DYNAMIC WEBSITES

Lecture 3: Madalitso Kaj Muva

Topic 4: Design and Build A Database (1)

The basics of PHP

- PHP Syntax
- PHP variables
- PHP If statements
- PHP Mathematical operations
- PHP For loop and while loop

PHP Syntax

```
<?php
    echo "Hello World";
?>
```

Tags and semicolons to terminate statements. Echo as h1

PHP Hello World Program using a variable

```
<?php
        $msg = "<h1>Hello World</h1>";
        echo $msg;
        echo $msg;
?>
```

In PHP, a variable starts with the $ sign, followed by the name of the variable:

Rules about naming variables.

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

Why use variables in programs. When not to use a variable.

Data Types in PHP

- String
- Integer
- Float (floating point numbers - also called double)
- Boolean
- NULL
- Array
- …

Examples

PHP is a Loosely Typed Language.

Hello me HTML form and PHP program

```
<form action="" method="GET">
        <input type="text" name="my_name" placeholder="Your name"/>
        <input type="submit" value="Submit"/>
        <br/>
</form>
<?php
        echo "<h1>Hello ".$_GET["my_name"]."</h1>";
?>
```

If statement

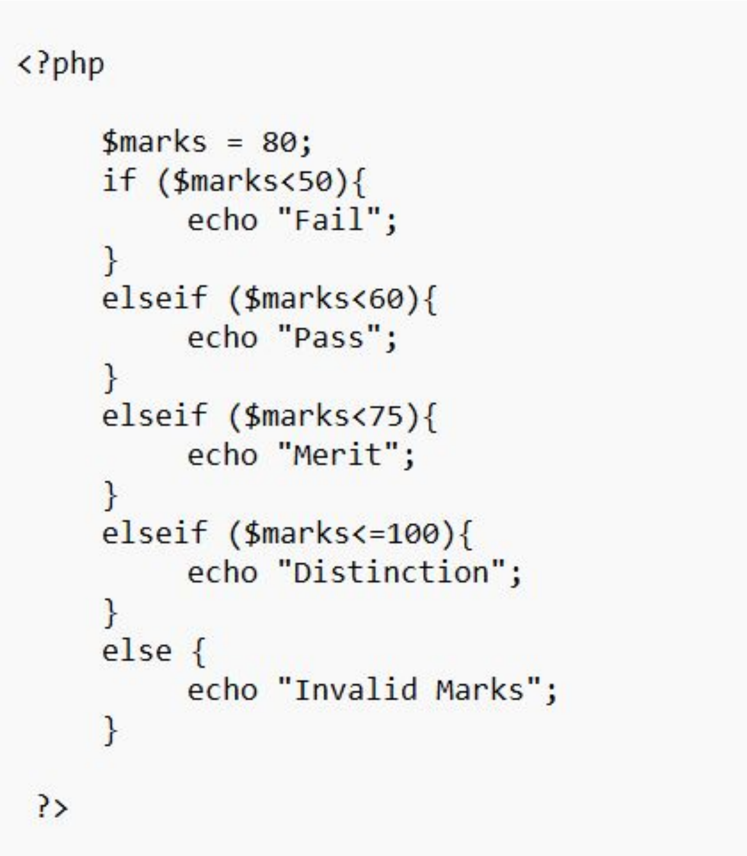
```
<?php
    $num = 12;
    if ($num == 12){
        echo "The number is 12";
    }
?>
```

If statement without an else or else if block

PHP If statements

```
<?php
    $age = 12;
    if ($age>18) {
        echo "You can vote";
    }
    else {
        echo "You can't vote, too young";
    }
    //You cannot vote is going to be printed since $age is less than 18
 ?>
```

PHP if elseif else



```
<?php

     $marks = 80;
     if ($marks<50){
          echo "Fail";
     }
     elseif ($marks<60){
          echo "Pass";
     }
     elseif ($marks<75){
          echo "Merit";
     }
     elseif ($marks<=100){
          echo "Distinction";
     }
     else {
          echo "Invalid Marks";
     }

 ?>
```

PHP Math

```
<?php
    $num1 = 10;
    $num2 = 20;
    $ans = $num1 + $num2;
    echo $ans;
?>
```

Finding a remainder after division

```
    <?php
        $num1 = 3;
        $num2 = 20;
        $ans = $num2 % $num1;
        echo $ans;
    ?>
```

Square

```
    <?php
        $num1 = 2;
        $num2 = 4;
        $ans = $num2 ** $num1;
        echo ($ans);
    ?>
```

```
<?php
        echo(sqrt(64));  // returns 8
?>
```

PHP For loop and while loop

Loops help us to execute a section of code several times.

Imagine if you wanted to print to print hello world 5 times.

```
<?php
    for($i=0; $i<=5;$i++){
        echo("Hello World");
    }
?>
```

For Loop to Print 10 numbers

```
<?php
    for($i=0; $i<10;$i++) {
        echo $i."<br/>";
    }
 ?>
```

For loop is used when you know how many times a loop has to run.

For loop to print even numbers only between 0 and 10

```
<?php
    for($i=0; $i<=10;$i++){
        if($i%2 !== 0){
            continue;
        }
        else{
            echo($i."<br>");
        }
    }
?>
```

While loop

Use the while loop if you do not know how many times the loop will need to run

```
<?php
    $i = 0;
    while($i<=10){
        echo($i."<br/>");
        $i=$i+1;
    }
?>
```

While loop to print old numbers only between 0 and 10

```
<?php
    $i = 0;
    while($i<=10){
        if($i% 2!==0){
            echo("The number is ".$i);
            echo("<br>");
        }
        $i++;
    }
?>
```

PHP Arrays

An array is a special variable, which can hold more than one value at a time.

```
<?php
    $details = array("Ron",20,True,62.1);
    echo $details[0];
    echo "<br/>";
    echo $details[1];
    echo "<br/>";
    echo $details[2];
    echo "<br/>";
    echo $details[3];
?>
```

In PHP, there are three types of arrays:

- Indexed arrays - Arrays with a numeric index
- Associative arrays - Arrays with named keys
- Multidimensional arrays - Arrays containing one or more arrays

Numerically indexed array

```
<?php
    $details = array("Ron", 20,True,3.3);
?>
```

Display each element in the array.

Looping through the array: Using the foreach

```
<?php
    $details = array("Ron", 20,True,3.3);
    foreach($details as $detail){
        echo ($detail."<br/>");
    }
?>
```

Example of an associative array

```
<?php
        $details = array("name"=>"Ron","age"=>20,"knows_php"=>True,"weight"=>3.3);
        echo $details["name"];
        echo "<br/>";
        echo $details["age"];
        echo "<br/>";
        echo $details["knows_php"];
        echo "<br/>";
        echo $details["weight"];
?>
```

Iterating through a php associative array using for each loop

```
<?php

    $details =
    array("name"=>"Ron","age"=>20,"knows_php"=>True,"weight"=>3.3);

    foreach($details as $detail){

        echo ($detail."<br/>");

    }

?>
```

The End