



Name :Ndayishimiye jean de Dieu

RegNo:21RP02800

LEVEL:6 YEAR 1 IT A

PHP ASSIGNMENT INDIVIDUALLY

1. Explain php programing beyond definition?

PHP was standards as Person Home Page and it was used by some programmers to build or create web pages and websites.but now php is known as **PHP: Hypertext Preprocessor**, so nowa days php is an open source scripting languages which was owned by developer called Rasmus in three decades ago,

This php has general-purpose whis says that it's a language that any one can use to make lots of projects, such as web designing,websites with Graphical User Interfaces.

PHP is platform which defined as independent language because You don't have to have a particular OS(operating system) to use. Thas why it runs on every platform, whether it's Mac, Windows, or Linux.

When we say Php programming, we understand that it is the process of performing a particular computation, usually by designing and building different an executable computer program. So In Programming also involves tasks such as analysis, generating algorithms, profiling algorithms etc.

2. Why do we need to use php programming?

We need to use php in programing because if we compare php with other programming languages,we find that php does not need manual or intesnive studying.and also the syntax of php are logical and organized well.and also the commnds are very easy to understand.for the other reason why the developers likes to choose php use ist because it helps them to make or create dynamic contents.

By conclusion we need to use php because of its uniquely the developers seeing on it.

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 to day is php v8.2. so the new features which added in php v8.2 are included:readonly,null,false and true as stand-alone types,deprecated dynamic properties,performance improvements.

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

New release is defined as 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 while the stable release is defined as STABLE is for developers that improve the current product that will be the next RELEASE.

5. What are the main features of php programming?

They are two main features of php are:

- PHP is platform independent
- PHP is server-side script and executes on web server.

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

PHP classes are a mix between variables and functions, so they are partially case-sensitive because of the some reasons. As you can see in the example I will given below, the variables \$num and \$NUM whicha are the same somehow can have different values. But when you declare two functions with the same name, the PHP can produces an error: it means that cannot redeclare the function.

Look at the example below;

- 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!";  
}
```
- Fatal error: Cannot redeclare GREETINGS()

```
function GREETINGS(){  
    echo "Hello!";  
}
```

According to this example its why we say that php is case sensitive.

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

When we say php comments, someone's understand the section or combination of codes which written but will not executed when the programmer or developer runs the program.

So we need php comments in our programming in order to help someone to read well the codes while he/she is looking in the codes. And also php comments can be used to let others understand your code and remind yourself what you did during your programming.

They are two main types of php comments, which include:

- **Single line comments:** these are comments which used in programming by developers to help them to remember what they did. These comments always start with two forward slashes (//).
Example: `//this is a line comment`
`//jhajhdkjahdfkja`
- **multiline comments:** these are comments which used by developer for that purpose of helping others to understand codes, and these comments are made by largest description text of codes.
Example :
`/*adhfsdhfksjdhksjdhksjdhks`
`Sdjhksjdhkshdkjshdkjshdkjshdkjshdk`
`Sdjlskjhdlskjdnlskjdnlskjshdkjshdk */`

What you have to know here, is that all comments in programming are ignored by compiler.

8 Differentiate with real example the following php output functions:

- a. Echo() vs print()
 - b. Print() vs printf()
 - c. Printf() vs print_r()
 - d. Print_r vs var_dump()
- a) 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.
 - b) The two PRINT procedures perform formatted output. PRINT performs output to the standard output stream (IDL file unit -1), while PRINTF requires a file unit to be explicitly specified. Note: IDL uses the standard I/O function sprintf to do its formatting
 - c) The print() 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
 - d) The Var dump() function displays structured information about variables/expressions including its type and value

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

In php, we have the different datatypes which can be listed as:

Special types:

- PHP NULL

The special NULL value is used to represent empty variables in PHP.

- PHP Resources

A resource is a special variable, holding a reference to an external resource

Scalar datatype

- **Php integers:** this datatype is defined as a whole number which can include the negative numbers and positive numbers. (-2,-1,0,1,2,3....). integers can be specified in base 10, base 16 but prefixed with 0 or base 8 and prefixed by 0.

Example :

```
int a=123;
int b=23;
<?php
$a = 123; // decimal number
var_dump($a);
echo "<br>";
$b = -123; // a negative number
var_dump($b);
echo "<br>";
$c = 0x1A; // hexadecimal number
var_dump($c);
echo "<br>";
$d = 0123; // octal number
var_dump($d);
?>
```

- **Php string:** is the datatype which is defined as the sequences of characters where every character is the same as a byte. This datatype can hold the letters, numbers, and special characters.

Example:

```
<?php
$a = 'Hello world!';
echo $a;
echo "<br>";
$b = "Hello world!";
echo $b;
echo "<br>";
?>
```

- **Php Float:** float is (also known as "Floating point numbers", "doubles", or "real numbers") are decimal or fractional numbers, like demonstrated in the example below

Example:

```
<?php
$a = 1.234;
var_dump($a);
echo "<br>";
$b = 10.2e3;
var_dump($b);
echo "<br>";
$c = 4E-10;
```

```
var_dump($c);
?>
```

- PHP Booleans :Booleans are like a switch it has only two possible values either 1 (true) or 0 (false)

Example:

```
<?php
// Assign the value TRUE to a variable
$show_error = true;
var_dump($show_error);
?>
```

Compound datatype:

- PHP Arrays

An array is a variable that can hold more than one value at a time. It is useful to aggregate a series of related items together, for example a set of country or city names.

Example :

```
<?php

$colors = array("Red", "Green", "Blue");

var_dump($colors);

echo "<br>";

$color_codes = array(

    "Red" => "#ff0000",

    "Green" => "#00ff00",

    "Blue" => "#0000ff"

);var_dump($color_codes);

?>
```

- PHP Objects :
An object is a data type that not only allows storing data but also information on, how to process that data

Example :

```
<?php
// Class definition
class greeting{
    // properties
    public $str = "Hello World!";

    // methods
    function show_greeting(){
```

```

        return $this->str;
    }
}

// Create object from class
$message = new greeting;
var_dump($message);
?>

```

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. It is important to know that variables in PHP are usually represented by a dollar sign (\$) followed by the name of the variable.

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?

Some predefined variables in PHP are "superglobals", which means that they are always accessible, regardless of scope - and you can access them from any function, class or file without having to do anything special. These are follow:

- \$GLOBALS
- \$_SERVER
- \$_REQUEST
- \$_POST
- \$_GET
- \$_FILES
- \$_ENV
- \$_COOKIE
- \$_SESSION

1.Re:

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjdvMLNjub8AhXxhf0HHQMgC7MQFnoECAAsQAQ&url=https%3A%2F%2Fen.wikipedia.org%2Fwiki%2FPHP&usg=AOvVaw1XwicZjwRZDUHxK8zuWOk3>

2.Re:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewi0sZDojub8AhULg_0HHZJAAYgQFnoECBIQAw&url=https%3A%2F%2Fwww.netsolutions.com%2Finsights%2Fwhat-is-php%2F&usg=AOvVaw2KvCq2fYbgCMu3i0ZGu53A

3.Re: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjn9o6Aj-b8AhXd_rslHdF6A6gQFnoECAgQAQ&url=https%3A%2F%2Fwww.netsolutions.com%2Finsights%2Fwhats-new-in-php-8-1%2F&usg=AOvVaw1_0mVDtL-0r8tpD04ATW83

4.Re: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewiGsPOXj-b8AhUFi_0HHT0GAVEQFnoECAsQAQ&url=https%3A%2F%2Fforums.freebsd.org%2Fthreads%2Fstable-vs-release-difference.48388%2F&usg=AOvVaw12DIstgTz7ilMa4YVGQCaf

5.Re: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjlgYrWj-b8AhXlhf0HHRYmD_oQFnoECAoQAQ&url=https%3A%2F%2Fwww.freecodecamp.org%2Fnews%2Fwhat-is-php-the-php-programming-language-meaning-explained%2F&usg=AOvVaw1VMQ19aHD1d76UydQwg6Ox

6.Re: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjdgs7sj-b8AhVnh_0HHd7wB8sQFnoECA4QAQ&url=https%3A%2F%2Fsebastian.com%2Fis-php-case-sensitive%2F&usg=AOvVaw24G_790m2Eaf-aLBI5XWtZ

7.Re: <https://blog.hubspot.com/website/php-comments>

8.Re:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewiJhZKEkOb8AhWDTOUKHcQ1CjUQFnoECAgQAQ&url=https%3A%2F%2Fwww.w3schools.com%2Fphp%2Fphp_echo_print.asp&usg=AOvVaw1qD6kAi6JkkBMmt1xy3Is8

9.Re:

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjcouy2kOb8AhWbhf0HHaYqDbkQFnoECAkQAQ&url=https%3A%2F%2Fwww.techtarget.com%2Fsearcharchitecture%2Fdefinition%2Fdata-type&usg=AOvVaw1UrqEIUnmnViFd3BDiFe1t>

10.Re:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewiljerTkOb8AhXchv0HHWBpA0EQFnoECA0QAQ&url=https%3A%2F%2Fwww.w3schools.com%2Fphp%2Fphp_variables.asp&usg=AOvVaw1LM4Wx2fkrMMsoKwKYwtuC

11.Re:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewjmx3mkOb8AhWkgf0HHSKKASUQFnoECA0QAQ&url=https%3A%2F%2Fwww.w3schools.com%2Fphp%2Fphp_superglobals.asp&usg=AOvVaw3tzTPmXCI-Wnn6Obib50gH