IPRC TUMBA
Integrated Polytechnic Regional College

P.O. Box 6638 Rulindo
Tel: +250 786000011
Email:info@iprctumba.rp.ac.rw
www.iprctumba.rp.ac.rw

RWANDA POLYTECHNIC

REG N^O: 21RP09112

MODULE: Develop Back-end using PHP

RTQF: ITLBP601

1. Explain PHP programing beyond definition?

- Php is a scripting programming language that used to develop dynamic website.

- PHP was invented in 1994 by Rasmus Lerdorf, at the beginning php abbreviation was "personal home page", but as it developed it changed the abbreviation to "hypertext preprocessor". Other factors that made php so popular was so easy to learn, cross platform (used in different platforms), simple and flexibility as it server side scripting language php made it easy for the administrators to track the customers so easily, apart from php there are other known scripting language platform such as asp.net (active server page), SP (server page) and pluge on rail platform does the same as php.

2. Why do we need to use php programming?

- Cross platform: php can run in different devices' operating systems.
- Simple: as other programming languages are difficult to learn not the same on php it is easily.
- Flexibility: php can work in different internet browser such as google chrome, Microsoft edge, Mozilla fire fox and others.
- Open-Source: PHP is freely available to download and use.
- Fast: PHP uses its memory, minimizing server workload and increasing performance. PHP can be up to 382%

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

- The latest version of php we have today is php 8.3

  - PHP 8.3 is the active development branch of PHP versions. It's the current target for new RFCs.

  - PHP 8.2 PHP 8.2 is the latest PHP version which brings read-only classes, DNF types, null, false, and true types, sensitive parameter redaction support, a new random extension, and several new features along with a few deprecations.

  - PHP 8.1, released in 2021, brings major new features such as Enums, Fibers, never return type, Intersection Types, read-only properties, and more, while ironing out some of its undesired legacy features by deprecating them.

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

- Stable release: of a version of a software that has been tested and verified. while new release

- New release: Is the distribution of the final version or the newest version of a software application?

5. What are the main features of php programming?

- 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

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

- PHP is case sensitive in terms of variables and constant for instance:
    - $Address is totally different from $address.

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

- Comment refers to as description of what your program is going to
  Do and can't be executed by compiler on interpreter.

a) Java Single Line Comment

The single-line comment is used to comment only one line of the code.

- example: //This is single line comment

b) Java Multi Line Comment

The multi-line comment is used to comment multiple lines of code.

- example: /*

    This

    is

    multi line

comment

*/

c) Java Documentation Comment

Documentation comments are usually used to write large
Programs for a project or software application as it helps to create
documentation API.

- example: /**

  *
  *We can use various tags to depict the parameter
  *or heading or author name
  *We can also use HTML tags
  *
  */

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

(a) echo() vs print():

- Example echo: $echo ('Hello class'); //output Hello class

- Example print: print 'Hello class'; //output Hello class

(b) Print() vs printf()
- example print:

  $print('Hello class'); // output: Hello class

- example printf:

```php
$<?php
$number = 12345;
printf("%f",$number);
?>
//output: 12345.000000
```

(c) Printf() vs print_r()

- example printf:

```php
$<?php
$number = 12345;
printf("%f",$number);
?>
//output: 12345.000000
```

- example print_r:

```php
$<?php
//integer variable
$input1 = 501;
print_r('Integer Value: '.$input1);
echo "</br>";
?>
//output: Integer Value: 501
```

(d) Print_r vs var_dump()

- o example print_r:

```
$<?php
//integer variable
$input1 = 501;
print_r('Integer Value: '.$input1);
echo "</br>";
?>
//output: Integer Value: 501
```

- o example var_dump:

```
$<?php

// PHP code to illustrate the working
//  of var_dump() Function

var_dump(var_dump(2, 2.1, TRUE, array(1, 2, 3, 4)));

?>


//output: int(2)

float(2.1)

bool(true)

array(4) {

[0]=> int(1)

[1]=> int(2)

[2]=> int(3)

[3]=> int(4)

}
NULL
```

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

- ✓ Scalar Types

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

    - Boolean: Booleans are the simplest data type works like switch. It holds only two values: TRUE (1) or FALSE (0). It is often used with conditional statements.

    - Integer: Integer means numeric data with a negative or positive sign. It holds only whole numbers, i.e., numbers without fractional part or decimal points.

    - Float: A floating-point number is a number with a decimal point. Unlike integer, it can hold numbers with a fractional or decimal point, including a negative or positive sign.

    - String: A string is a non-numeric data type. It holds letters or any alphabets, numbers, and even special characters.

- ✓ Compound Types

  PHP Data Types: Compound Types

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

    - Array: An array is a compound data type. It can store multiple values of same data type in a single variable.
    - Object: Objects are the instances of user-defined classes that can store both values and functions. They must be explicitly declared.

- ✓ PHP Data Types: Special Types

  There are 2 special data types in PHP.

    - Resource: 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.

- 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?

- def. variable are containers for storing data values

  - 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 _)
  - Variable names are case-sensitive ($age and $AGE are two different variables)

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

- The PHP super global variables are:

- $GLOBALS: $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).
- $_SERVER:$_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: $_FILES is a global constant or predefined variable in PHP that can be used to associate array items that are uploaded through the HTTP POST method.
- $_ENV: is a global constantIt stores environment variables available to current script.
- $_COOKIE:PHP setcookie() function is used to set cookie with HTTP response. Once cookie is set, you can access it by $_COOKIE superglobal variable.
- $_SESSION:In general, session refers to a frame of communication between two medium. A PHP session is used to store data on a server rather than the computer of the user.

Reference

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