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ASSIGNMENT OF PHP

1. **Explain php programing beyond definition?**

   “Personal Home Page " PHP is a widely-used, open source scripting language.

   Features of php

   - 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.

   Advantages

   - Extremely Flexible.
   - Easy Integration and Compatibility.
   - Efficient Performance.
   - Cost-Efficient.

- Gives Web Developer More Control.

Disadvantages

- building websites and web applications, then you're all set.
- Limited debugging tools.
- Can't modify core behavior
- Security is not the best.
- There are easier-to-use languages.

Example:

```
<!DOCTYPE html>
<html>
  <head>
    <title>PHP "Hello, World!" program</title>
  </head>
  <body>
    <?php
      echo '<p>Hello, World!</p>';
    ?>
  </body>
</html
```

2.Why do we need to use php programming?

- ✓ It makes work more easily
- ✓ High speed, simplicity
- ✓ It can interact with different database language.
- ✓ Php allows web developers to create dynamic content and interact with databases.
- ✓ PHP makes website pages, load faster as compared to many other web development technologies.

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

release?

1. PHP Version 8.2.0	Released 08 Dec 2022
2. PHP Version 8.1.12	Released 24 Nov 2022
3. PHP Version 8.0.26	Released 26 Nov 2022

the updated features for the latest 3 is PHP Version 8.2.0

- ❖ read-only classes
- ❖ and true as stand-alone types
- ❖ deprecated dynamic properties

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

New release software: is the distribution of the final version or the newest version of a software application. It is used to improves the stability of the system.

stable release of a software product: is a version of a software package that has been tested and verified. It is the latest (and sometimes final version) of a program that is considered safe for public use.

5.What are the main features of php programming?

- **It is adaptable:** It works flawlessly when downloaded and used on Windows, Linux, or Mac OS.
- **Monitoring of real-time access**: PHP additionally offers a list of users' most recent logging accesses.
- **Flexibility:** PHP is known for its flexibility and embedded nature as it can be well integrated with HTML, **XML, Javascript an Active community support:** PHP is very rich with many diverse online community developers to help beginners for web-based applications and many more.
- **Magic Constants:** PHP provides many built-in magic methods starting with_(double underscore) which are called during specific events.

- **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.

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

PHP is partially case-sensitive and variable names are case-sensitive but function names are not case sensitive.

EXAMPLE1 of class constant:

```
 <?php
class TestClass
{
   const UserName = "students";
   const UserCity= "kigali";
}
echo "Name of the user: ". TestClass::UserName;
echo "City of the user: ". TestClass::UserCity;
?>
```

EXAMPLE2 of class properties:

```
<? php

class UserInfo {

private $username="user@example.com";

private $userpwd="123456";

}


class userInfo {

private $Username="user@example.com";

private $Userpwd="123456";

}


?>
```

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.

Comments can be used to:

- Let others understand your code.
- Remind yourself of what you did - Most programmers have experienced coming back to their own work a year or two later and having to re-figure out what they did. Comments can remind you of what you were thinking when you wrote the code.

Example : <?php

```
// This is a single-line comment this is a comment.

# This is also a single-line comment
?>

</body>
</html>
```

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

a. Echo() vs print()

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).

print can take one argument**. echo** is marginally faster than **print.**

Example of echo:

```
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.";
?>
```

Example of print:

```
<?php
print "<h2>PHP is Fun!</h2>";
print "Hello world!<br>";
print "I'm about to learn PHP!";
?>
```

b. Print() vs printf()

PRINT: performs output to the standard output stream, **PRINTF** requires a file unit to be explicitly specified.

Example of print:

```
<?php
print "Hello world!";
?>
```

example of printf:

```
<?php
$number = 9;
$str = "Rwanda";
printf("There are %u hundred cars in %s.",$number,$str);
?>
```

c. Printf () vs print_r()

The printf( ): builds a formatted string by inserting values into a template.

Example:

```
<?php
$number = 5;
$str = "Bujumbura";
printf("There are %u million bicycles in %s.",$number,$str);
?>
```

print_r(): is used to display human-readable information about a variable.

Example:

```
<?php
$a = array("red", "green", "blue");
print_r($a);

echo "<br>";

$b = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
print_r($b);
?>
```

d. Print_r vs var_dump().

print_r(): is used to display human-readable information about a variable.

Example:

```
 <?php
$a = array("red", "green", "blue");
print_r($a);

echo "<br>";


$b = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
print_r($b);
?>
```

var_dump(): used to dump information about a variable. This function displays structured information such as type and value of the given variable.

Example:

```
<?php

$a = 32;

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

```
$b = "Hello world!";
echo var_dump($b) . "<br>";

$c = 32.5;
echo var_dump($c) . "<br>";

$d = array("red", "green", "blue");
echo var_dump($d) . "<br>";

$e = array(32, "Hello world!", 32.5, array("red", "green", "blue"));
echo var_dump($e) . "<br>";

// Dump two variables
echo var_dump($a, $b) . "<br>";
?>
```

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.

- numeric is a non-decimal number between -2,147,483,648 and 2,147,483,647.
- Character
- Logical represents two possible states: TRUE or FALSE.
- complex

Compound Types: includes the values that contain more than one value.

Has two datatype

- **array** Can hold multiple values indexed by numbers or strings.:
- **object** Can hold multiple values (properties), and can also contain methods (functions) for working on properties.
-

special types: It is the storing of a reference to functions and resources external to PHP.

has 2 special data types in PHP.

- **Null is** a special data type which can have only one value: NULL.
- R**esources** is not an actual data type. It is the storing of a reference to functions and resources external to PHP.

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 name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)

Rules of 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.

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

$GLOBALS : It is a superglobal variable which is used to access global variables from anywhere in the PHP script. PHP stores all the global variables in array $GLOBALS[] where index holds the global variable name, which can be accessed.

$_SERVER : It is a PHP super global variable that stores the information about headers, paths and script locations. Some of these elements are used to get the information from the superglobal variable $_SERVER**.**

$_REQUEST : It is a superglobal variable which is used to collect the data after submitting a HTML form. $_REQUEST is not used mostly, because $_POST and $_GET perform the same task and are widely used.

$_POST : It is a super global variable used to collect data from the HTML form after submitting it. When form uses method post to transfer data, the data is not visible in the query string, because of which security levels are maintained in this method.

$**_GET :** $_GET is a super global variable used to collect data from the HTML form after submitting it. When form uses method get to transfer data, the data is visible in the query string, therefore the values are not hidden. $_GET super global array variable stores the values that come in the URL.

＄_FILES is a two-dimensional associative array that contains a list of files that were uploaded to the script using the POST method. The keys to this array are the names of the fields uploading the files and the data being accessed. For example, ＄_FILES[fileUploaded][name] accesses the name of the file being uploaded from the fileUploaded field.

$_COOKIES keeps data input via HTTP Cookies. The keys to this array are defined when the cookies are set.

$_SESSION holds session variables. Session variables can be accessed on multiple pages. This array's keys are defined by the users when they define session variables.

$_ENV contains information about the environment that PHP is running in. The keys to the values in this array are predefined.

References

There are no sources in the current document.

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