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MODULE NAME:DEVELOP BACKEND USING PHP

Correction of assessment

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

   answer

   php is scripting language that support object oriented programming and it stands for hyper text pre-processor but early in the biggening it was stands for personal home page . **php** plays many many role in programing even in website development because it is powerful tool used to built Back end to the website.

   Php was invented in 1994 by Rasmus lerdorf where at the first he used it to track the viewers to his webpages and now it has some frame works like **yii**, **zend,** **Laravel** and others…

   and it is server side.

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

We need php programming because:

1. We need php programming because it support object oriented programming means that while you are using php to create object and class is very simple.
2. We need php programming because php is powerful tool to create Back end development for Back end developers when they want to integrate their webpages to the database.
3. We need php programming because allows web developers to create dynamic content and interact with databases.
4. We need php programming because php it is fast and secure.
5. We need php programming because php is protable and php code are open and easy to learn.

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

Answer

1.**php version 8.2**: it was released at 8/December/2022 and its updates were:
   - read only classes
   - local independence conversion.

2. **php version 8.1** : it was released at 25/November/2021 and its feature updates are:

   -new in initializers

   -pure intersection types

   -readonly properties

3. php version 8.0 and it was released in 26 november 2020 its feature update wos:

   -independent float to string conversion

   -consistency type error for internal function

   -arrays starting with a negative index.

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

   Answer

   New release of software product can be defined as release of newest final version of a software product. Means that new release can came after other versions of that product that is in use at the market.

   While stable release of software product is defined as a way of releasing a software product that is truly enough to be used at the market. After successful testing of a software product and all bugs are handled you will need to release the first version that will be permanent at the market and it can be considered as stable release but after you are allowed to provide new release.

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

   Answer

   1. PHP is flexible.
   2. PHP is simple and familiar.
   3. PHP is open source.
   4. PHP is fast and efficient to use
   5. PHP is independent
   6. PHP is portable.
   7. PHP is designed for dynamic web application

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

   Answer

   Php is case sensitive because If you defined variable in lowercase, then you need to use it in lowercase everywhere in the program but if you declare it again in upper case it will not work because it looks like re_declare.
   Example:
   <?php

```php
$location="muhanga";
$LOCATION="nyanza";
Echo("\n.$location
Echo("\n.$LOCATION)
function location(){
//code to be executed//
}
Function LOCATION(){
//code to be executed
}// here in this function they will give you an error because of 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?**

<u>**Answer**</u>

Php comment is a line which is not executed during code execution or it is a line which compiler ignores during executing the code it's purpose is to be read and guide someone who reads the code.

Example of php comments:

Single line comment: Single-line comments allow narrative on only one line at a time.

Ex:

```php
<?php
//this is how single line comment looks like//
# also this can be used to make single line comment
?>
```

Multiline comment: multiline comment allow narrative on more lines at a time to increase code readability and guide programmer.

Ex:

```php
<?php
/*multiline comment can be placed in this form
multiline comment can be placed in this form
multiline comment can be placed in this form
*/
```

```php
<?php
// You can also use comments to leave out parts of a code line
$t=2/*1+1*/+2
Echo $t;
?>
```

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

   a. **Echo() vs print():** The speed of both echo and print statements in PHP is roughly the same. Using one over the other is not likely to yield any performance improvement in your application. Theoretically, echo is more efficient because it does not return any value.

   b. **b. Print() vs printf():** printf() outputs a formatted string whereas print() outputs one or more strings.
      Ex: print("hello,world"),
      Output
      Hello, world
      $students=42;
      $def="level two IT";
      Printf("they are%u students in %s",$students,$def);
      Output:
      They are 42 students in level two IT

   c. **Printf() vs print_r()** :print_r prints a variable in a more human-readable form: strings are not quoted, type information is omitted, array sizes aren't given, etc. var_dump is usually more useful than print_r when debugging, in my experience. It's particularly useful when you don't know exactly what values/types you have in your variables.

   Ex: $values = array(0, 0.0, false, '');

   var_dump($values);
   print_r ($values);

D. **Print_r vs var_dump():**

The var_dump function displays structured information about variables/expressions including its type and value. Arrays are explored recursively with values indented to show structure. It also shows which array values and object properties are references.

The print_r() displays information about a variable in a way that's readable by humans. array values will be presented in a format that shows keys and elements. Similar notation is used for objects.

Example:

$obj = (object) array('qualitypoint', 'technologies', 'India');

var_dump($obj) will display below output in the screen.

object(stdClass)#1 (3) {
 [0]=> string(12) "qualitypoint"
 [1]=> string(12) "technologies"
 [2]=> string(5) "IRWANDA"
}

And, print_r($obj) will display below output in the screen.

stdClass Object (
 [0] => qualitypoint
 [1] => technologies
 [2] => RWANDA
)

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

 ANSWER

PHP Data Types: Scalar Types

In simple words, a variable is called scalar type if it holds singular value only. There are 4 scalar data types in PHP.

- boolean

- integer

- float

- string

PHP Data Types: **Compound Types**

In contrast to Scalar data types, a variable is called compound if it holds multiples values within. There are 2 compound data types in PHP.

Array: An array is a collection of items of same data type stored at contiguous memory locations.

Object:refers to instances of class

PHP Data Types: **Special Types**

Resource: is a special variable, holding a reference to an external **resource**. **Resources** are created and used by special functions

NULL: It's the empty slot, it's the missing information, it's the unanswered question

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

Answer

Variables are used to store information to be referenced and manipulated in a computer program.or it is a name given to a memory zone that stores a data

Ex: int a=6;

a:is a variable.

Rules for naming variable

1.a variable name must starts with $ sign.
2.a variable must start with leter or underscore
3.variable names are case sensitive
4. a variable name can only contain alphanumeric and underscores.
5. a variable name can not start with a number

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

Answer

1.$GLOBALS : It is a superglobal variable which is used to access global variables from anywhere in the PHP script.

2.$_SERVER : It is a PHP super global variable that stores the information about headers, paths and script locations.

3.$_REQUEST : It is a superglobal variable which is used to collect the data after submitting a HTML form.

4.$_POST : It is a super global variable used to collect data from the HTML form after submitting it.

5.$_GET : $_GET is a super global variable used to collect data from the HTML form after submitting it.

6.A $_SESSION variable is a PHP superglobal that keeps and provides information about a site user from the moment the site is opened until it is closed.

7.$_FILES is a variable in PHP that is used to store objects uploaded using the HTTP POST method.

8.$_COOKIE

the $_COOKIE super global variable is used to read cookies that are available to the current script. Basically, it enables you to access cookies that are already set by the setcookie function in PHP.

9. $_SERVER['HTTP_REFERER'] Returns the complete URL of the current page (not reliable because not all user-agents support it)

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6. https://en.wikipedia.org/wiki/Global_variable