**IRADUKUNDA Marcel**

**Reg No: 21RP04320**

**IT L6 Y2 B**

**DEVELOP BACK-END USING PHP ITLBP601**

**ASSIGNMENT 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** file always saved as .php as extension , and saved on htdocs so that can be available for accessibility.

## **What Does PHP Mean?**

The abbreviation PHP initially stood for Personal Homepage. But now it is a recursive acronym for Hypertext Preprocessor. (It's recursive in the sense that the first word itself is an abbreviation, so the full meaning doesn't follow the abbreviation.)

## **Advantages of PHP**

* Cross-Platform: PHP is platform-independent.
* Open Source: PHP is open source. The original code is made available to everyone who wants to build upon it
* Easy to learn: PHP is not hard to learn for absolute beginners.
* Supportive Community: PHP has a very supportive online community

**Hello world in Php**

<?php

echo "Hello World";

?>

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

Because PHP allows web developers to create dynamic content and interact with databases. PHP is known for its simplicity, speed, and flexibility.

* Because **It’s easy to learn and use.**
* **Because It’s open source (and therefore free!):**
* **Because It’s fast and secure**
* **Because It is well connected with databases:**

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

release?

Nowadays latest Php version is PHP 8.2

Released: 08 Dec 2022

[readonly,classes](https://php.watch/versions/8.2/readonly),[null,false](https://php.watch/versions/8.2/null-false-types),[true](https://php.watch/versions/8.2/true-type).

PHP 8.1, released in 2021, brings major new features such as (Enums,Fiber,Never,Return type….

PHP 8.0, on the 25th year of PHP history, brings several important features such as

Union Types,JIT ,Constructor Property Promotion.

PHP 7.4, the final release in the PHP 7.x series. PHP 7.4 brings

Typed properties ,underscore numeric separator, and other minor improvements to PHP.

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

A normal user (that is not a developer) will not want STABLE (until he is really experienced and has good reasons to use it; at his own risk of course). Normal users choose the latest RELEASE. STABLE is for developers that improve the current product that will be the next RELEASE (most of this work are bug fixes and sometimes new features that don't break the userland and 3rd-party applications).

5.What are the main features of php programming?

* PHP can add, delete, modify data in your database.
* Flexibility
* Objective oriented
* PHP can be used to control user-access.
* PHP can encrypt data.
* PHP is platform independent
* Case-sensitive
* Error reporting and handling
* Free and open-source

6.

**In PHP, variables and constants are case sensitive, while functions are not case sensitive.**

**Examples:**

**(**$age **and** $AGE **are two different variables).**

// 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!";

}

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

**A comment in PHP code** is a line that is not executed as a part of the program. Its only purpose is to be read by someone who is looking at the code.

* Because Can Let others understand your code
* Because Can Remind yourself of what you did

EX1.

<?php

// This is a single-line comment  
  
# This is also a single-line comment

?>

Ex2.

<?php

/\*

This is a multiple lines comment block  
  
\*/

?>

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

**a. Echo() vs print()**

echo and print are more or less the same. They are both used to output data to the screen. 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.

**b. Print() vs printf():**

printf() outputs a formatted string whereas print() outputs one or more strings.

ex for printf():

$number = 8;

$str = "Solar System";

printf("There are %u planets in the %s.", $number, $str);

ex for print():

print "Hello, world!";

**c. Printf() vs print\_r()**

function provides a convenient way to print out a variable's value, including string, number, array, objects etc.

**ex:**

<?php

$arr=array("Monday","Tuesday","Wednesday","Thursday","Friday","Saturday","Sunday");

**?>**

**d. 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.

Ex1.

<?php

$a = array(1, 2, array("a", "b", "c"));

var\_dump($a);

?>

Ex2.

<?php

$a = array ('a' => 'apple', 'b' => 'banana', 'c' => array ('x', 'y', 'z'));

print\_r ($a);

?>

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

* It holds only single value. There are 4 scalar data types in PHP.

1. Boolean : It holds only two values: **TRUE (1)**or **FALSE (0)**.
2. [I](https://www.javatpoint.com/php-data-types" \l "integer)nteger : An integer can be either positive or negative, Integer can be decimal (base 10), octal (base 8), or hexadecimal (base 16).
3. Float :A floating-point number is a number with a decimal point. Ex : <?php $n1=19.34; ?>
4. String : A string is a non-numeric data type. It holds letters or any alphabets, numbers, and even special characters. Ex : <?php $company ="Javatpoint"; ?>

## Compound Types

It can hold multiple values. There are 2 compound data types in PHP.

1. [A](https://www.javatpoint.com/php-data-types" \l "array)rray : An array is a compound data type. It can store multiple values of same data type in a single variable. Ex:

<?php

$bikes= array("Royal ,Enfield","Yamaha","KTM");

1. var\_dump($bikes);

echo"</br>";

echo"Array Element1: $bikes[0] </br>";

echo"Array Element2: $bikes[1] </br>";

echo"Array Element3: $bikes[2] </br>";

?>

1. Object : Objects are the instances of user-defined classes that can store both values and functions

Special Types

1.[R](https://www.javatpoint.com/php-data-types" \l "resource)esource : Resources are not the exact data type in PHP. Basically, these are used to store some function calls or references to external PHP resources. **For example** - a database call. It is an external resource.

2.Null : Null is a special data type that has only one value: **NULL**. There is a convention of writing it in capital letters as it is case sensitive

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

PHP variables are characters that stores value or information such as text or integers in your code.

In PHP, a variable is declared using a **$ sign** followed by the variable name.

**Rules for declaring PHP variable:**

A variable must start with a dollar ($) sign, followed by the variable name.

* It can only contain alpha-numeric character and underscore (A-z, 0-9, \_).
* A variable name must start with a letter or underscore (\_) character.
* A PHP variable name cannot contain spaces.
* One thing to be kept in mind that the variable name cannot start with a number or special symbols.
* PHP variables are case-sensitive, so $name and $NAME both are treated as different variable.

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

* $\_SERVER : $\_SERVER is a PHP super global variable which holds information about headers, paths, and script locations.
* $\_REQUEST : PHP $\_REQUEST is a PHP super global variable which is used to collect data after submitting an HTML form.
* $\_POST : 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.
* $\_GET : PHP $\_GET is a PHP super global variable which is used to collect form data after submitting an HTML form with method="get".
* $\_FILES :The global predefined variable $\_FILES is an associative array containing items uploaded via HTTP POST method.
* $GLOBALS :$GLOBALS is a PHP super global variable which is used to access global variables from anywhere in the PHP script
* $\_ENV :$\_ENV is another superglobal associative array in PHP. It stores environment variables available to current scrip
* $\_COOKIE : he superglobal $\_COOKIE stores variables passed to current script along with HTTP request in the form of cookies.
* $\_SESSION : PHP $\_SESSION is an associative array that contains all session variables. It is used to set and get session variable values. Example: Store information.

references:

<https://www.freecodecamp.org/news/what-is-php-the-php-programming-language-meaning-explained/>

<https://www.jobsity.com/blog/8-reasons-why-php-is-still-so-important-for-web-development>

[https://php.watch/versions#:~:text=PHP 8.1%2C released in 2021,legacy features by deprecating them.](https://php.watch/versions" \l ":~:text=PHP 8.1%2C released in 2021,legacy features by deprecating them.)

[https://forums.freebsd.org/threads/stable-vs-release-difference.48388/#:~:text=Normal users choose the latest,and 3rd-party applications).](https://forums.freebsd.org/threads/stable-vs-release-difference.48388/" \l ":~:text=Normal users choose the latest,and 3rd-party applications).)

<https://www.interviewbit.com/blog/features-of-php/>

[https://sebhastian.com/is-php-case-sensitive/#:~:text=PHP classes are a mix,they are partially case-sensitive.&text=As you can see in,error%3A cannot redeclare the function.](https://sebhastian.com/is-php-case-sensitive/" \l ":~:text=PHP classes are a mix,they are partially case-sensitive.&text=As you can see in,error%3A cannot redeclare the function.)

[https://stackoverflow.com/questions/3406171/php-var-dump-vs-print-r#:~:text=The var\_dump() function displays,way that's readable by humans.](https://stackoverflow.com/questions/3406171/php-var-dump-vs-print-r" \l ":~:text=The var_dump() function displays,way that's readable by humans.)

[https://www.javatpoint.com/php-data-types#:~:text=There are 4 scalar data,string](https://www.javatpoint.com/php-data-types" \l ":~:text=There are 4 scalar data,string)