Chapter :04 - Introduction to Hypertext Pre-Processor

Part - II

Short Answers

webStrake

1. What are the common usages of PHP?

- **PHP** is a server side scripting language.
- **PHP** stands for Hypertext Pre-processor, that earlier stood for Personal Home Pages.
- That is used to develop Static websites or Dynamic websites or Web applications.

2. What is Webserver?

- Web server software that runs on server hardware, governs the server side scripting compilation into an intermediate byte-code that is then interpreted by the runtime engine.

3. What are the types scripting language?

PHP, ASP.NET(Microsoft), Java, Static files, Ruby, Scala, Python, JavaScript, ColdFusion, Perl, Erlang.

4. Difference between Client and Server?

Client	Server
The client is a separate hardware machine which is connected with server in the network (Internet/intranet).	The server is a high performance hardware machine it could run more than one application concurrently

5. Give few examples of Web Browser?

A Web browser (commonly referred to as a browser) is a software application for accessing information on the World Wide Web. Each individual Web page, image, and video is identified by a distinct URL, enabling browsers to retrieve and display them on the user's device.

6. What is URL?

Uniform Resource Locator, the address of a specific Web page or file on the Internet.

7. Is PHP a case sensitive language?

PHP is a Case Sensitive(both user defined and PHP defined)

Case sensitive	Case insensitive
• variables • constants • array keys • class properties • class constants	• functions • class constructors • class methods • keywords and constructs (if, else, null, for each, echo etc.)

8. How to declare variables in PHP?

The variable in PHP begins with a dollar ($) symbol and the assignment activity implemented using "=" operator, finally the statement ends with semi colon ";" The semicolon indicates the end of statement

9. Define Client Server Architecture.

The client server architecture introduces application sharing mechanism between two different hardware systems over the network (Internet/intranet).

10. Define Web server.

A Web server is Software that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users

Part - III

Explain in Brief Answer

1. Write the features of server side scripting language.

- Server side scripting languages are working on any one the client server architecture model.
- It is very simple and lightweight open source server side scripting language.
- HTTP Response
- The code remains hidden from users, and browser independent.
- Reduces client side computation overhead

2. Write is the purpose of Web servers?

- The primary function of a web server is to store, process and deliver web pages to clients.
- web server is server software, or hardware to Executive PHP code
- The communication between client and server takes place using the Hypertext Transfer Protocol
- His feature is used for submitting web forms, including uploading of files.
- Response will be generated and sent back to the client machine over the network from Webserver.

3. Differentiate Server side and Client Side Scripting language.

Client side Scripting language	Server Side Scripting language
Its used to web development that involves in scripts that run on the client machine's browser	Its used to web development that involves in scripts on the web server to produce a response that is customized for each client request to the website

Executed in the client side or web browser	Executed in the back side or the Web server
PHP, Python, Java, ASP, are used	HTML, CSS, JavaScript are used
HTTP Request	HTTP Response

4. In how many ways you can embed PHP code in an HTML page?

- PHP script can be written in side of HTML code and save the file with extension of .php.
  <? echo "Hello world..." ; ?>
- The embedded PHP file get executed in the Webserver, the browser receives only the HTML and other client side files.
- None of the raw PHP code is visible in browser which means that PHP interpreter produces raw HTML files to browsers in the client machine.

5. Write short notes on PHP operator.

Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:

1. Arithmetic operators, **2.** Assignment operators, **3.** Comparison operators,
4. Increment/Decrement operators, **5.** Logical operators, and **6.** String operators

Part - IV
Explain in detail

1. Explain client side and server side scripting language.

i. Server side Scripting language

- Its used to web development that involves in scripts on the web server to produce a response that is customized for each client request to the website
- Executed in the back side or the Web server
- HTML, CSS, JavaScript are used
- Provides less security for the data
- HTTP Response
- The code remains hidden from users, and browser independent.
- Reduces client side computation overhead

ii. Client Side Scripting language

- Its used to web development that involves in scripts that run on the client machine's browser
- Executed in the client side or web browser
- CGI/Perl PHP, Python, Java, ASP, are used
- Provides more security for the data
- HTTP Request
- Reduces the load on server, reduces network traffic

2. Discuss in detail about Website development activities.

- Gathering Information: Purpose, Main Goals, and Target Audience.
  - Set goals for the web side
  - Define website's target audience
- Planning: Sitemap and Wireframe Creation.
  - Create a Sitemap sketch
  - Create a wireframe/ mock-up
  - Select technology Stack (Programming language, Frameworks,CMS)
- Design: Page Layouts, Review, and Approval Cycle.
  - Create colourful page layout
  - Review the layout
  - Get client feedback on the layout
  - Change the layout when required
- Content Writing and Assembly.
  - Create new content
  - Get content ready for migration
- Coding.
  - Build and deploy website
  - Add special features and interactivity
  - SEO for the website
- Testing, Review, and Launch.
  - Test the created website
  - Upload the website to server
  - Final (Regression) testing and lunch
- Maintenance: Opinion Monitoring and Regular Updating.
  - Add user report system
  - Fix bugs
  - Keep website up-to-date

3. Explain the process of Web server installation.

The following are the steps to install and configure Apache Httpd Webserver and PHP module in windows server machine.

Step 1:

Go to Apache foundation Website and download the Httpd Webserver Software.

https://httpd.apache.org/download.cgi

Step2:

After downloading .MSI file from Apache foundation Website, user launches the .MSI file and clicks next and next button to finish the installation on server machine. The software takes default port number 130 or 130130.

Once the user finished, the Web server software is installed and configured on server hardware machine as a service.

Step 3:

To test the installation of Apache Httpd Webserver, enter the following URL from your Web browser which is installed in your client machine.

https://localhost:130/ or https:// localhost:130130

The output page that says "Its works"

Step 4:

Administrator user can start, stop and restart the Web server service at any time via windows Control panel. Once the services stops, the client machine will not receive the response message from server machine.

Step 5:

Webserver's configuration setting file "httpd.conf " is located in the **conf** directory under the apache installation directory. Edit this file and enable the PHP module to run PHP scripting language.

4. Discuss in detail about PHP data types.

PHP scripting language supports 13 (But 8 data type) primitive data types.

Data Types plays important role in all programming languages to classify the data according to the logics.

PHP supports the following data types.

1. String **2.** Integer **3.** Float
4. Boolean **5.** Array **6.** Object
7. NULL **8.** Resource

String: String is a collection of characters within the double or single quotes like "Computer Application" or 'Computer Application'. Space is also considered as a character.

Integer: Integer is a data type which contains non decimal numbers.

Float: Float is a data type which contains decimal numbers.

Boolean: Boolean is a data type which denotes the possible two states, TRUE or FALSE

Array: Array is a data type which has multiple values in single variable.

Object: PHP object is a data type which contains information about data and function inside the class.

NULL: Null is a special data type which contains a single value: NULL

Resources: Resource is a specific variable, it has a reference to an external resource.

Note: The var_dump() system define function, returns structured information (type and value) about variables in PHP. and for Arrays and objects are explored recursively with values indented to show structure.

5. Explain operators in PHP with example.

Operators in PHP

Operator is a symbol which is used to perform mathematical and logical operations in the programming languages. Different types of operator in PHP are:

1. Arithmetic operators, **2.** Assignment operators, **3.** Comparison operators,
4. Increment/Decrement operators, **5.** Logical operators, and **6.** String operators.

Arithmetic operators

The arithmetic operators in PHP perform general arithmetical operations, such as addition, subtraction, multiplication and division etc

Operator	Name	Result
+	Addition	This operator performs the process of adding numbers (Sum of $x and $y)
-	Subtraction	This operator performs the process of subtracting numbers (Difference of $x and $y)
*	Multiplication	This operator performs the process of multiplying numbers(Product of $x and $y)
/	Division	This operator performs the process of dividing numbers(Quotient of $x and $y)
%	Modulus	This operator performs the process of finding remainder in division operation of two numbers (Remainder of $x divided by $y)

Assignment Operators:

Assignment operators are performed with numeric values to store a value to a variable. The default assignment operator is "=". This operator sets the left side operant value of expression to right side variable. Refer Table 4.2.

Assignment	Same as...	Description
x = y	x = y	This operator sets the left side operant value of expression to right side variable
x += y	x = x + y	Addition
x -= y	x = x - y	Subtraction
x *= y	x = x * y	Multiplication
x /= y	x = x / y	Division
x %= y	x = x % y	Modulus

Comparison Operators:

Comparison operators perform an action to compare two values. These values may contain integer or string data types

Operator	Name	Result
==	Equal	Returns true if $x is equal to $y
===	Identical	Returns true if $x is equal to $y, and they are of the same type
!=	Not equal	Returns true if $x is not equal to $y
<>	Not equal	Returns true if $x is not equal to $y
!==	Not identical	Returns true if $x is not equal to $y, or they are not of the same type
>	Greater than	Returns true if $x is greater than $y
<	Less than	Returns true if $x is less than $y
>=	Greater than or equal to	Returns true if $x is greater than or equal to $y
<=	Less than or equal to	Returns true if $x is less than or equal to $y

Increment and Decrement Operators:

Increment and decrement operators are used to perform the task of increasing or decreasing variable's value. This operator is mostly used during iterations in the program logics.

Operator	Name	Description
++$x	Pre-increment	Increments $x by one, then returns $x
$x++	Post-increment	Returns $x, then increments $x by one
--$x	Pre-decrement	Decrements $x by one, then returns $x
$x--	Post-decrement	Returns $x, then decrements $x by one

Logical Operators:

Logical Operators are used to combine conditional statements.

Operator	Name	Example	Result
and	And	$x and $y	True if both $x and $y are true
or	Or	$x or $y	True if either $x or $y is true
xor	Xor	$x xor $y	True if either $x or $y is true, but not both
&&	And	$x && $y	True if both $x and $y are true
||	Or	$x || $y	True if either $x or $y is true
!	Not	!$x	True if $x is not true

String Operators:

Two operators are used to perform string related operations such as Concatenation and Concatenation assignment.

Operator	Name	Example	Result
.	Concatenation	$text1 . $text2	Concatenation of $text1 and $text2
.=	Concatenation assignment	$text1 .= $text2	Appends $text2 to $text1

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