REGNO: 21RP02483

LEVEL6YEAR2

Class: B

ASSIDNMENT OF PHP

Learning unit 2

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1. **Php programing beyond definition:**
   PHP is an open-source server-side scripting language that many devices use for web development. It is also a general-purpose language that you can use to make lots of projects, including Graphical User Interfaces (GUIs).
   The abbreviation PHP initially stood for Personal Homepage. But now it is a recursive acronym for Hypertext Preprocessor
   PHP (Hypertext Preprocessor) a general-purpose scripting language that can be used to develop dynamic and interactive websites.
   t is very simple to learn and use. The files have the extension ".php".
   Other **characteristics of PHP** are as follows.

- Simple and fast
- Efficient
- Secured
- Flexible

- Cross-platform, it works with major operating systems like Windows, Linux, and macOS.
- Open Source
- Powerful Library Support
- Database Connectivity

2. **We need to use php programing:**
   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.
   PHP can actually do anything related to server-side scripting or more popularly known as the backend of a website. For example, PHP can receive data from forms, generate dynamic page content, can work with databases, create sessions, send and receive cookies, send emails etc
   Advantages:

- Platform Independent
- Open source and dynamic Library support
- Organized
- Database Connectivity
- Easy to understand and code

3.The latest php version we have today and list the update features for the latest 3 release

The latest php version we have today:

1.Php version **8.2, is released on December 8, 2022.**

- **Update feature:**
- New readonly Classes.
- Allow true, false, and null as Standalone Types.

- Disjunctive Normal Form (DNF) Types.
- Redact Sensitive Parameters in Back Traces.
- New mysqli_execute_query Function and MySQL::execute_query Method.

2.PHP 8.1 is the new PHP version released **November 2021**. This version comes with new features, performance improvements, and changes that will open more opportunities for PHP developers to work efficiently and more creatively. There are over 20 new features, tons of changes, and several deprecations in PHP 8.1.21 Dec 2022

4. Different between new release vs stable release of a software product:

new release of software

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 the unveiling of a new or upgraded version of the application.

A stable release: 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. This kind of release is also called a “Stable” release.

stable release: is a version that has been tested as thoroughly as possible and is as reliable as we can make it. It does not have all the new features of a beta release and it does not have the latest fixes for problems.

5.**The main features of php programming:**

Simple: It is very simple and easy to use, compare to other scripting language it is very simple and easy, this is widely used all over the world.

Interpreted: It is an interpreted language, i.e. there is no need for compilation.

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

Open Source: Open source means you no need to pay for use php, you can free download and use.

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

Case Sensitive 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.

Error Reporting have some predefined error reporting constants to generate a warning or error notice.

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

Loosely Typed Language supports variable usage without declaring its data type. It will be taken at the time of the execution based on the type of data it has on its value.

New features of php:

- Scalar type declarations
- Return type declarations

- Null coalescing operator
- Spaceship operator
- Constant arrays using define
- Anonymous classes
- Unicode codepoint escape syntax
- Closure

6.**Example explain why php is case sensitive**:

PHP classes are a mix between variables and functions, so they are partially case-sensitive. 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.

PHP case-sensitive example?

Variables in PHP are represented by a dollar sign followed by the name of the variable. The variable name is case-sensitive. Note: For our purposes here, a letter is a-z, A-Z, and the bytes from 128 through 255 (0x80-0xff). Note: $this is a special variable that can't be assigned.

7.**we use comments while writing php codes, with a help of example explain different types of php comments:**

Comment: in PHP code is a line that is not executed as a part of the program.

PHP comments are usually meant to help programmers understand and interpret the PHP codes

Because 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

different types of php comments:

Single-line PHP Comments: are useful for short notes before a code block or for explaining a single line of code slashes (**//)**

Examples:

```
<?php
echo "printed to the user."; // This is my first output
echo “This will be also be printed.”; # my second output
// echo “not be printed to the user.”;
# echo “And neither will this.”;
?>
```

Multiline PHP Comments: 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. Start your multiline comment by writing /* and end it by writing */.

examples

```
<?php
/* This is a multiline PHP
comment. None of this
will be shown to the user. */
echo "This message will be printed to the user.";
?>
```

8.a.echo() vs print():

echo():echo has no return value **while print():** print has a return value of **1**

echo() examples:

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

Print() examples:

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

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

Examples of out print():**is print "Hello, world!";**

Output:

Hello, world!

Examples of out printf():

```
$number = 8;

$str = "Solar System";

printf("There are %u planets in the %s.", $number, $str);
```

Output:

There are 8 planets in the Solar System.

c.printf () vs print_r: he printf() function builds a formatted string by inserting values into a template. **Where** asThe print_r( ) function is useful for debugging—it prints the contents of arrays, objects, and other thing

examples of print_r:

```
class P {
  var $name = 'nat';
  // ...
}
$p = new P;
print_r($p);
Object)
    [name] => nat)
```

examples of printf: printf('%.2f', 27.452); **27.45**

D. 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.

```
<?php
var_dump(var_dump(45, 62.1, TRUE,
"sravan", array(1, 2, 3, 4,5,6)) ); ?>
```

Output:

```
int(45) float(62.1) bool(true) string(6) "sravan" array(6)
```

```
{ [0]=> int(1) [1]=> int(2) [2]=> int(3)

[3]=> int(4) [4]=> int(5) [5]=> int(6) } NULL
```

```
// String variable

$a = "Welcome to GeeksforGeeks";



// Integer variable

$b = 450;

$arr = array('0' => "Computer",

'1' => "science",

'2' => "portal")print_r($a);

echo"\n<br>";

print_r($b);

echo"\n<br>";

print_r($arr);

?>
```

Output:

Welcome to irpc Tumba

450Array ([0] => Computer [1] => science [2] => portal)

9.Different datatype we have in php by categorizing them in scalar, compound, and special datatype

Scalar Types

It holds only single value. There are 4 scalar data types in PHP.

- **Integer:** Integer means numeric data with a negative or positive sign. It holds only whole numbers, i.e., numbers without fractional part or decimal points

- **Float:** A floating-point number is a number with a decimal point. Unlike integer, it can hold numbers with a fractional or decimal point, including a negative or positive sign

- **Boolean**: Booleans are the simplest data type works like switch. It holds only two values: TRUE (1) or FALSE (0).

- **String**: string is a non-numeric data type. It holds letters or any alphabets, numbers, and even special characters.

Compound Types

It can hold multiple values. There are 2 compound data types in PHP.

- **Array**: An array is a compound data type. It can store multiple values of same data type in a single variable.

- **Object**: Objects are the instances of user-defined classes that can store both values and functions.

Special Types

- **Resource:** Resources are not the exact data type in PHP. Basically, these are used to store some function calls or references to external PHP resources. For example - a database call. It is an external resource.

- **NULL**: Null is a special data type that has only one value: NULL. There is a convention of writing it in capital letters as it is case sensitive.

10.**PHP variable ,list the variable naming rules you have to obey while defining a variable in php:**

PHP variables are characters that stores value or information such as text or integers in your code. It is important to know that variables in PHP are usually represented by a dollar sign ($) followed by the name of the variable

Rules for naming variables:

- All variable names must begin with a letter of the alphabet or an. Underscore ()

- After the first initial letter, variable names can also contain letters and numbers. ...

- Uppercase characters are distinct from lowercase characters. ...

- You cannot use a C++ keyword (reserved word) as a variable name

11. **at least 10 super global variables:**

Global variables refer to any variable that is defined outside of the function.

- **$GLOBALS**: $**GLOBALS** is a PHP super global variable which is used to access global variables from anywhere in the PHP script (also from within functions or meth
- **$_SERVER**: s a PHP super global variable which holds information about headers, paths, and script locations
- **$_REQUEST:** s a PHP super global variable which is used to collect data after submitting an HTML form
- **$_POST**: s a PHP super global variable which is used to collect form data after submitting an HTML form with method="post"
- **$_GET**: is a PHP super global variable which is used to collect form data after submitting an HTML form with method="get".
- **$_FILES**: s a global constant or predefined variable in PHP that can be used to associate array items that are uploaded through the HTTP POST method.
- **$_ENV**: An associative array of variables passed to the current script via the environment method.
- **$_COOKIE**: super global variable is used to retrieve a cookie value
- **$_SESSION:** an associative array that contains all session variables. It is used to set and get session variable values.

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