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PHP ASSIGNMENT

1.Explain php programming beyond definition?

PHP is a general-purpose scripting language geared toward web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1993 and released in 1995. The PHP reference implementation is now produced by The PHP Group. PHP was originally an abbreviation of *Personal Home Page*, but it now stands for the recursive initialism *PHP: Hypertext Preprocessor*.

Reference: https://en.wikipedia.org/wiki/PHP

2. why do we need to use php programming?

PHP **allows web developers to create dynamic content and interact with databases**. PHP is known for its simplicity, speed, and flexibility — features that have made it a cornerstone in the web development world.

Reference: https://www.netsolutions.com/insights

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

8.3
Version StatusUpcoming Release
PHP 8.3 is the active development branch of PHP versions. It's the current target for new RFCs, and is scheduled to be released towards the end of 2023.

8.2
Release Date2022-12-08
Version StatusSupported (Latest)
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.

8.1
Release Date2021-11-25
Version StatusSupported
PHP 8.1, released in 2021, brings major new features such as **Enums**, **Fibers**, `never` **return type**, **Intersection Types**, `readonly` **properties**, and more, while ironing out some of its undesired legacy features by deprecating them.

8.0
Release Date2020-11-26

Version StatusSecurity-Fixes Only

PHP 8.0, on the 25th year of PHP history, brings several important features such as **Union Types**, **JIT**, **Constructor Property Promotion**, **Match Syntax**, **Named Parameters**, and several more performance, syntax, and quality-of-life improvements.

7.4

Release Date2019-11-28
Version StatusUnsupported

PHP 7.4, the final release in the PHP 7.x series. PHP 7.4 **brings typed properties, underscore numeric separator**, and other minor improvements to PHP.

7.3

Release Date2018-12-06
Version StatusUnsupported

Heredoc/nowdoc syntax improvements and a bunch of legacy code deprecations.

7.2

Release Date2017-11-30
Version StatusUnsupported

Argon2 password hashing support, class constant visibility, object type, and many more.

Reference: https://php.watch/versions

4. what is the difference 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.

A stable release is a version that has been tested as thoroughly as possible and is as reliable as we can make it.

5. what are the main features of php programming?

- PECL Extension. Several instruments require the native extension to be included, including timing of Redis, Elasticsearch, and Memcached. ...
- Deploy Tracking
- Request Queuing
- Custom Context
- External Services
- Custom Instrumentation

Reference: https://scoutapm.com/
6. with the help of examples explain why php is case sensitive?

PHP is a unique programming language in terms of case sensitivity.In PHP, variables and constants are case sensitive, while functions are not case sensitive.

```php
// 👇 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. This happens even though the function names use different letter cases.

Reference: https://sebhastian.com/

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

 Comments: are sections of code that are not executed when a program is run. A PHP comment can explain the purpose of a particular section of code to other programmers. This way, when a developer is viewing a PHP file for the first time, they can more easily understand the code they're looking at.

Single-line PHP Comments

Single-line PHP comments are useful for short notes before a code block or for explaining a single line of code.

//this code is for forms

#this code is for tables

Multiline PHP Comments

PHP also allows for comments that span multiple lines, in case you want to comment out a larger section of code or leave a more descriptive comment.

/*this is an example of a multi-line comment, which can span multiple lines.*/

Reference: https://blog.hubspot.com/

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

a. Echo () vs print ()

The echo statement can be used with or without parentheses: echo or echo().

```php
<?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.";
?>
```

The print statement can be used with or without parentheses: print or print().

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

b. print () vs printf ()

print()outputs one or more settings whereas printf()outputs a formatted string

for example

print("hello,world!")

output:hello,world!

$num=4;

$str="solar energy";

Printf("there are %u planets in the %s",$num,$str");

```
Output:there are 5 planets in the solar system
```

d.print_r vs var_dump()

var_dump displays structured information about the object / variable. This includes *type* and values. Like print_r arrays are recursed through and indented.
print_r displays *human readable* information about the values with a format presenting keys and elements for arrays and objects.

Example(print_r)

```
Array
(
    [0] => xyz
    [1] =>
    [2] => 1
    [3] => 99
    [4] => Array
        (
            [0] => 50
        )
)
```

Example(var_dump)

```
array(5) {
 [0]=>
 string(3) "xyz"
 [1]=>
 bool(false)
 [2]=>
 bool(true)
 [3]=>
 int(100)
 [4]=>
 array(1) {
  [0]=>
  string(2) "50"
 }
}
```

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

<u>PHP Scalar Data Types</u>

Boolean

Booleans are like a switch which has only two possible values either 1 (true) or 0 (false). Successful events will return true and unsuccessful events return false. NULL type values are also treated as false in Boolean.

Integer

Integers hold only whole numbers including positive and negative numbers, i.e, numbers without fractional part or decimal point. They can be decimal (base 10), octal (base 8) or hexadecimal (base 16). The default base is decimal (base 10).

Floating

Floating point numbers (also known as "floats", "doubles", or "real numbers") are decimal or fractional numbers

String

In a string, letters or any alphabets, even numbers are included. These are written within double quotes during declaration. The strings can also be written within single quotes but it will be treated differently while printing variables.

Compound DataTypes

Array

An array is a variable that can hold more than one value at a time. It is useful to aggregate a series of related items together, for example, a set of country or city names.

Object

An object is a data type which stores not only data but also information on how to process that data. Unlike the other data types in PHP, an object must be explicitly declared.

PHP Special Data Types

Null

The special NULL value is used to represent empty variables in PHP. A variable of type NULL is a variable without any data. NULL is the only possible value of type null.

Resources

A resource is a special variable, holding a reference to an external resource.

Reference: http://www.trytoprogram.com/php/php-data-types/

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

Variables are "containers" for storing information.

Rules

- 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 _)
- Variable names are case-sensitive ($age and $AGE are two different variables)

Reference: https://www.w3schools.com/php/php_variables.asp

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

PHP $GLOBALS

$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).

PHP $_SERVER

$_SERVER is a PHP super global variable which holds information about headers, paths, and script locations.

PHP $_REQUEST

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

PHP $_POST

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

PHP $_GET is a PHP super global variable which is used to collect form data after submitting an HTML form with method="get".

$_GET can also collect data sent in the URL.

- $_FILES
- $_ENV
- $_COOKIE
- $_SESSION

Reference: https://www.w3schools.com/php/php_superglobals_get.asp