

Name: NIYONKURU David

Reg\_Number:21RP01643

Module: Developing backend using PHP

## 1. Explain php programing beyond definition?

- Php is the most widely used open source and general purpose server side scripting language used mainly in web development to create dynamic websites and applications.

It is not only used to web app of many tech giants like facebook but also used to build many CMS(Content Management System) like WordPress ,Drupal Shopify, WooCommerce

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

- **The use of PHP makes website pages load faster** as compared to many other web development technologies. For example, PHP is about three times faster than Python for most use scenarios. Higher application speed keeps customers satisfied and, in combination with other advantages, helps build and retain the client base.
- **Wide selection of databases**  
PHP allows connection to almost any type of database. Other solid options of database management systems compatible with PHP are mSQL, MS-SQL, SQLite, PostgreSQL, etc. Besides, PHP can be equally well used with Elasticsearch, Redis, MongoDB, and other non-relational databases. So the developers are not limited to using a particular database and may select the most optimal one for a future app.
- **Inexpensive open-source software**  
This mean the PHP is a free-to-use technology that presents considerable savings for the development budget and it used of free of charge also reduce project cost.
- **Cheaper hosting services:**
- **Excellent combinability with html** :you can embed php programming in html document.
- **Good flexibility:** php is able to effectively combine with other programming languages so that the software product could use the effective technology for each particular feature and also php is cross platform language that meandevloper may use any operating system
- **Compatibility with cloud services:** application written in php are supported by different cloud service like AWS Lambda ,can be deployed on cloud server

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

Release?

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp),<https://www.javatpoint.com>,<https://www.php.net/releases>,<https://stackoverflow.com>

**The latest php version is PHP 8.2** is the latest PHP version which brings readonly 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.

It is released in dec 2022

**The 3 latest release and their features are:**

- **PHP 8.1**, released in 2021  
**The major new features are:**
  - ✓ Enums
  - ✓ Fibers
  - ✓ never return type
  - ✓ Intersection Types
  - ✓ readonly properties
- **PHP 8.0**, released in 2020.11.16

**The major features:**

- ✓ Union Types,
  - ✓ JIT
  - ✓ Constructor Property Promotion
  - ✓ Match Syntax
  - ✓ Named Parameters
  - ✓ Several more performance,
  - ✓ Syntax
  - ✓ Quality-of-life improvements.
- **PHP 7.4**

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

- ✓ typed properties,
- ✓ underscore numeric separator
- ✓ Other minor improvements to PHP.

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

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 of a new or upgraded version of the application.

Stable software product: it means the products behaviour does not change anymore.

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

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp), <https://www.javatpoint.com>, <https://www.php.net/releases>, <https://stackoverflow.com>

**Simple:** It is very simple and easy to use, compare to other scripting language.

**Interpreted:** It is an interpreted language, it mean there is no need for compilation.

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

**Open Source:** means you don't need to pay for use php, you can free download and use freely.

**Platform Independent:** PHP code will run on every platform, Linux, Unix, Mac OS X, Windows.

**Case Sensitive:** PHP is case sensitive scripting language at time of variable declaration.

**Error Reporting:** PHP have some predefined error reporting constants to generate a warning.

**Loosely Typed Language:** you can use variable without declaring its data type it take data type when you enter values.

**Real-Time Access Monitoring:** it provides access logging by creating the summary of recent accesses for the user.

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

```
<?php
    $number=78;// is difference to $Number
$Number=90;//90
echo $number+$number;//the output will be 168
?>
```

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

Comment is an explanation added to php script.

We need comment in order to make code maintenance much easy as well as helping make finding bugs faster

```
<?php
    $n=5;// thi is single line comment
$o=90;/*this is mult line comment*/
echo $number+$number;
?>
```

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp), <https://www.javatpoint.com>, <https://www.php.net/releases>, <https://stackoverflow.com>

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

✓ echo() and print()

### echo()

?php

```
$fname = "Gunjan";
```

```
$lname = "Garg";
```

```
echo "My name is: ".$fname,$lname; // It will not generate any syntax error.
```

?>

### print()

<?php

```
$fname = "Gunjan";
```

```
$lname = "Garg";
```

```
print "My name is: ".$fname,$lname; // it generate syntax error
```

?>

### print() and printf()

<?php

```
$val = 2976;
```

```
printf("%f",$val);// return length of outputted string
```

?>

<?php

```
$fname = "Gunjan";
```

```
$lname = "Garg";
```

```
print "My name is: ".$fname,$lname; // it generate syntax error
```

?>

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

<?php

```
$s = "Welcome";
```

```
printf("[%s]<b>",$s);
```

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp),<https://www.javatpoint.com>,<https://www.php.net/releases>,<https://stackoverflow.com>

```
?>
```

### print\_r()

```
print_r(variable, isStore)
```

```
<?php
```

```
$str = "This is a string"; //string
```

```
print_r($str);
```

```
?>
```

### Print\_r vs var\_dump()

```
<?php
```

```
// PHP program to illustrate
```

```
// the print_r() function
```

```
// string variable
```

```
$var1 = "Welcome to GeeksforGeeks";
```

```
print_r($var1);
```

```
?>
```

### Var\_dump()

```
<?php
```

```
$a = 32;
```

```
echo var_dump($a) . "<br>"; // used to dump information about a variable.
```

```
$b = "Hello world!";
```

```
echo var_dump($b) . "<br>";
```

```
?>
```

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

There are 4 scalar data types in PHP.

- ✓ Boolean is data type only has two values, It can be either true or false.
- ✓ Integer is data type used in php to return integer values
- ✓ Float is data type used for decimal number
- ✓ String is data type used for set of characters (string).

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp), <https://www.javatpoint.com>, <https://www.php.net/releases>, <https://stackoverflow.com>

There are 2 compound data types in PHP.

- ✓ Array is data type used for holding more than one values at time (variable) with the same type.
- ✓ Object: is a compound data type (along with arrays) , data type that hold data of difference data type

There are 2 special data types in PHP :

- ✓ resource: a special data type that refers to any external resource. acts as a reference to external source of data such as stream, file, database. When you want to include external resource in php script
- ✓ NULL: a special data type which can have only one value, there is no value assigned to it

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

- **Php variable** is container for storing information.
- **list the variable naming rules in php**
  - variable star with the \$ sign, followed by the name of the variable
  - variable name must start with letter or the underscore character
  - variable name cannot start with number.
  - Variable name can only contain alpha-numeric character and underscore.
  - Variable names are case sensitive (\$age and \$AGE).

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

**\$GLOBALS** is php super global variable which is used to access global variables from anywhere in php script also within function or methods.

```
Ex: function addition() {  
    $GLOBALS['z'] = $GLOBALS['x'] + $GLOBALS['y'];  
}
```

**\$\_SERVER** php super global variable which hold information about headers, path, and script locations.

```
Ex: echo $_SERVER['SERVER_NAME'];
```

**\$\_REQUEST** is a PHP super global variable which is used to collect data after submitting an HTML form.

```
<form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
```

**\$\_POST** is php super global variable which is used to collect form data after submitting an HTML form with method="POST".

```
<form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
```

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp), <https://www.javatpoint.com>, <https://www.php.net/releases>, <https://stackoverflow.com>

**\$\_GET** IS PHP super global variable which is used to collect form data after submitting an HTML form with method="GET".

```
<form method="get" action="<?php echo $_SERVER['PHP_SELF'];?>">
```

**\$\_FILES** is an associative array containing items uploaded via HTTP POST method.

```
echo "Type : " . $_FILES['file']['type'] . "<br>";
```

**\$\_ENV** is an associative array in php. It stores environment available to current script.

**\$\_COOKIE** : it stores variables passed to current script along with HTTP request in the form of cookies

```
echo 'Hello ' . htmlspecialchars($_COOKIE["name"]) . '!';
```

**\$\_SESSION** is an associative array that contains all session variable.

```
$_SESSION["favcolor"] = "green";
```

Reference:

[https://www.w3schools.com/php/php\\_sessions.asp](https://www.w3schools.com/php/php_sessions.asp), <https://www.javatpoint.com>, <https://www.php.net/releases>, <https://stackoverflow.com>