- PHP is a **server side scripting language** that is embedded in HTML. PHP scripts are executed on theserver
- It is used to manage dynamic content, databases, session tracking, even build entire e-commercesites.
- PHP supports many databases (MySQL, Informix, Oracle, Sybase, Solid, PostgreSQL, Generic ODBC, Microsoft SQL Server ,etc.)
- PHP is an open sourcesoftware.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-settingtime.
- PHP supports a large number of major protocols such as POP3, IMAP, andLDAP.
- PHP is forgiving: PHP language tries to be as forgiving aspossible.
- PHP **Syntax isC-Like**.

Common uses of PHP:
PHP performs system functions, i.e. from files on a system it can create, open, read, write, and close them. **The other uses of PHP are:**

- PHP can handle forms, i.e. gather data from files, save data to a file, thru email you can send data, return data to theuser.
- You add, delete, and modify elements within your database thruPHP.
- Access cookies variables and setcookies.
- Using PHP, you can restrict users to access some pages of yourwebsite.
- It can encryptdata.

Characteristics of PHP:

- Simplicity
- Efficiency
- Security
- Flexibility
- Familiarity
-

All PHP code must be included inside one of the three special markup tags are recognized by the PHP Parser.

```
<?php PHP code goes here ?>
 <?    PHP code goes here?>
 <script language="php"> PHP code goes here </script>
```

Most common tag is the **<?php...?>**

SYNTAX OVERVIEW:

Canonical PHP tags *The most universally effective PHP tag style is:*
<?php...?>

Short-open (SGML-style) tags *Short or short-open tags look like this:*
<?...?>
HTML script tags *HTML script tags look like this:*

<script language="PHP">...</script>

PHP - VARIABLE TYPES

The main way to store information in the middle of a PHP program is by using a **variable**. Here are the most important things to know about variables in PHP.

- A variable is used to storeinformation.
- All variables in PHP are denoted with a leading dollar sign(**$**).
- The value of a variable is the value of its most recentassignment.
- Variables are assigned with the **= operator**, with the variable on the left-hand side and the expression to be evaluated on theright.
- Variables can, but do not need, to be declared beforeassignment.
- Variables used before they are assigned have defaultvalues.
- PHP does a good job of **automatically converting types from one to another** when necessary.
- PHP variables arePerl-like.

Syntax: $var_name = value;

Eg: creating a variable containing a string, and a variable containing a number:

```
<?php
$txt="HelloWorld!";
$x=16;
?>
```

PHP is a Loosely Typed Language:

✓ In PHP, a variable does not need to be declared before adding a value toit.
✓ You do not have to tell PHP which data type the variableis
✓ PHP automatically converts the variable to the correct data type, depending on itsvalue.

Naming Rules for Variables

✓ A variable name must start with a letter or an underscore"_"
✓ A variable name can only contain alpha-numeric characters and underscores (a-z,A-Z, 0-9, and _)
✓ A variable name should not contain spaces. If a variable name is more than one word, it should be separated with an underscore ($my_string), or with capitalization/Camel notation ($myString)

PHP VariablesScope

In PHP, variables can be declared anywhere in the script. The scope of a variable is the part of the script where the variable can be referenced / used. PHP has three different variablescopes:

- **local**
- **global**
- **static**

Global and Local Scope

A variable declared **outside** a function has a GLOBAL SCOPE and can only be accessed outside a function:

Example

```
<?php
$x = 5; // global scope
function myTest() {
    // using x inside this function will generate an error
    echo "<p>Variable x inside function is: $x</p>";
}
myTest();
echo "<p>Variable x outside function is: $x</p>";
?>
```

A variable declared **within** a function has a LOCAL SCOPE and can only be accessed within that function:

Example

```
<?php
function myTest() {
    $x = 5; // local scope
    echo "<p>Variable x inside function is: $x</p>";
}
myTest(); // using x outside the function will generate an error
echo "<p>Variable x outside function is: $x</p>";
?>
```

You can have local variables with the same name in different functions, because local variables are only recognized by the function in which they are declared.

PHP The global Keyword

The global keyword is used to access a global variable from within a function. To do this, use the global keyword before the variables (inside the function):

Example

```
<?php
$x = 5; $y = 10;
function myTest() {
    global $x, $y;
    $y = $x+$y;       }
myTest();
echo $y; // outputs 15
?>
```

PHP also stores all global variables in an array called **$GLOBALS[*index*]**. The *index* holds the name of the variable. This array is also accessible from within functions and can be used to update global variables directly. The example above can be rewritten like this:

Example

```
<?php
$x = 5;
$y = 10;
function myTest() {
    $GLOBALS['y'] = $GLOBALS['x'] + $GLOBALS['y'];
}
```

```
myTest();
echo $y; // outputs 15
?>
```

PHP The static Keyword

Normally, when a function is completed / executed, all of its variables are deleted. However, sometimes we want a local variable NOT to be deleted. We need it for a further job.
To do this, use the **static** keyword when you first declare the variable:
Example

```
<?php
function myTest() {
   static $x = 0;
   echo $x;
   $x=$x+5;
}
myTest();
myTest();
myTest();        ?>
```

Output: 5 10 15

Then, each time the function is called, that variable will still have the information it contained from the last time the function was called.
Note: The variable is still local to the function.

Variable Naming
Rules for naming a variable is-

- Variable names must begin with a letter or underscorecharacter.
- A variable name can consist of numbers, letters, underscores but you cannot use characterslike + , - , % , (,) . & , etc

There is no size limit for variables.

PHP - Data Types:
PHP has a total of **eight data types** which we use to construct our variables:

- **Integers:** are whole numbers, without a decimal point, like4195.
- **Doubles:** are floating-point numbers, like 3.14159or49.1.
- **Booleans:** have only two possible values either true orfalse.
- **Strings:** are sequences of characters, like 'PHP supports stringoperations.'

Scalar types

- **Arrays:** are named and indexed collections of othervalues.
- **Objects:** are instances ofprogrammer-definedclasses.

Compoundtypes

- **NULL:** is a special type that only has one value:NULL.
- **Resources:** are special variables that hold references toresourcesexternal to PHP (such as database connections).

Specialtypes

The first four are simple types, and the next two (arrays and objects) are compound - the compound types can package up other arbitrary values of arbitrary type, whereas the simple typescannot.

PHP Integers

Integers are **primitive data types.** They are **whole numbers**, without a decimal point, like 4195. They are the simplest type. They correspond to simple whole numbers, both positive and negative {..., -2, -1, 0, 1, 2, ...}.

Integer can be in decimal (base 10), octal (base 8), and hexadecimal (base 16) format. Decimal format is the default, octal integers are specified with a leading 0, and hexadecimals have a leading 0x.

Ex: $v = 12345;
$var1 = -12345 + 12345;

notation.php

```
<?php
$var1 = 31; $var2 = 031; $var3 = 0x31;
 echo "$var1\n$var2\n$var3";     ?>
```

Output:

```
31
25
49
```

The default notation is the **decimal**. The script shows these three numbers in decimal. In Java and C, if an integer value is bigger than the maximum value allowed, integer overflow happens. PHP works differently. In PHP, the integer becomes a float number. Floating point numbers have greater boundaries. In 32bit system, an integer value size is four bytes. The maximum integer value is2147483647.

boundary.php

```
<?php
$var = PHP_INT_MAX;
 echo var_dump($var);
$var++;
echo var_dump($var);
 ?>
```

We assign a maximum integer value to the $var variable. We increase the variable by one. And we compare the contents.

Output:

```
int(2147483647)
float(2147483648)
```

As we have mentioned previously, internally, the number becomes a floating point value.

var_dump(): The PHP var_dump() function returns the data type and value.

PHP Doubles or Floating point numbers

Floating point numbers represent real numbers in computing. Real numbers measure continuous quantities like weight, height or speed. Floating point numbers in PHP can be larger than integers and they can have a decimal point. The size of a float is platform dependent.

We can use various syntaxes to create floating point values.

```
<?php
 $a = 1.245;
$b = 1.2e3;
$c = 2E-10;
```

```
$d = 1264275425335735;
 var_dump($a);
var_dump($b);
var_dump($c);
var_dump($d);
 ?>
```

The **$d** variable is assigned a large number, so it is automatically converted to float type.

Output:

```
float(1.245)
float(1200)
float(2.0E-10)
float(1264275425340000)
```

This is the output of beside script

PHP Boolean

A Boolean represents two possible states: TRUE or FALSE.

$x = true; $y = false;

Booleans are often used in conditional testing.

```
<?php
 $male = False;
 $r = rand(0, 1);
 $male = $r ? True: False;
 if ($male) {
    echo "We will use name John\n";
} else {
    echo "We will use name Victoria\n";
}        ?>
```

The script uses a **random integer** generator to simulate our case. $r = **rand**(0, 1);
The **rand( )** function returns a random number from the given integer boundaries **0 or 1**.
$male = $r? True: False;

We use the ternary operator to set a $male variable. The variable is based on the random $r value. If $r equals to **1**, the $male variable is set to **True**. If $r equals to **0**, the $male variable is set to **False**.

PHP Strings
String is a data type representing textual data in computer programs. Probably the single most important data type in programming.

```
<?php
 $a = "PHP ";
$b = 'PERL';
 echo $a . $b;?>
```

Output: PHP PERL

We can use single quotes and double quotes to create string literals.

The script outputs two strings to the console. The \n is a special sequence, a new line.
The escape-sequence replacements are −

- \n is replaced by the newlinecharacter
- \r is replaced by the carriage-returncharacter
- \t is replaced by the tabcharacter
- \$ is replaced by the dollar sign itself($)
- \" is replaced by a single double-quote(")
- \\ is replaced by a single backslash(\)

The Concatenation Operator
There is only one string operator in PHP.
The concatenation operator **(.)** is used to put two string values together. To concatenate two string variables together, use the concatenation operator:

```
<?php
$txt1="Hello Kalpana!";
$txt2="What a nice day!";
echo $txt1 . " " . $txt2;
?>
```

O/P: Hello Kalpana! What a niceday!

Search for a Specific Text within a String
The **PHP strpos() function** searches for a specific text within a string. If a **match is found**, the function **returns the character position of the first match**. If **no match is found**, it will return **FALSE**. The example below searches for the text "world" in the string "Hello world!":

Example

```
<?php
echo strpos("Hello world!", "world");
?>
```

output:6

Tip: The first character position in a string is 0 (not 1).

Replace Text within a String
The PHP **str_replace()** function replaces some characters with some other characters in a string. The example below replaces the text "world" with "Dolly":

Example

```
<?php
echo str_replace("world", "Kalpana", "Hello world!");
?>
```

Output: HelloKalpana!

The strlen() function:
The **strlen()** function is used to return the length of a string. Let's find the length of a string:

```
Eg: <?php
   echostrlen("Helloworld!");       ?>
```

The output of the code above will be:12

PHP Array
Array is a complex data type which handles a collection of elements. Each of the elements can be accessed by an index. An array stores multiple values in one single variable. In the following example $cars is an array. The PHP var_dump() function returns the data type and value:

Example

```
<?php
$cars = array("Volvo","BMW","Toyota");
print_r($cars);
var_dump($cars);
?>
```

The **array keyword** is used to create a collection of elements. In our case we have names.
The print_r function prints human readable information about a variable to the console.

O/P:
```
Array ( [0] => Volvo [1] => BMW [2] => Toyota )
  array(3) { [0]=> string(5) "Volvo" [1]=> string(3) "BMW" [2]=> string(6) "Toyota" }
```

PHP Object
An object is a data type which stores data and information on how to process that data. In PHP, an object must be explicitly declared. First we must declare a class of object. For this, we use the class keyword. A class is a structure that can contain properties and methods:

Example

```
<?php
class Car {
   function Car() {
$this->model = "VW";
   }    }
$herbie =newCar();       // create anobject
echo$herbie->model;    // show object properties
?>
```

Output: VW

PHP NULL
NULL is a special data type that only has **one value: NULL**. To give a variable the NULL value, simply assign it like this −
Ex: $my_var = NULL;
The special constant NULL is capitalized by convention, but actually it is case insensitive; you could just as well have typed −
$my_var = null;
A variable that has been assigned NULL has the following properties −

- It evaluates to FALSE in a Boolean context.
- It returns FALSE when tested with **IsSet()** function.

Tip: If a variable is created without a value, it is automatically assigned a value of NULL. Variables can also be emptied by setting the value to NULL:

Example1

```
<?php
$x = "Hello world!";
$x = null;
var_dump($x);
?>
```

PHP Resource

The special resource type is not an actual data type. It is the storing of a reference to functions and resources external to PHP. A common **example** of using the resource data type is a **database call**. Resources are handlers to opened files, database connections or image canvas areas. We will not talk about the resource type here, since it is an advancedtopic.

constant() function

As indicated by the name, this function will return the value of the constant. This is useful when you want to retrieve value of a constant, but you do not know its name, i.e. It is stored in a variable or returned by a function.constant() example

```
<?php
  define("MINSIZE",50);
    echo MINSIZE;
  echo constant("MINSIZE"); // same thing as the previous line
?>
```

Output: 50 50

Only scalar data (boolean, integer, float and string) can be contained in constants.

PHP - Operators:

What is Operator?

Simple answer can be given using expression 4 + 5 is equal to 9. **Here 4 and 5 are called operands and + is called operator.** PHP language supports following type of operators.

Arithmetic Operators	Assignment Operators
Increment/Decrement operators	Conditional (or ternary) Operators
Comparison Operators	String Operators
Logical (or Relational) Operators	Array Operators

Arithmetic Operators:

There are following arithmetic operators supported by PHP language:
Assume variable **A holds 10** and variable **B holds 20** then:

Operator	Description	Example
+	Adds two operands	$A + $B will give 30
-	Subtracts second operand from the first	$A - $B will give -10
*	Multiply both operands	$A *$B will give 200
/	Divide numerator by denumerator	$B / $A will give 2
%	Modulus Operator and remainder of after an integer division	$B % $A will give 0
**	Exponentiation ($x to the $y'th power)	$A ** $B

Increment/Decrement operators

Operator	Description	Example
++	Increment operator, increases integer value by one	$A++ - 11 / ++$A
--	Decrement operator, decreases integer value by one	$A-- will give 9 / --$A

Comparison Operators:

There are following comparison operators supported by PHP language Assume variable A holds 10 and variable B holds 20 then:

Operator	Description	Example
==	Checks if the value of two operands are equal or not	($A==$B) is not true.
===	Identical(Returns true if $A is equal to $B, and they are of the same type)	$A === $B
!=	Checks if the values of two operands are equal or not, if values are not equal then condition becomes true.	($A != $B) is true.
<>	Returns true if $x is not equal to $y	$A <> $B
!==	Not identical (Returns true if $A is not equal to $B, or they are not of the same type)	$A !== $B
>	Checks if the value of left operand is greater than the value of right operand, if yes then condition becomes true.	($A > $B) is not true.
<	Checks if the value of left operand is less (A < B) is true. Than the value of right operand, if yes then condition becomestrue.	
>=	Checks if the value of left operand is greater than or equal to the value of right operand, if yes then returns true.	($A >= $B) is not true.
<=	Checks if the value of left operand is less than or equal to the value of right operand, if yes then condition becomes true.	($A <= $B) is true.

Logical Operators:

There are following logical operators supported by PHP language
Assume variable A holds 10 and variable B holds 20 then:

Operator	Description	Example
and (or) &&	Called Logical AND operator. If both the operands are true then then condition becomes true.	($A and $B) is true. ($A && $B) is true.
or (or)||	Called Logical OR Operator. If any of the two operands are non zero then then condition becomes true.	($A or $B) is true. ($A || $B) is true.
!	Called Logical NOT Operator. Use to reverses the logical state of its operand. If a condition is true then Logical NOT operator will make false.	!($A && $B) is false.

Assignment Operators:
There are following assignment operators supported by PHP language:

Operator	Description	Example
=	Simple assignment operator, Assigns values from right side operands to left side operand	$C = $A + $B

+=	Add AND assignment operator, It adds right operand to the left operand and assign the result to left operand	$C += $A is equivalent to $C = $C + $A
-=	Subtract AND assignment operator, It subtracts right operand from the left operand and assign the result to left operand	$C -= $A is equivalent to $C = $C - $A
***=**	Multiply AND assignment operator, It multiplies right operand with the left operand and assign the result to left operand	$C *= $A is equivalent to $C = $C * $A
/=	Divide AND assignment operator, It divides left operand with the right operand and assign the result to left operand	$C /= $A is equivalent to $C = $C / $A
%=	Modulus AND assignment operator, It takes modulus using two operands and assign the result to left operand	$C %= $A is equivalent to $C = $C % $A

ConditionalOperator
There is one more operator called conditional operator. This first evaluates an expression for a true or false value and then execute one of the two given statements depending upon the result of theevaluation.

The conditional operator has this syntax:

Operator	Description	Example
? :	Conditional Expression	If Condition is true ? Then value X : Otherwise value Y

PHP String Operators

PHP has two operators that are specially designed for strings.

Operator	Description	Example
.	Concatenation	$txt1 . $txt2 (Concatenation of $txt1 and $txt2)
.=	Concatenation assignment	$txt1 .= $txt2 (Appends $txt2 to $txt1)

PHP Array Operators

The PHP array operators are used to compare arrays.

Operator	Description	Example
+	Union	$x + $y (Union of $x and $y)
==	Equality	$x == $y (Returns true if $x and $y have the same key/value pairs)
===	Identity	$x === $y (Returns true if $x and $y have the same key/value pairs in the same order and of the same types)
!= or <>	Inequality	$x != $y or $x <> $y Returns true if $x is not equal to $y
!==	Non-identity	$x !== $y (Returns true if $x is not identical to $y)

Precedence of PHP Operators

Operator precedence determines the grouping of terms in an expression. This affects how an expression is evaluated. Certain operators have higher precedence than others; for example, the multiplication operator has higher precedence than the addition operator −

For example x = 7 + 3 * 2; Here x is assigned 13, not 20 because operator * has higher precedence than + so it first get multiplied with 3*2 and then adds into 7. **Ans:13**

Here operators with the highest precedence appear at the top of the table; those with the lowest appear at the bottom. Within an expression, higher precedence operators will be evaluated first.

Category	**Operator**	**Associativity**
Unary	! ++ --	Right to left
Multiplicative	* / %	Left to right
Additive	+ -	Left to right
Relational	<<= >>=	Left to right
Equality	== !=	Left to right
Logical AND	&&	Left to right
Logical OR	||	Left to right
Conditional	?:	Right to left
Assignment	= += -= *= /= %=	Right to left

Ex:
```
<!DOCTYPE html>
<html>
<body>
<?php
$x = 10;
$y = 6;
echo $x + $y;
?>
</body>
</html>
```
O/P: 16

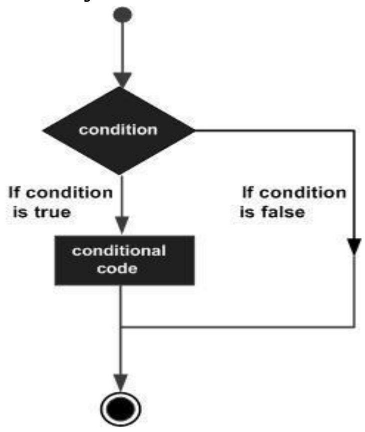
```
<!DOCTYPE html>
<html>
<body>
<?php
$x = 100;
$y = 50;
var_dump($x > $y); // returns true because $x is greater than $y
?>
```
O/P: **bool(true)**

```
<!DOCTYPE html>
<html>
<body>
<?php
$x = 100;
$y = 50;
if ($x == 100 xor $y == 80) {
    echo "Hello world!";
}
?>
```
O/P: **Hello world!**

PHP - Decision Making

The if, elseif ...else and switch statements are used to take decision based on the different condition. You can use conditional statements in your code to make your decisions. PHP supports following three decision making statements –

- **if...else statement** − use this statement if you want to execute a set of code when a condition is true and another if the condition is nottrue
- **elseif statement** − is used with the if...else statement to execute a set of code if **one** of the several condition istrue
- **switch statement** − is used if you want to select one of many blocks of code to be executed, use the Switch statement. The switch statement is used to avoid long blocks of if..elseif..elsecode.



Syntax

```
if (condition)
  code to be executed if condition is true;
else
  code to be executed if condition is false;
```

Example

The following example will output "Have a nice weekend!" if the current day is Friday, Otherwise, it will output "Have a nice day!":

EX:
```
<html>
      <body>
    <?php
    $d=date("D");
          if ($d=="Fri")
      echo "Have a nice weekend!";
          else
      echo "Have a nice day!";
  ?>
  </body></html>
```

The If...Else Statement

If you want to execute some code if a condition is true and another code if a condition is false, usetheif......else statement.

The elseif Statement

If you want to execute some code if one of the several conditions is true use the elseif statement

Syntax	**EX:**<html>
if (*condition*) *code to be executed if condition is true;* elseif (*condition*) *code to be executed if condition is true;* else *code to be executed if condition is false;*	<body> <?php $d=date("D"); if($d=="Fri") echo "Have a nice weekend!"; elseif ($d=="Sun") echo "Have a nice Sunday!"; else echo "Have a nice day!"; ?> </body> </html>
Example The following example will output "Have a nice weekend!" if the current day is Friday, and "Have a nice Sunday!" if the current day is Sunday. Otherwise, it will output "Have a nice day!"	

The Switch Statement

If you want to select one of many blocks of code to be executed, use the Switch statement. The switch statement is used to avoid long blocks of if..elseif..else code.

Syntax	**Example**

switch (*expression*)
{
case *label1:*
code to be executed if expression = label1;
break;
case *label2:*
code to be executed if expression = label2;
break;
default:
code to be executed
if expression is different
from both label1 and label2;
}
	The *switch* statement works in an unusualway. First it evaluates given expressionthen seeks a lable to match the resultingvalue. If a matching value is found then thecode associated with the matching labelwill be executed or if none of the lablematches then statement will execute anyspecified default code.

PHP - Loop Types

Loops in PHP are used to execute the same block of code a specified number of times. PHP supports following four loop types.

- **for** − loops through a block of code a specified number oftimes.
- **while** − loops through a block of code if and as long as a specified condition istrue.
- **do...while** − loops through a block of code once, and then repeats the loop as long as a special condition istrue.
- **foreach** − loops through a block of code for each element in anarray.

We will discuss about **continue** and **break** keywords used to control the loops execution.

The for loop statement

The for statement is used when you know how many times you want to execute a statement or a block of statements.

Syntax

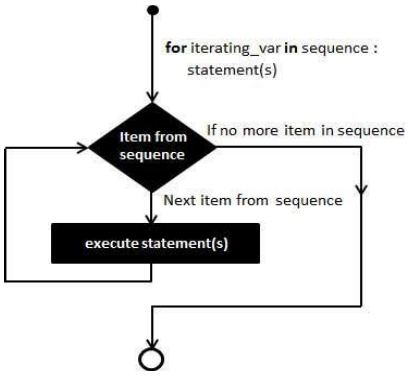
```
for (initialization; condition; increment)
{
  code to be executed;
}
```

The initializer is used to set the start value for the counter of the number of loop iterations. A variable may be declared here for this purpose and it is traditional to name it $i.

Example

The following example makes five iterations and changes the assigned value of two variables on eachpass
` of the loop −

```
<html><body>
        <?php
      $a =0;
      $b =0;
        for( $i=0; $i<5; $i++ )
      {
        $a += 10;
        $b += 5;
      }
          echo ("At the end of the loop a=$a and b=$b" );
    ?>      </body></html>
```



This will produce the following result –

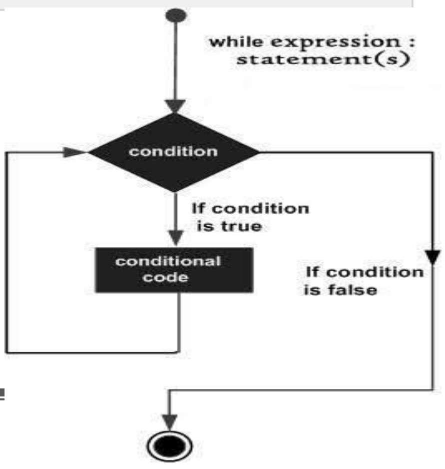
At the end of the loop a=50 and b=25

The while loop statement

The while statement will execute a block of code if and as long as a test expression is true. If the test expression is true then the code block will be executed. After the code has executed the test expression will again be evaluated and the loop will continue until the test expression is found to be false.

Syntax

```
while (condition)
{
  code to be executed;
}
```



Example

This example decrements a variable value on each iteration of the loop and the counter increments until it reaches 10 when the evaluation is false and the loop ends.

```
<html>
  <body>
      <?php
        $i = 0;
        $num = 50;
      while( $i < 10)
     {
       $num--;
       $i++;
     }
      echo ("Loop stopped at i = $i and num = $num" );
  ?>   </body></html>
```

This will produce the following result –

```
Loop stopped at i = 10 and num = 40
```

The do...while loop statement

The do...while statement will execute a block of code at least once. It then will repeat the loop as long as a condition is true.

Syntax

```
do
{
  code to be executed;
}while (condition);
```

Example

The following example will increment the value of i at least once, and it will continue incrementing the variable i as long as it has a value of less than 10 −

```
<html>
  <body>
    <?php
      $i = 0; $num = 0;
     do{
        $i++;
      }while( $i < 10 );
      echo ("Loop stopped at i = $i" );
    ?>
  </body>
</html>
```

O/P: Loop stopped at i = 10

The foreach loop statement

The foreach statement is used to **loop through arrays**. For each pass the value of the current array element is assigned to $value and the array pointer is moved by one and in the next pass next element will be processed.

Syntax

```
foreach (array as value)
{
  code to be executed;
}
```

Example

Try out beside example to list out the values of an array.

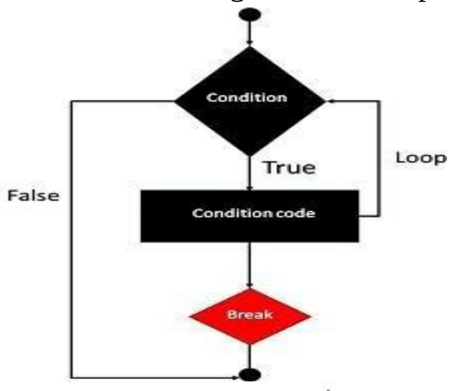
```
<html>
  <body>
    <?php
        $array = array( 1, 2, 3, 4, 5);
          foreach( $array as $value )
        {
           echo "Value is $value <br />";
        }
     ?>
  </body></html>
```

This will produce the following result −

```
Value is1
Value is2
Value is3
Value is4
Value is5
```

The break statement

The PHP **break** keyword is used to terminate the execution of a loop prematurely. The **break** statement is situated inside the statement block. If gives you full control and whenever you want to exit from the loop you can come out. After coming out of a loop immediate statement to the loop will beexecuted.

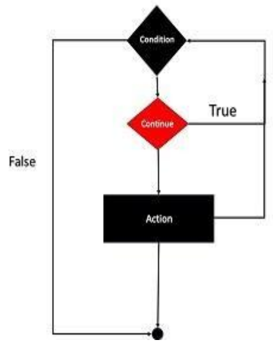


Example

In the following example condition test becomes true when the counter value reaches 3 and loop terminates.

```
        <?php
        $i =0;
         while( $i<10)          {
           $i++;
           if( $i ==3)break;          }
        echo ("Loop stopped at i = $i" );
     ?>
```
O/P: Loop stopped at i=3

The continue statement



The PHP **continue** keyword is used to halt the current iteration of a loop but it does not terminate the loop. Just like the **break** statement the **continue** statement is situated inside the statement block containing the code that the loop executes, preceded by a conditional test. For the pass encountering **continue** statement, rest of the loop code is skipped and next pass starts.

Example

In the following example loop prints the value of array but for which condition becomes true it just skip the code and next value is printed.

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

This will produce the following result −

```
Value is1
Value is2
Value is4
Value is5
```

PHP – Functions

PHP functions are similar to other programming languages. A function is a piece of code which takes one more input in the form of parameter and does some processing and returns a value. You already have seen many functions like **fopen()** and **fread()** etc. They are built-in functions but PHP gives you option to create your own functions as well.

There are two parts which should be clear to you–

- **Creating a PHPFunction**
- **Calling a PHPFunction**

In fact you hardly need to create your own PHP function because there are already more than 1000 of built-in library functions created for different area and you just need to call them according to yourrequirement.

Creating PHP Function

It’s very easy to create your own PHP function. Suppose you want to create a PHP function which will simply write a simple message on your browser when you will call it. Following example creates a function called writeMessage() and then calls it just after creating it.

```
<html><head>
      <title>Writing PHP Function</title>
   </head>
   <body>
     <?php
         /* Defining a PHP Function */
         function writeMessage()
         {
            echo "Have a nice time Kalpana!";
         }      /* Calling a PHP Function */
         writeMessage();
      ?>
   </body>
</html>
```

Output: Have a nice time Kalpana!

PHP Functions with Parameters

PHP gives you option to pass your parameters inside a function. You can pass as many as parameters you’re like. These parameters work like variables inside your function. Following example takes two integer parameters and add them together and then printthem.

```
<html>
   <head>      <title>Writing PHP Function with Parameters</title></head>
   <body>
   <?php
         function addFunction($num1, $num2)
               {
            $sum = $num1 + $num2;
            echo "Sum of the two numbers is : $sum";
                }
         addFunction(10, 20);
      ?>    </body>    </html>
```

Output: Sum of the two numbers is : 30

Passing Arguments by Reference

It is possible to pass arguments to functions by reference. This means that a reference to the variable is manipulated by the function rather than a copy of the variable's value. Any changes made to an argument in these cases will change the value of the original variable. You can pass an argument by reference by adding an ampersand to the variable name in either the function call or the function definition.

```
<html>
      <head>
      <title>Passing Argument by Reference</title>
   </head>
   <body>
   <?php
         function addFive($num)
         {
            $num += 5;
         }
        function addSix(&$num)
         {
            $num += 6;
         }
         $orignum = 10;
         addFive( $orignum);
         echo "Original Value is $orignum<br />";
         addSix( $orignum);
         echo "Original Value is $orignum<br />";
      ?>
      </body>
</html>
```

Output:
```
Original Value is10
Original Value is16
```

PHP Functions returning value

A function can return a value using the **return** statement in conjunction with a value or object. return stops the execution of the function and sends the value back to the calling code. You can return more than one value from a function using **returnarray(1,2,3,4)**.

```
<html>    <head>      <title>Writing PHP Function which returns value</title></head>
    <body>
      <?php
         function addFunction($num1, $num2)
         {
            $sum = $num1 + $num2;
            return $sum;
         }
         $return_value = addFunction(10, 20);
        echo "Returned value from the function : $return_value";
      ?></body></html>
```

Output: Returned value from the function : 30

Setting Default Values for Function Parameters

You can set a parameter to have a default value if the function's caller doesn't pass it. Following function prints NULL in case use does not pass any value to this function.

```
<html><head>        <title>Writing PHP Function which returns value</title></head>
   <body>
   <?php
         function printMe($param = NULL)
         {
```

```
         print $param;
        }
        printMe("This is test");
        printMe();
      ?>
   </body></html>
```

Output: This is test

Dynamic Function Calls

It is possible to assign function names as strings to variables and then treat these variables exactly as you would the function name itself.

```
<html>
 <head>
<title>Dynamic Function Calls</title>
</head>
   <body>
    <?php
        function sayHello()
        {
          echo "Hello<br />";
        }
        $function_holder = "sayHello";
        $function_holder();
      ?>    </body></html>
```

Output: Hello

```
<html>
 <head>
<title>Dynamic Function Calls</title>
</head>
   <body>
    <?php
        function add($x,$y)
        {
          echo "addition=" . ($x+$y);
        }
        $function_holder = "add";
        $function_holder(20,30);
      ?>    </body></html>
```

Output:addition=50

PHP Default Argument Value

The following example shows how to use a default parameter. If we call the function setHeight() without arguments it takes the default value as argument:

Example

```
<?php
function setHeight($minheight = 50) {
   echo "The height is : $minheight \t";
}
setHeight(350);
setHeight(); // will use the default value of 50
setHeight(135);
setHeight(80);
?>
```

O/P:350   50   135   80