Learning unit 2

1. **Explain php programing beyond definition?**

PHP is an open-source server-side scripting language that many devs use for web development. It is also a general-purpose language that you can use to make lots of projects, including Graphical User Interfaces (GUIs).

PHP is a script language and interpreter that is freely available and used primarily on Linux Web servers. PHP, originally derived from Personal Home Page Tools, now stands for PHP: Hypertext Preprocessor, which the PHP FAQ describes as a "recursive acronym."

PHP executes on the server, while a comparable alternative, JavaScript, executes on the client. PHP is an alternative to Microsoft's Active Server Page (ASP) technology. As with ASP, the PHP script is embedded within a Web page along with its HTML. Before the page is sent to a user that has requested it, the Web server calls PHP to interpret and perform the operations called for in the PHP script

What Can PHP Do?

* 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.Why do we need to use php programming?**

Why to use PHP? PHP can actually do anything related to server-side scripting or more popularly known as the backend of a website. For example, PHP can receive data from forms, generate dynamic page content, can work with databases, create sessions, send and receive cookies, send emails etc.

**Advantages:**

* Platform Independent
* Open source and dynamic Library support
* Organized
* Database Connectivity

**3.What is the latest php version we have today and list the updated features for the latest 3 release?**

* the latest php version used to day is **PHP 8.2**
* **list the updated features for the latest 3 release?**

Version PHP (\*) Release

7.2 - 8.0 March 3rd, 2020

7.3 - 8.1 September 8th, 2020

8.0 - 8.2 February 8th, 2022

8.1 - 8.2 February 7th, 2023

**4. What is different between new release vs stable release of a software product?**

* **A release software** is the distribution of the final version or the newest version of a software application. A software release may be public or private and generally signifies the unveiling of a new or upgraded version of the application.
* **A stable release** is a version that has been tested as thoroughly as possible and is as reliable as we can make it. It does not have all the new features of a beta release and it does not have the latest fixes for problems.

**5. What are the main features of php programming?**

**The main features of php is**;

* **open source scripting language:** so you can free download this and use.
* **PHP is a server site scripting language**. It is open source scripting language. It is widely used all over the world. It is faster than other scripting language. Some important features of php are given below
  1. **Simple**

It is very simple and easy to use, compare to other scripting language it is very simple and easy, this is widely used all over the world.

* 1. **Interpreted**

It is an interpreted language, i.e. there is no need for compilation.

* 1. **Faster**

It is faster than other scripting language e.g. asp and jsp.

* 1. **Open Source**

Open source means you no need to pay for use php, you can free download and use.

* 1. **Platform Independent**

PHP code will be run on every platform, Linux, Unix, Mac OS X, Windows.

* 1. **Case Sensitive**

PHP is case sensitive scripting language at time of variable declaration. In PHP, all keywords (e.g. if, else, while, echo, etc.), classes, functions, and user-defined functions are NOT case-sensitive.

* 1. **Error Reporting**

PHP have some predefined error reporting constants to generate a warning or error notice.

* 1. **Real-Time Access Monitoring**

PHP provides access logging by creating the summary of recent accesses for the user.

* 1. **Loosely Typed Language**

PHP supports variable usage without declaring its data type. It will be taken at the time of the execution based on the type of data it has on its value.

**6. With a help of examples explain why php is case sensitive?**

* **EX 1:** // 👇 you can create two variables like this:

$num = 99;

$NUM = 20;

echo $num; // 99

echo "\n".$NUM; // 20

// 👇 but you can't have two functions like this:

function greetings (){

echo "Hello World!";

}

// 👇 Fatal error: Cannot redeclare GREETINGS ()

function GREETINGS (){

echo "Hello World!";

}

As you can see in the example above, the variables $num and $NUM can have different values.

But when you declare two functions with the same name, PHP produces a fatal error: cannot redeclare the function.

But class properties are case sensitive, so you can create two different properties with the same name, but different cases:

**EX 2:**

public $name = "Nathan";

public $NAME = "Jack";

}

$h = new HUMAN();

echo $h->name; // Nathan

echo "\n".$h->NAME; // Jackth the same name, but different cases:

**7. What and why do we use comments while writing php codes, with a help of example explain different types of php comments?**

**Why do we need comments in php codes**

* Comments Are a Lightweight Way to Let You Experiment
* Comments Let You Exhibit Without Getting in Your Way
* You Can Generate Code Documentation with Comments
* Comments Explain Why You Wrote Something

**With examples types of comments in php code**

1. **multiple-line comments**

<!DOCTYPE html>

<html>

<body>

<?php

// This is a single-line comment

# This is also a single-line comment

?>

</body>

</html>

1. **multiple-line comments**

<!DOCTYPE html>

<html>

<body>

<?php

/\*

This is a multiple-lines comment block

that spans over multiple

lines

\*/

?>

</body>

</html>

**8. Differentiate with real example the following php output functions:**

1. **Echo() vs print()**

* The differences are small: echo has no return value while print has a return value of 1 so it can be used in expressions.
* echo can take multiple parameters (although such usage is rare) while print can take one argument. echo is marginally faster than print.

**EX. For echo**

<?php

echo "<h2>PHP is Fun!</h2>";

echo "Hello world!<br>";

echo "I'm about to learn PHP!<br>";

echo "This ", "string ", "was ", "made ", "with multiple parameters.";

?>

**Ex.for print**

<?php

/\*print string\*/

print "Hello world\n";

/\*print variable values\*/

$text = "Sample text";

$lucky\_number = 100;

print "</br>";

print "Value of text is: " . $text . " Lucky number is: " . $lucky\_number . "\n";

?>

**B. Print () vs printf()**

* **The printf()** function outputs a formatted string. The arg1, arg2, ++ parameters will be inserted at percent (%) signs in the main string.
* **print** is also a statement, used as an alternative to echo at many times to display the output.
* **Ex:** print("Some Text $var some other text");

1. **Printf() vs print\_r()** The printf( ) function builds a formatted string by inserting values into a template. The print\_r( ) function is useful for debugging—it prints the contents of arrays, objects, and other things, in a more-or-less human-readable form.

**EX: print\_r(mixed $value, bool $return = false): string|bool.**

**Print\_r vs var\_dump()** The var\_dump() function displays structured information about variables/expressions including its type and value. Whereas The print\_r() displays information about a variable in a way that's readable by humans.

**9. List and Describe different datatype we have in php by categorizing them in scalar, compound and special datatypes**

* **Scalar data Types:** a variable is called scalar type if it holds singular value only

**There are 4 scalar data types in PHP.**

1. Boolean
2. integer
3. float
4. string

* **Compound Types**: includes the values that contain more than one value.

**There are 2 compound data types in PHP.**

* **array**
* **object**

**special types**: It is the storing of a reference to functions and resources external to PHP.

**There are 2 special data types in PHP.**

1. resource

2. NULL

**10. What is php variable, list the variable naming rules you have to obey while defining a variable in php?**

* **php variable :** are characters that stores value or information such as text or integers in your code.
* **list the variable naming rules you have to obey while defining a variable in php?**
* A variable starts with the $ sign, followed by the name of the variable.
* A variable name must start with a letter or the underscore character.
* A variable name cannot start with a number.
* A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )

**11. List and explain at least 10 super global variables?**

* **$GLOBALS** is a PHP super global variable which is used to access global variables from anywhere in the PHP script (also from within functions or methods).
* **$\_SERVER** is a PHP super global variable which holds information about headers, paths, and script locations.
* **PHP $\_REQUEST** is a PHP super global variable which is used to collect data after submitting an HTML form.
* **PHP $\_POST** is a PHP super global variable which is used to collect form data after submitting an HTML form with method="post". $\_POST is also widely used to pass variables.
* **PHP $\_GET** is a PHP super global variable which is used to collect form data after submitting an HTML form with method="get".
* **$\_FILES** is an associative array containing items uploaded via HTTP POST method.
* **$\_ENV** is another super global associative array in PHP. It stores environment variables available to current script.
* **A cookie** is a variable which is stored in a user's web browser.
* **Session** variables are stored in associative array called $\_SESSION.

# References

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