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MODULE ITLBP601 **DEVELOP BACK-END USING PHP**

REGNO: 21RP12437

CLASS: L6Y2 ITA

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LEARNING UNIT2: ASSIGNIMENT

1. Explain PHP programming beyond definition.
   PHP stands for Hypertext Preprocessor. It is an open-source, interpreted, and object-oriented scripting language that can be executed at the server-side. PHP was created since 1994 and released in 1995 by Rasmus Lerdorf. It is widely used to develop web applications (an application that executes on the server and generates the dynamic page, webpages that interact with users).
2. Why do we need to use php programming?
   PHP is a server-side scripting language, which is used to design the dynamic web applications with MySQL database.
   Main reasons why we need PHP are :
   - ✓ It handles dynamic content, database as well as session tracking for the website.
   - ✓ You can create sessions in PHP.
   - ✓ It can access cookies variable and also set cookies.
   - ✓ It helps to encrypt the data and apply validation.
   - ✓ PHP supports several protocols such as HTTP, POP3, SNMP, LDAP, IMAP, and many more.
   - ✓ By using PHP language, you can control the user to access some pages of your website.
   - ✓ As PHP is easy to install and set up, this is the main reason why PHP is the best language to learn.

- ✓ PHP can handle the forms, such as - collect the data from users using forms, save it into the database, and return useful information to the user. Ex: Registration form

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 is **PHP 8.2** released at **24th November 2022.**

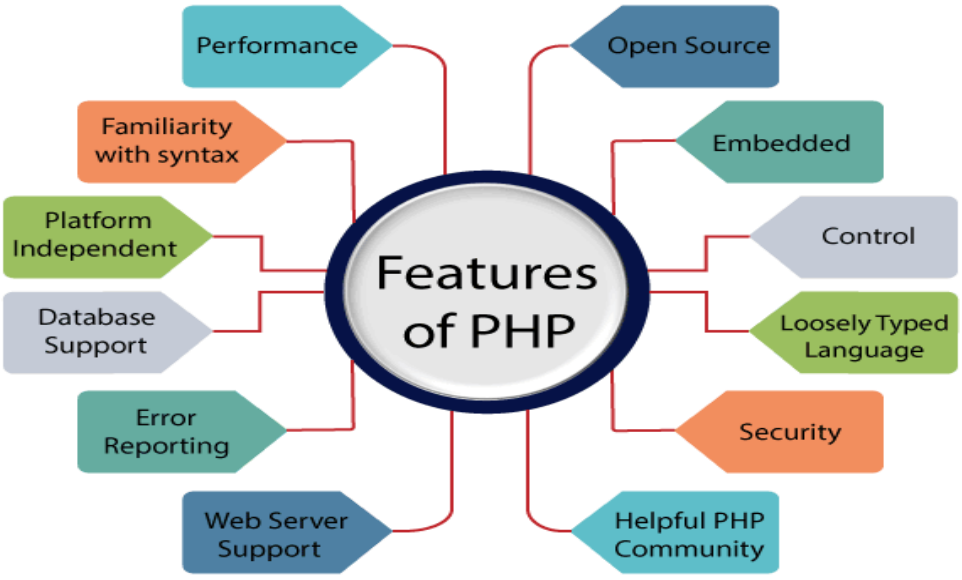
   The 3 latest released versions are:

PHP Version	**Release Date**
7.4	28 August 2019
8.0	26 November 2020
8.1	25 November 2021
8.2	24 November 2022

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

   New release is the distribution of the final version or the newest version of a software application while **Stable Release** means a version of the software that is known to be working as expected as it has been thoroughly tested by The Company prior to use by any Customer.

5. What are the main features of php programming?



Here is some overview of above features of **PHP:**

- **Performance:** PHP uses its own memory, so the server workload and loading time is automatically reduced, which results in faster processing speed and better performance.
- **Open Source:** PHP source code and software are freely available on the web. All its components are free to download and use.
- **Embedded:** PHP code can be easily embedded within HTML tags and script.
- Platform Independent: PHP is available for WINDOWS, MAC, LINUX & UNIX operating system.
- **Database Support:** PHP supports all the leading databases such as MySQL, SQLite, ODBC, etc.
- **Error Reporting:** PHP has predefined error reporting constants to generate an error notice or warning at runtime. E.g., E_ERROR, E_WARNING, E_STRICT, E_PARSE.
- **Web servers Support:** PHP is compatible with almost all local servers used today like Apache, Netscape, Microsoft IIS, etc.
- **Security:** PHP is a secure language to develop the website. It consists of multiple layers of security to prevent threads and malicious attacks.
- **Control**

6. With a help of examples explain why PHP is case sensitive?
   In PHP variable names are case sensitive because the variable name **color** is different from **Color**, **COLOR, COLor…**
   Example in codes:

```
<?php
$color="red";
echo "My car is " . $color . "<br>";
echo "My house is " . $COLOR . "<br>";
?>  //Output:
My car is red
Notice: Undefined variable: COLOR in C:\wamp\www\variable.php on
line 4
My house is
Notice: Undefined variable: coLOR in C:\wamp\www\variable.php on
line 5
```

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

   PHP comments are used to describe any line of code so that other developer can understand the codes easily. It can also be used to hide any code.

   We have only two types of comments:

   - Single line comment
   - Multi-line comment

Single line comment: is a comment of single line, we write a single line comment by using // (double slash) and # (hash sign).

Example of single line comment:

```
<?php
// this is C++ style single line comment
# this is Unix Shell style single line comment
echo "Welcome to PHP single line comments";
?>
```

Output: *Welcome to PHP single line comments*

Example of Multi-line comment:

```
<?php

/*
PHP program to print hello world,
PHP is the best programming language*/
echo "Hello world";
?>
```

Output: *Hello word*

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

   a. Echo() vs print()

   Echo() vs print(): echo can have multiple parameters while print only takes one parameter. Print returns a value (1), so can be used as an expression whereas

   echo is slightly faster.

b. Print() vs printf()

Print() vs printf(): printf() outputs a formatted string whereas print() outputs one or more strings.

c. Printf() vs print_r()

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 and it prints the contents of arrays, objects, and other things, in a more-or-less human-readable form.

d. Print_r vs var_dump()

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 data type we have in php by categorizing them in scalar, compound and special data types.

   The data type specifies the amount of memory that allocates to the variable associated with it. It also determines the operations that you can perform on it.

   A. **Scalar variable** are variables that holds singular value only. Listed below:
      - Boolean
      - Integer
      - Float
      - String

   B. **Compound Types:** are variables that holds multiples values within.

      Which are **Array and Object**

   C. **Special Types** , there two special data types in PHP
      - Resources
      - Null

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

    PHP variable: is a name given to a memory location that stores data at runtime. They are used to store data, like a string of text, numbers, etc.

    Rules for naming PHP variable:

    - A variable must start with a dollar ($) sign, followed by the variable name.
    - It can only contain alpha-numeric character and underscore (A-z, 0-9, _).
    - A variable name must start with a letter or underscore (_) character.
    - A PHP variable name cannot contain spaces.
    - One thing to be kept in mind that the variable name cannot start with a number or special symbols.
    - PHP variables are case-sensitive, so $name and $NAME both are treated as different variable.

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

    Super global variables are built-in variables that are always available in all scopes.

    10 Super global variables

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

- ✓ **$GLOBALS** is a PHP super global variable which is used to access global variables from anywhere in the PHP script (also from within functions or methods).
- ✓ **$_SERVER** is a PHP super global variable which holds information about headers, paths, and script locations.
- ✓ **$_REQUEST** is a PHP super global variable which is used to collect data after submitting an HTML form.
- ✓ **$_POST** is a PHP super global variable which is used to collect form data after submitting an HTML form with method="post". $_POST is also widely used to pass variables.
- ✓ **$_GET** is a PHP super global variable which is used to collect form data after submitting an HTML form with method="get". It can also collect data sent in the URL.
- ✓ **$_FILES** is a super global variable which can be used to upload files.
- ✓ **$_ENV** is another superglobal associative array in PHP. It stores environment variables available to current script.
- ✓ **$_COOKIE** stores variables passed to current script along with HTTP request in the form of cookies.
- ✓ **$_SESSION** is associative array containing session variables available to the current script. See the Session functions documentation for more information on how this is used.
- ✓ **$http_response_header**: The $http_response_header array is similar to the get_headers() function. When using the HTTP wrapper, $http_response_header will be populated with the HTTP response headers.

Reference page

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