"); // outputs 12 ?>

3. PHP Strings

Count The Number of Words in a String
 The PHP str_word_count() function counts the number of words in a string:

<?php echo str_word_count("Hello world!"); // outputs 2 ?>

Reverse a String The PHP strrev() function reverses a string: <?php echo strrev("Hello world!"); // outputs !dlrow olleH ?>

4. PHP is a Loosely Typed Language...

- In the example below, notice that we did not have to tell PHP which data type the variable is.
- PHP automatically converts the variable to the correct data type, depending on its value.
- In other languages such as C, C++, and Java, the programmer must declare the name and type of the variable before using it.
- Example
- <?php
 \$x = 5;
 \$y = 4;
 echo \$x + \$y;
 ?>

Summary of Today's Lecture

- Setting the environment
- PHP overview
 - What is a PHP File
 - Open-source
 - Platform independent
 - What Can PHP Do?
 - Why PHP?
 - Basic PHP Syntax
 - Writing and Executing PHP Code
- PHP constants
 - Constants are Global
- PHP variables
 - Local
 - Global
 - Static
 - Type Determination

Summary of Today's Lecture

- PHP Strings
- PHP is a Loosely Typed Language

THANK YOU