Lab Exercise 06– Introduction to PHP

Objectives

By the end of this lab session you will be able to:

- Familiar with PHP basics.

Introduction to PHP

- PHP is a server side scripting language. That is used to develop Static websites or Dynamic websites. PHP stands for Hypertext Pre-processor
- A PHP file can be saved with the extension ".php".
- PHP files can contain text, HTML, CSS, JavaScript, and PHP code
- PHP code are executed on the server, and the result is returned to the browser as plain HTML
- PHP can generate dynamic page content and collect form data
- PHP can create, open, read, write, delete, and close files on the server
- PHP can add, delete, modify data in your database and can be used to control user-access

First program using PHP

```
<html>
  <head>
    <title>My First Program</title>
  </head>
  <body>
    <? php
                #This is a comment
                echo "Hello, Welcome to PHP!!!";
        ?>
  </body>
</html>
```

Lab Exercise 06– Introduction to PHP

Variables in PHP

- A variable start with the $ sign, followed by the name of the variable
- A variable name must start with a letter or the underscore character (cannot start with a number)
- Variable names are case-sensitive ($age and $AGE are two different variables) Variables can store data of different types such as integer, string and etc..
    - A string can be any text inside single or double quotes ○ An integer data type is a non-decimal number (must have at least one digit) ○ An integer can be either positive or negative

```php
<?php
    $name = 'Saman';
    $age = 24;
    $salary = 2500.50;
    $num1 = 10;
    $num2 = 20;
    $num3 = $num1 + $num2;

    print("My name is $name <br>");
    print("$num1 + $num2 = $num3 <br>");
?>
```

Php Comments.

// this is a single-line comment

this is also a single-line comment

/*in php
this is a multiple-lines comment block that spans over multiple lines.*/

Lab Exercise 06– Introduction to PHP

Conditional Statements Arrays in PHP

If - elseif -else

```php
<?php
# textual representation of a day (three letters)
#$d = date("D");
$d = "Sun";
if ($d == "Fri")
echo "Have a nice weekend!";
elseif ($d == "Sun")
        echo "Have a nice Sunday!";
else
        echo "Have a nice day!";
?>
```

For each

```php
<?php
$num = array( 1, 2, 3, 4, 5);
foreach( $num as $value ) {
echo "Value is $value <br />";
    }
?>
```

Do - while

```php
<?php
$x = 1;
do {
    echo "The number is: $x <br>";
    $x++;
} while ($x <= 5);
?>
```

Switch - case

```php
$d = date("D");
switch ($d){
case "Mon":
        echo "Today is Monday";
        break;
case "Tue":
        echo "Today is Tuesday";
        break;
        case "Wed":
        echo "Today is Wednesday";
        break;
case "Thu":
        echo "Today is Thursday";
        break;
        case "Fri":
        echo "Today is Friday";
        break;
case "Sat":
        echo "Today is Saturday";
        break;
case "Sun":
        echo "Today is Sunday";
        break;
default:
        echo "Wonder which day is this ?";
         }
```

Lab Exercise 06– Introduction to PHP

In PHP, there are three types of arrays:

1. **Indexed arrays -** Arrays with a numeric index

   The index can be assigned automatically (index always starts at 0)

   The index can be assigned manually

```php
<?php
$weekdays = array("Monday", "Tuesday", "Wednesday","Thursday", "
    Friday");
foreach( $weekdays as $value ) {
echo "Weekdays : $value <br />";
}
    echo "<br />";
$weekends[5] = "Saturday";
$weekends[6] = "Sunday";
foreach( $weekends as $value ) {
echo "Weekends : $value <br />";
    }
?>
```

2. **Associative arrays** - Arrays with named keys

```php
<?php
$age = array("Bob"=>35, "Sally"=>37);
echo "Bob is " . $age["Bob"] . " years old"."<br />";
echo "Sally is " . $age["Sally"] . " years old"."<br />";
echo "<br />";

$salaries["Bob"] = 2000;
$salaries["Sally"] = 4000;

echo "Bob is being paid - " . $salaries["Bob"] . "<br />";
echo "Sally is being paid - " . $salaries["Sally"] . "<br />";
 ?>
```

Lab Exercise 06– Introduction to PHP

3. **Multidimensional arrays** - Arrays containing one or more arrays

   A multi-dimensional array each element in the main array can also be an array. And each element in the sub-array can be an array, and so on. Values in the multi-dimensional array are accessed using multiple index.

Functions in PHP

- Function name should start with keyword "**function"** and all the PHP code should be put inside **"{"** and **"}"** braces.
- A function will not execute immediately when a page loads. A function will be executed by a call to the function.
- Function names are **NOT case-sensitive**.

```php
<?php
        #Starting of the function implementation
        function addFunction($num1, $num2) {
        $sum = $num1 + $num2;
        echo "Sum of the two numbers ($num1 and $num2) is  :  $
            sum  <br />";
         }
         addFunction(10, 20);
         addFunction(12, 55);
      ?>
?>
```

Exercise 01:

```php
<?php function student_info($student_name, $subject, $grade,)
{
echo "The Name of the student is : $student_name <br />";
echo "Subject is : $subject and $grade is : $grade";
}
?>
```

Lab Exercise 06– Introduction to PHP

I. Create a php file, name it as 'gradeCreater.php', and add above code and save it.

II. Call the function to display below output.
The Name of the student is Saman

Subject is iwt and Grade is 'A'

III. Create a global variable "classSize" and assign value 40.Change above function to print "His class size is 40", using that global variable.

IV. Define a constant name **sliit** , change the function to print "He studies at Srilanka institute of information and technology "

V. Write a switch statement to display students mark range. In this case it should print "He got more than 85 to IWT'.

Exercise 02:

Name	IWT Marks
Gamage	78
Perera	85
Vithanage	92
Wasala	55
Somarathna	77
nawarathna	82
Kalpage	33
Uduwaka	45

- Create an associated array name iwt_marks to store above details.
- Write a function in a separate php file, with if else statements to return students grade. Call that function to display Wasla's and Kalpages grades.
- Use for loop to iterate your array and generate below output.
(Output: Gamage : 78 marks and grade : 'A'….to Uduwaka :45 marks and grade: 'C')

Lab Exercise 06– Introduction to PHP

Exercise 03: Write a functions to convert temperature from Celsius to Fahrenheit and Fahrenheit to Celsius.

Exercise 04: Write a function to calculate the area and perimeter when the length and width are given as the input parameters. Identify whether it is a square or a rectangle.