**PHP functions -** A function is a segment of code grouped into a single entity. The great thing about functions is that you can re-use them. By doing so, you eliminate the need to re-type the same code over and over again. Once you implement a function, you can use its code by calling that function.

**Create a function** - type in the **function** keyword, followed by an opening brace and a closing brace.

**Parameters** are variables placed inside the parenthesis of a function which are used by the code inside the function in some way. Parameters are separated by commas.

**To call a function** - refer to the function name and pass the appropriate parameter values to it.

**Return values** - The function simply acts as a value after its code has been executed. This way, a variable can take the value of a function which returns a value, or you can just print the value returned by the function.

**Built in functions**

* abs() - Will return the absolute value of a number.
* max() - Returns the highest value from a set of specified numbers.
* strrev() - Will print a text string backwards.
* strtoupper() - Will print a text string in all uppercase letters.

**Loops -** Loops are specifically designed to perform repetitive tasks with one set of code. Loops save alot of time.

The **for loop** is used to repeat a task a set number of times.

**Variable declaration** - The first part of the loop which initializes the variable at the beginning of the loop to some value. This value is the starting point of the loop.

**Condition** - The second part of the loop, and it is the part that decides whether the loop will continue running or not. While the condition in the loop is true, it will continue running. Once the condition becomes false, the loop will stop.

**Increment statement** - The increment statement is the third part of the loop. It is the part of the loop that changes the value of the variable created in the variable declaration part of the loop. The increment statement is the part of the loop which will eventually stop the loop from running.

Sample code:

<?php

for($a = 1; $a < 11; $a++){  
echo $a . " ";  
}

?>

Output:

1 2 3 4 5 6 7 8 9 10

W**hile loop** - the while loop repeats a segment of code an unknown number of times.

Sample code:

<?php

$num = 0;

while($num < 25){

$num = $num + 5;

print $num . "<br />";

}

?>

Output:

5 10 15 20 25

**Do-while loop -** The mechanism of the while loop is - while a condition is true, perform a certain action. The mechanism of the do-while loop is - perform a certain action while a condition is true.

Sample code:

<?php  
$num = 0;  
  
do{   
$num = $num + 5;  
print $num . "<br />";  
}

while ($num < 25);

?>

**Array**  - An array is a special type of variable which can hold a list of information. An array gives you the ability to group together related variables into one set. Arrays are special variables which hold lists of information.

Sample code:

<?php  
 $name[0] = “Michael”;  
 $name[1] = “Chad”;  
 $name[2] = “Lloyd”;  
 ?>

**Classes** – using the **class** keyword followed by the class name and followed by an opening brace and closing brace will create a class.

**Variables** - Class variables are known as properties, because they store important information in regards to the class - hence, they are the classes properties.

**PHP Strings** - A String is a grouping of characters sorrounded by double quotes such as "this is a string".

Strings are an important part of PHP. But there is much more that can be done with them than just printing them onto a webpage. PHP provides many powerful String functions which can be used to manipulate your text in many ways.

**PHP String functions**

* The strlen() function - Returns the length of a string.
* The substr() function - Returns a section of a string. Takes three parameters - the string to extract from, the position in the string from which to begin extracting, and how many characters to extract.
* The strrev() function - Takes a string and reverses it.
* The strstr() function - Used to find one string in another string. Takes two parameters - the string you are searching in, and the string you are searching for. The strstr() function will return all the content from the start of the found string to the end of the string to search in.

**PHP HTML Entities**

**htmlentities()** function converts HTML into HTML entities. < would become &lt;, and > would become &gt;. By doing so, the browser can't run HTML tags that a malicious user might try to inject.

**PHP Databases**

**MySQL** - The database system we will be working with is MySQL. The MySQL database is an open source Rational Database Management System that relies on SQL for data processing.

Known for its speed and reliability, MySQL has gained much popularity over proprietary database systems. MySQL is commonly used for web and embedded applications, and it can run on several operating systems including UNIX, Windows, and Mac OS. MySQL was developed by the MySQL AB company.

**MySQL commands**

* **use** – Selects a database for usage
* **create database** – Used to create a database
* **create table** – Used to create a table in a database
* **select** – Used to select particular data from a database