

## **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

##### **a. 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.

**b. Interpreted**

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

**c. Faster**

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

**d. Open Source**

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

**e. Platform Independent**

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

**f. 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.

**g. Error Reporting**

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

**h. Real-Time Access Monitoring**

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

### **i. 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>
```

### 2. 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:

### a. 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");`

- c. **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

[https://www.w3schools.com/php/func\\_var\\_print\\_r.asp](https://www.w3schools.com/php/func_var_print_r.asp)

<https://www.php.net/manual/en/function.print-r.php>

<http://www.expertsmind.com/questions/what-is-the-difference-between-print-and-printf-301102897.aspx>

<https://www.quora.com/How-many-data-types-are-there-in-PHP>

[https://www.findresultsnow.co/web?q=php%20coding&o=1670417&akid=1000000270frn143363568680kwd-295271837746&gclid=EAlaIqObChMI mob\\_8NHI\\_AIV6RkGAB2K8wqREAAYyAAEgJdS\\_D\\_BwE&ueid=6601f90d-69b7-4ee8-a234-919088ca1726&qo=semQuery&ad=semA&ag=fw&an=google\\_s](https://www.findresultsnow.co/web?q=php%20coding&o=1670417&akid=1000000270frn143363568680kwd-295271837746&gclid=EAlaIqObChMI mob_8NHI_AIV6RkGAB2K8wqREAAYyAAEgJdS_D_BwE&ueid=6601f90d-69b7-4ee8-a234-919088ca1726&qo=semQuery&ad=semA&ag=fw&an=google_s)

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

<https://www.techtarget.com/whatis/definition/PHP-Hypertext-Preprocessor#:~:text=PHP%2C%20originally%20derived%20from%20Personal,JavaScript%2C%20executes%20on%20the%20client.>