

# PHP

# Fundamentals

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**ITE 311 WEB SYSTEMS AND TECHNOLOGIES 2**

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# PHP Basic

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PHP is a powerful tool for making dynamic and interactive Web pages.

PHP is the widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.

In our PHP tutorial you will learn about PHP, and how to execute scripts on your server.

# What You Should Already Know

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Before you continue you should have a basic understanding of the following:

HTML/XHTML

JavaScript

# What is PHP?

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PHP stands for **PHP: Hypertext Preprocessor**

PHP is a server-side scripting language, like ASP

PHP scripts are executed on the server

PHP supports many databases (MySQL, Informix, Oracle, Sybase, Solid, PostgreSQL, Generic ODBC, etc.)

PHP is an open source software

PHP is free to download and use

# What is a PHP File?

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PHP files can contain text, HTML tags and scripts

PHP files are returned to the browser as plain HTML

PHP files have a file extension of ".php", ".php3", or ".phtml"

# What is MySQL?

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MySQL is a database server

MySQL is ideal for both small and large applications

MySQL supports standard SQL

MySQL compiles on a number of platforms

MySQL is free to download and use

# PHP + MySQL

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PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

# Why PHP?

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PHP runs on different platforms (Windows, Linux, Unix, etc.)

PHP is compatible with almost all servers used today (Apache, IIS, etc.)

PHP is FREE to download from the official PHP resource: [www.php.net](http://www.php.net)

PHP is easy to learn and runs efficiently on the server side



# Where to Start?

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To get access to a web server with PHP support, you can:

Install Apache (or IIS) on your own server, install PHP, and MySQL

Or find a web hosting plan with PHP and MySQL support

# PHP Installation

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What do you Need?

If your server supports PHP you don't need to do anything.

Just create some .php files in your web directory, and the server will parse them for you. Because it is free, most web hosts offer PHP support.

However, if your server does not support PHP, you must install PHP.

Here is a link to a good tutorial from PHP.net on how to install PHP5:<http://www.php.net/manual/en/install.php>

# What do you Need?

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## Download PHP

Download PHP for free

here: <http://www.php.net/downloads.php>

## Download MySQL Database

Download MySQL for free

here: <http://www.mysql.com/downloads/>

## Download Apache Server

Download Apache for free

here: <http://httpd.apache.org/download.cgi>

# PHP Syntax

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The PHP script is executed on the server, and the plain HTML result is sent back to the browser.

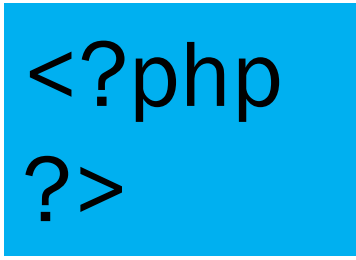
# Basic PHP Syntax

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A PHP script always starts with `<?php` and ends with `?>`. A PHP script can be placed anywhere in the document.

On servers with shorthand-support, you can start a PHP script with `<?` and end with `?>`.

For maximum compatibility, we recommend that you use the standard form (`<?php`) rather than the shorthand form.



```
<?php  
?>
```

# Basic PHP Syntax

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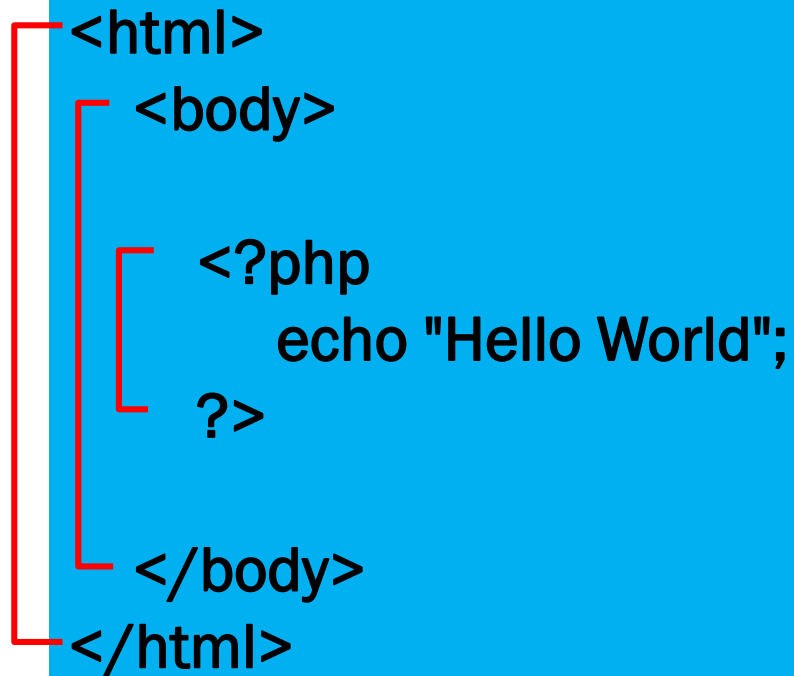
A PHP file must have a .php extension. (\*.PHP)

A PHP file normally contains HTML tags, and some PHP scripting code.

# Basic PHP Syntax (Example First Code)

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Below, we have an example of a simple PHP script that sends the text "Hello World" back to the browser:



```
<html>  
  <body>  
    <?php  
      echo "Hello World";  
    ?>  
  </body>  
</html>
```

# Basic PHP Syntax

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Each code line in PHP must end with a semicolon. The semicolon is a separator and is used to distinguish one set of instructions from another.

There are two basic statements to output text with PHP: **echo** and **print**.

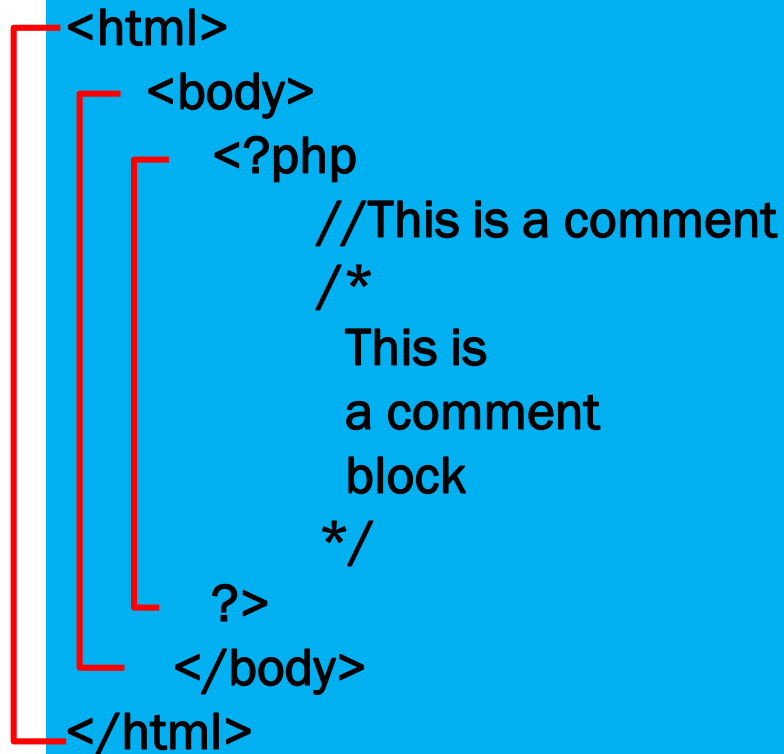
In the example above we have used the echo statement to output the text "Hello World".



# Comments in PHP

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In PHP, we use `//` to make a one-line comment or `/*` and `*/` to make a comment block:



```
<html>  
  <body>  
    <?php  
      //This is a comment  
      /*  
        This is  
        a comment  
        block  
      */  
    ?>  
  </body>  
</html>
```

The diagram illustrates the nesting of comments in PHP code. Red brackets are used to show the scope of each comment type: a single-line comment (`//`) is nested within a multi-line comment block (`/*`...`*/`), which is in turn nested within the PHP code block (`<?php`...`?>`), which is nested within the HTML body (`<body>`...`</body>`), which is finally nested within the HTML document (`<html>`...`</html>`).

# PHP Variables

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Variables are "containers" for storing information.

Do You Remember Algebra From School?

Do you remember algebra from school?  $x=5$ ,  $y=6$ ,  $z=x+y$

Do you remember that a letter (like  $x$ ) could be used to hold a value (like 5), and that you could use the information above to calculate the value of  $z$  to be 11?

These letters are called **variables**, and variables can be used to hold values ( $x=5$ ) or expressions ( $z=x+y$ ).

# PHP Variables

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As with algebra, PHP variables are used to hold values or expressions.

A variable can have a short name, like `x`, or a more descriptive name, like `carName`.

Rules for PHP variable names:

Variables in PHP starts with a `$` sign, followed by the name of the variable

The variable name must begin with a letter or the underscore character

A variable name can only contain alpha-numeric characters and underscores (`A-z`, `0-9`, and `_` )

A variable name should not contain spaces

Variable names are case sensitive (`y` and `Y` are two different variables)

# Creating (Declaring) PHP Variables

---

PHP has no command for declaring a variable.

A variable is created the moment you first assign a value to it:

```
$myCar = "Volvo";
```

# Creating (Declaring) PHP Variables

---

After the execution of the statement above, the variable `myCar` will hold the value `Volvo`.

**Tip:** If you want to create a variable without assigning it a value, then you assign it the value of `null`.

Let's create a variable containing a string, and a variable containing a number:

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

# PHP is a Loosely Typed Language

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In PHP, a variable does not need to be declared before adding a value to it.

In the example above, notice that we did not have to tell PHP which data type the variable is.

PHP automatically converts the variable to the correct data type, depending on its value.

In a strongly typed programming language, you have to declare (define) the type and name of the

# PHP Variable Scope

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The scope of a variable is the portion of the script in which the variable can be referenced.

PHP has four different variable scopes:

- local
- global
- static
- parameter

# Local Scope

---

A variable declared **within** a PHP function is local and can only be accessed within that function. (the variable has local scope):

```
<?php
$a = 5;  // global scope

function myTest()
{
    echo $a; // local scope
}

myTest();
?>
```

The script above will not produce any output because the echo statement refers to the local scope variable `$a`, which has not been assigned a value within this scope.

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.

Local variables are deleted as soon as the function is completed.



# Global Scope

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Global scope refers to any variable that is defined outside of any function.

Global variables can be accessed from any part of the script that is not inside a function.

To access a global variable from within a function, use the **global** keyword:

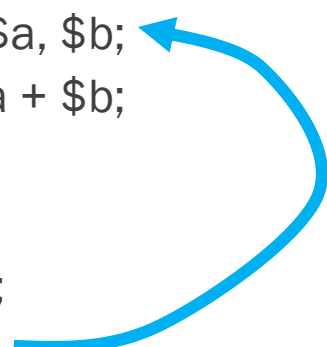
# Global Scope

---

```
<?php
$a = 5;
$b = 10;

function myTest()
{
    global $a, $b;
    $b = $a + $b;
}

myTest();
echo $b;
?>
```



The script above will output 15. PHP also stores all global variables in an array called `$GLOBALS[index]`. Its index is the name of the variable. This array is also accessible from within functions and can be used to update global variables directly.

# Global Scope

---

The example above can be rewritten as this:

```
<?php
$a = 5;
$b = 10;

function myTest()
{
    $GLOBALS['b'] = $GLOBALS['a'] + $GLOBALS['b'];
}

myTest();
echo $b;
?>
```

# Static Scope

---

When a function is completed, all of its variables are normally deleted. However, sometimes you want a local variable to not be deleted.

To do this, use the **static** keyword when you first declare the variable:

```
static $rememberMe;
```

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

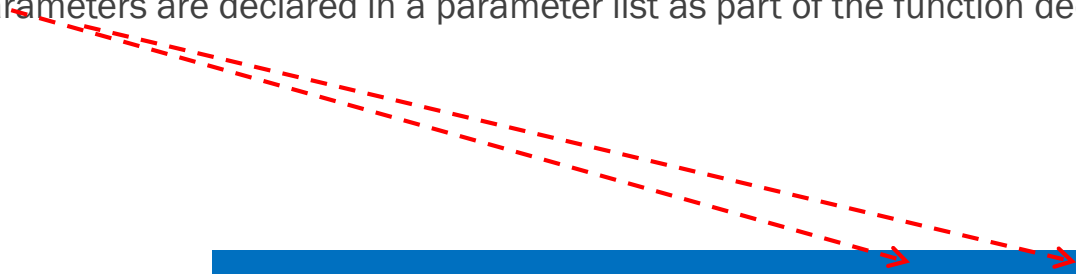
**Note:** The variable is still local to the function.

# Parameters

---

A parameter is a local variable whose value is passed to the function by the calling code.

Parameters are declared in a parameter list as part of the function declaration:



```
function myTest($para1,$para2,...)
{
    // function code
}
```

Parameters are also called arguments. We will discuss them in more detail when we talk about functions.

# PHP String Variables

---

## String Variables in PHP

String variables are used for values that contain characters.

In this chapter we are going to look at the most common functions and operators used to manipulate strings in PHP.

After we create a string we can manipulate it. A string can be used directly in a function or it can be stored in a variable.

Below, the PHP script assigns the text "Hello World" to a string variable called \$txt:

```
<?php  
$txt="Hello  
World";  
echo $txt;  
?>
```



Hello World

# 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 World!";  
    $txt2="What a nice  
day!";  
    echo $txt1 . " " . $txt2;  
?>
```

**Hello World! What a  
nice day!**

# The strlen() function

---

The strlen() function is used to return the length of a string.

Let's find the length of a string:

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

12



# The strpos() function

---

The strpos() function is used to search for a character/text within a string.

If a match is found, this function will return the character position of the first match. If no match

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

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# PHP Operators

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The assignment operator = is used to assign values to variables in PHP.

The arithmetic operator + is used to add values together.

# Arithmetic Operators

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Operator	Name	Description	Example	Result
$x + y$	Addition	Sum of x and y	$2 + 2$	4
$x - y$	Subtraction	Difference of x and y	$5 - 2$	3
$x * y$	Multiplication	Product of x and y	$5 * 2$	10
$x / y$	Division	Quotient of x and y	$15 / 5$	3
$x \% y$	Modulus	Remainder of x divided by y	$5 \% 2$	1
			$10 \% 8$	2
			$10 \% 2$	0
$-x$	Negation	Opposite of x	$-2$	
$a . b$	Concatenation	Concatenate two strings	"Hi" . "Ha"	HiHa

# Assignment Operators

---

The basic assignment operator in PHP is "=". It means that the left operand gets set to the value of the expression on the right. That is, the value of "\$x = 5" is 5.

Assignment	Same as...	Description
<b>x = y</b>	<b>x = y</b>	The left operand gets set to the value of the expression on the right
<b>x += y</b>	<b>x = x + y</b>	Addition
<b>x -= y</b>	<b>x = x - y</b>	Subtraction
<b>x *= y</b>	<b>x = x * y</b>	Multiplication
<b>x /= y</b>	<b>x = x / y</b>	Division
<b>x %= y</b>	<b>x = x % y</b>	Modulus
<b>a .= b</b>	<b>a = a . b</b>	Concatenate two strings

# Incrementing/Decrementing Operators

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Operator	Name	Description
<b>++ x</b>	<b>Pre-increment</b>	<b>Increments x by one, then returns x</b>
<b>x ++</b>	<b>Post-increment</b>	<b>Returns x, then increments x by one</b>
<b>-- x</b>	<b>Pre-decrement</b>	<b>Decrements x by one, then returns x</b>
<b>x --</b>	<b>Post-decrement</b>	<b>Returns x, then decrements x by one</b>

# Comparison Operators

---

Comparison operators allows you to compare two values:

Operator	Name	Description	Example
<code>x == y</code>	Equal	True if x is equal to y	<code>5==8</code> returns false
<code>x === y</code>	Identical	True if x is equal to y, and they are of same type	<code>5==="5"</code> returns false
<code>x != y</code>	Not equal	True if x is not equal to y	<code>5!=8</code> returns true
<code>x &lt;&gt; y</code>	Not equal	True if x is not equal to y	<code>5&lt;&gt;8</code> returns true
<code>x !== y</code>	Not identical	True if x is not equal to y, or they are not of same type	<code>5!== "5"</code> returns true
<code>x &gt; y</code>	Greater than	True if x is greater than y	<code>5&gt;8</code> returns false
<code>x &lt; y</code>	Less than	True if x is less than y	<code>5&lt;8</code> returns true
<code>x &gt;= y</code>	Greater than or equal to	True if x is greater than or equal to y	<code>5&gt;=8</code> returns false
<code>x &lt;= y</code>	Less than or equal to	True if x is less than or equal to y	<code>5&lt;=8</code> returns true

# Logical Operators

Operator	Name	Description	Example
x and y	And	True if both x and y are true	x=6 y=3 (x < 10 and y > 1) returns true
x or y	Or	True if either or both x and y are true	x=6 y=3 (x==6 or y==5) returns true
x xor y	Xor	True if either x or y is true, but not both	x=6 y=3 (x==6 xor y==3) returns false
x && y	And	True if both x and y are true	x=6 y=3 (x < 10 && y > 1) returns true
x    y	Or	True if either or both x and y are true	x=6 y=3 (x==5    y==5) returns false
! x	Not	True if x is not true	x=6 y=3 !(x==y) returns true

# Array Operators

Operator	Name	Description
<b>x + y</b>	<b>Union</b>	Union of x and y
<b>x == y</b>	<b>Equality</b>	True if x and y have the same key/value pairs
<b>x === y</b>	<b>Identity</b>	True if x and y have the same key/value pairs in the same order and of the same types
<b>x != y</b>	<b>Inequality</b>	True if x is not equal to y
<b>x &lt;&gt; y</b>	<b>Inequality</b>	True if x is not equal to y
<b>x !== y</b>	<b>Non-identity</b>	True if x is not identical to y



# Conditional Statements

---

Very often when you write code, you want to perform different actions for different decisions.

You can use conditional statements in your code to do this.

In PHP we have the following conditional statements:

**if statement** - use this statement to execute some code only if a specified condition is true

**if...else statement** - use this statement to execute some code if a condition is true and another code if the condition is false

**if...elseif....else statement** - use this statement to select one of several blocks of code to be executed

**switch statement** - use this statement to select one of many blocks of code to be execute

# PHP If...Else Statements

---

Conditional statements are used to perform different actions based on different conditions.

# The if Statement

---

Use the if statement to execute some code only if a specified condition is true.

Syntax

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

# The if Statement

---

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

```
<html>
  <body>

    <?php
      $d=date("D");
      if ($d=="Fri") echo "Have a nice weekend!";
    ?>

  </body>
</html>
```

# The if...else Statement

---

Use the if....else statement to execute some code if a condition is true and another code if a condition is false.

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!":

---

```
<?php
$d=date("D");
echo date("D");
if ($d=="Fri")
{
    echo "Have a nice weekend!";
}
else
{
    echo "Have a nice day!";
}
?>
```

# The **if...elseif...else** Statement

---

Use the if...elseif...else statement to select one of several blocks of code to be executed.

```
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;  
}
```

# The **if...elseif....else** Statement

---

## 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!":

```
<?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!";
}
?>
```



# PHP Switch Statement

---

Conditional statements are used to perform different actions based on different conditions.

# The PHP Switch Statement

---

Use the switch statement to select one of many blocks of code to be executed

```
switch (n)
{
case label1:
    code to be executed if n=label1;
    break;
case label2:
    code to be executed if n=label2;
    break;
default:
    code to be executed if n is different from both label1 and label2;
}
```

# The PHP Switch Statement

---

This is how it works: First we have a single expression  $n$  (most often a variable), that is evaluated once. The value of the expression is then compared with the values for each case in the structure. If there is a match, the block of code associated with that case is executed. Use **break** to prevent the code from running into the next case automatically. The default statement is used if no match is found.

# The PHP Switch Statement

---

```
<?php
$x=1;
switch ($x)
{
case 1:
    echo "Number 1";
    break;
case 2:
    echo "Number 2";
    break;
case 3:
    echo "Number 3";
    break;
default:
    echo "No number between 1 and 3";
}
?>
```

# PHP Arrays

---

What is an Array?

A variable is a storage area holding a number or text. The problem is, a variable will hold only one value.

An array is a special variable, which can store multiple values in one single variable.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

# Variables

---

```
$cars1="Saab";  
$cars2="Volvo";  
$cars3="BMW";
```



Full of Variable

# Arrays

---

However, what if you want to loop through the cars and find a specific one? And what if you had not 3 cars, but 300?

The best solution here is to use an array!

An array can hold all your variable values under a single name. And you can access the values by referring to the array name.

Each element in the array has its own index so that it can be easily accessed.

In PHP, there are three kind of arrays:

- **Numeric array** - An array with a numeric index
- **Associative array** - An array where each ID key is associated with a value
- **Multidimensional array** - An array containing one or more arrays

# Numeric Arrays

---

A numeric array stores each array element with a numeric index.

There are two methods to create a numeric array.

**1. In the following example the index are automatically assigned (the index starts at 0):**

```
$cars=array("Saab","Volvo","BMW","Toyota");
```



# Numeric Arrays

---

**2. In the following example we assign the index manually:**

```
$cars[0]="Saab";  
$cars[1]="Volvo";  
$cars[2]="BMW";  
$cars[3]="Toyota";
```

---

## Example

In the following example you access the variable values by referring to the array name and index:

```
<?php
$cars[0]="Saab";
$cars[1]="Volvo";
$cars[2]="BMW";
$cars[3]="Toyota";
echo $cars[0] . " and " . $cars[1] . " are Swedish cars.";
?>
```

The code above will output:

**Saab and Volvo are Swedish cars.**

# Associative Arrays

---

An associative array, each ID key is associated with a value.

When storing data about specific named values, a numerical array is not always the best way to do it.

With associative arrays we can use the values as keys and assign values to them.

# Associative Arrays

---

## Example 1

In this example we use an array to assign ages to the different persons:

```
$ages = array("Peter"=>32, "Quagmire"=>30,  
"Joe"=>34);
```

# Associative Arrays

---

## Example 2

This example is the same as example 1, but shows a different way of creating the array:

```
$ages['Peter'] = "32";  
$ages['Quagmire'] = "30";  
$ages['Joe'] = "34";
```

# Associative Arrays

---

The ID keys can be used in a script:

```
<?php
$ages['Peter'] = "32";
$ages['Quagmire'] = "30";
$ages['Joe'] = "34";
echo "Peter is " . $ages['Peter'] . " years old.";
?>
```

The code above will output:

**Peter is 32 years old.**

# Multidimensional Arrays

---

In a multidimensional 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.

# Multidimensional Arrays

---

## Example

In this example we create a multidimensional array, with automatically assigned ID keys:

```
$families = array
(
    "Griffin"=>array
    (
        "Peter",
        "Lois",
        "Megan"
    ),
    "Quagmire"=>array
    (
        "Glenn"
    ),
    "Brown"=>array
    (
        "Cleveland",
        "Loretta",
        "Junior"
    )
);
```

```
Array
(
    [Griffin] => Array
    (
        [0] => Peter
        [1] => Lois
        [2] => Megan
    )
    [Quagmire] => Array
    (
        [0] => Glenn
    )
    [Brown] => Array
    (
        [0] => Cleveland
        [1] => Loretta
        [2] => Junior
    )
)
```



# Multidimensional Arrays

---

## Example 2

Lets try displaying a single value from the array above:

```
echo "Is " . $families['Griffin'][2] . " a part of the Griffin family?";
```

The code above will output:

```
Is Megan a part of the Griffin family?
```

# PHP Looping - While Loops

---

## PHP Loops

Often when you write code, you want the same block of code to run over and over again in a row. Instead of adding several almost equal lines in a script we can use loops to perform a task like this.

In PHP, we have the following looping statements:

**while** - loops through a block of code while a specified condition is true

**do...while** - loops through a block of code once, and then repeats the loop as long as a specified condition is true

**for** - loops through a block of code a specified number of times

**foreach** - loops through a block of code for each element in an **array**

# The while Loop

---

The while loop executes a block of code while a condition is true.

## Syntax

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

---

## Example

The example below first sets a variable  $i$  to 1 ( $\$i=1;$ ).

Then, the while loop will continue to run as long as  $i$  is less than, or equal to 5.  $i$  will increase by 1 each time the loop runs:

# The example below first sets a variable *i* to 1 (\$i=1;)

---

```
<html>
```

```
<body>
```

```
<?php
```

```
    $i=1;
```

```
    while($i<=5)
```

```
    {
```

```
        echo "The number is " . $i . "<br>";
```

```
        $i++;
```

```
    }
```

```
?>
```

```
</body>
```

```
</html>
```

The number is 1  
The number is 2  
The number is 3  
The number is 4  
The number is 5

# The do...while Statement

---

The do...while statement will always execute the block of code once, it will then check the condition, and repeat the loop while the condition is true.

## Syntax

```
do  
{
```



---

## Example

The example below first sets a variable  $i$  to 1 ( $i=1$ ;

Then, it starts the do...while loop. The loop will increment the variable  $i$  with 1, and then write some output. Then the condition is checked (is  $i$  less than, or equal to 5), and the loop will continue to run as long as  $i$  is less than, or equal to 5:

---

```
<html>
```

```
<body>
```

```
<?php
```

```
    $i=1;
```

```
    do
```

```
    {
```

```
        $i++;
```

```
        echo "The number is " . $i . "<br>";
```

```
    }
```

```
    while ($i<=5);
```

```
?>
```

```
</body>
```

```
</html>
```

The number is 2

The number is 3

The number is 4

The number is 5

The number is 6



# The for Loop

---

The for loop is used when you know in advance how many times the script should run.

Syntax

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

# The for Loop

---

## Parameters:

***Init*** : Mostly used to set a counter (but can be any code to be executed once at the beginning of the loop)

***condition***: Evaluated for each loop iteration. If it evaluates to TRUE, the loop continues. If it evaluates to FALSE, the loop ends.

***increment***: Mostly used to increment a counter (but can be any code to be executed at the end of the iteration)

```
for (init; condition; increment)
```

```
{
```

```
    code to be executed;
```

```
}
```

# The for Loop

---

## Example

The example below defines a loop that starts with  $i=1$ . The loop will continue to run as long as the variable  $i$  is less than, or equal to 5. The variable  $i$  will increase by 1 each time the loop runs:

# The for Loop

---

```
<html>
<body>

    <?php
        for ($i=1; $i<=5; $i++)
        {
            echo "The number is " . $i .
"<br>";
        }
    ?>

</body>
</html>
```

The number is 1  
The number is 2  
The number is 3  
The number is 4  
The number is 5

# The foreach Loop

---

The foreach loop is used to loop through arrays.

## Syntax

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

For every loop iteration, the value of the current array element is assigned to `$value` (and the array pointer is moved by one) - so on the next loop iteration, you'll be looking at the next array value.

---

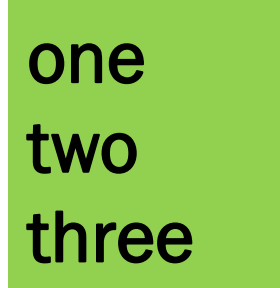
## Example

The following example demonstrates a loop that will print the values of the given array:

```
<html>
<body>

    <?php
        $x=array("one","two","three");
        foreach ($x as $value)
        {
            echo $value . "<br>";
        }
    ?>

</body>
</html>
```



one  
two  
three

# PHP Functions

---

The real power of PHP comes from its functions.

In PHP, there are more than 700 built-in functions.

## PHP Built-in Functions

For a complete reference and examples of the built-in functions, please visit our [PHP Reference](#).

## PHP Functions

In this chapter we will show you how to create your own functions.

To keep the script from being executed when the page loads, you can put it into a function.

A function will be executed by a call to the function.

You may call a function from anywhere within a page.

# Create a PHP Function

---

A function will be executed by a call to the function.

## Syntax

```
function functionName()  
{  
    code to be executed;  
}
```



---

## PHP function guidelines:

Give the function a name that reflects what the function does

The function name can start with a letter or underscore (not a number)

# Example

A simple function that writes my name when it is called:

---

```
<html>
<body>
```

```
<?php
```

```
function writeName()
{
    echo "Kai Jim Refsnes";
}
```

```
echo "My name is
";writeName();
```

```
?>
```

```
</body>
</html>
```

My name is Kai Jim Refsnes



# PHP Functions - Adding parameters

---

To add more functionality to a function, we can add parameters. A parameter is just like a variable.

Parameters are specified after the function name, inside the parentheses.

# Example 1

The following example will write different first names, but equal last name:

```
<html>
<body>

<?php
function writeName($fname)
{
    echo $fname . " Refsnes.<br>";
}
echo "My name is ";
writeName("Kai Jim");
echo "My sister's name is ";
writeName("Hege");
echo "My brother's name is ";
writeName("Stale");
?>

</body>
</html>
```

Function Name

Parameter

My name is Kai Jim Refsnes.  
My sister's name is Hege Refsnes.  
My brother's name is Stale Refsnes.

## Example 2

The following function has **two** parameters:

<html>

<body>

<?php

function writeName(\$fname,\$punctuation)

{

echo \$fname . " Refsnes" . \$punctuation . "<br>";

}

echo "My name is ";

writeName("Kai Jim", ".");

echo "My sister's name is ";

writeName("Hege", "!");

echo "My brother's name is ";

writeName("Ståle", "?");

?>

</body>

</html>

My name is Kai Jim Refsnes.  
May sister's name is Hege  
Refsnes!  
My brother's name is Ståle  
Refsnes?

# PHP Functions - Return values

To let a function return a value, use the return statement.

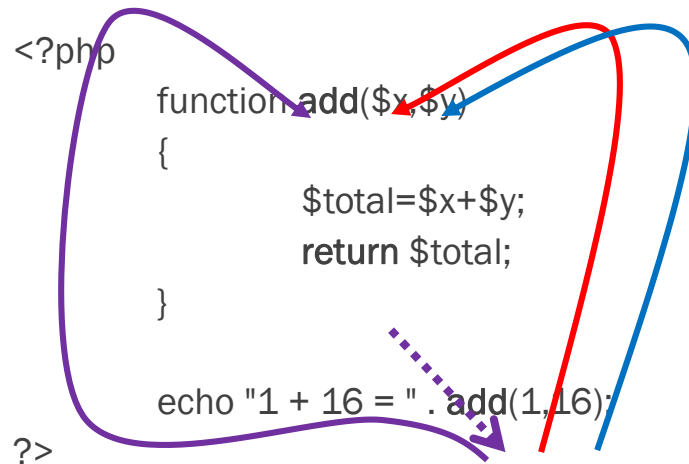
## Example

```
<html>
```

```
<body>
```

```
<?php
function add($x,$y)
{
    $total=$x+$y;
    return $total;
}

echo "1 + 16 = " . add(1,16);
?>
```

A diagram illustrating the execution of the PHP code. A purple line starts at the opening PHP tag, goes down to the function definition, and then loops back to the opening tag. A red line starts at the function call 'add(1,16)', goes up to the function definition, and then loops back to the function call. A blue line starts at the function call, goes up to the function definition, and then loops back to the function call. A dashed purple arrow points from the 'return \$total;' statement to the function call.

**1 + 16 = 17**

```
</body>
```

```
</html>
```

# PHP Forms and User Input

---

The PHP `$_GET` and `$_POST` variables are used to retrieve information from forms, like user input.

## PHP Form Handling

The most important thing to notice when dealing with HTML forms and PHP is that any form element in an HTML page will **automatically** be available to your PHP scripts.

# Example

The example below contains an HTML form with two input fields and a submit button:

<html>

<body>

<form action="welcome.php" method="post">

    Name: <input type="text" name="fname">

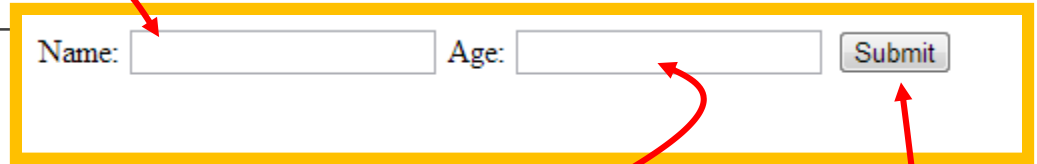
    Age: <input type="text" name="age">

    <input type="submit">

</form>

</body>

</html>





---

When a user fills out the form above and clicks on the submit button, the form data is sent to a PHP file, called "welcome.php":

"welcome.php" looks like this:

```
<html>
<body>
```

```
    Welcome <?php echo
$_POST["fname"]; ?>!  
    You are <?php echo $_POST["age"];
?> years old.
```

```
</body>
</html>
```

**`$_POST["fname"];`**

Output could be  
something like this:

```
Welcome John!
You are 28 years old.
```

# PHP \$\_GET Variable

---

In PHP, the predefined \$\_GET variable is used to collect values in a form with method="get".

## The \$\_GET Variable

The predefined \$\_GET variable is used to collect values in a form with method="get"

Information sent from a form with the GET method is visible to everyone (it will be displayed in the browser's address bar) and has limits on the amount of information to send.

---

## Example

```
<form action="welcome.php" method="get">  
  Name: <input type="text" name="fname">  
  Age: <input type="text" name="age">  
  <input type="submit">  
</form>
```

When the user clicks the "Submit" button, the URL sent to the server could look something like this:



**welcome.php?fname=Peter&age=37**

---

The "welcome.php" file can now use the `$_GET` variable to collect form data (the names of the form fields will automatically be the keys in the `$_GET` array):

```
Welcome <?php echo $_GET["fname"]; ?>.<br>
You are <?php echo $_GET["age"]; ?> years old!
```

```
$_GET["fname"];
```

---

## When to use method="get"?

When using method="get" in HTML forms, all variable names and values are displayed in the URL.

**Note:** This method should not be used when sending passwords or other sensitive information!

However, because the variables are displayed in the URL, it is possible to bookmark the page. This can be useful in some cases.

**Note:** The get method is not suitable for very large variable values. It should not be used with values exceeding 2000 characters.

# PHP \$\_POST Function

---

In PHP, the predefined `$_POST` variable is used to collect values in a form with `method="post"`.

## The `$_POST` Variable

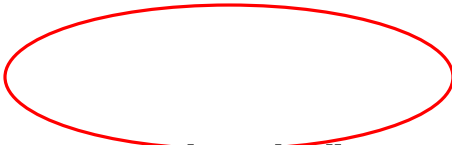
The predefined `$_POST` variable is used to collect values from a form sent with `method="post"`.

Information sent from a form with the POST method is invisible to others and has no limits on the amount of information to send.

**Note:** However, there is an 8 MB max size for the POST method, by default (can be changed by setting the `post_max_size` in the `php.ini` file).

---

## Example



```
<form action="welcome.php" method="post">  
    Name: <input type="text" name="fname">  
    Age: <input type="text" name="age">  
    <input type="submit">  
</form>
```

The "welcome.php" file can now use the `$_POST` variable to collect form data (the names of the form fields will automatically be the keys in the `$_POST` array):

```
$_POST["fname"];
```

---

```
    Welcome <?php echo $_POST["fname"];  
?>!<br>
```

```
    You are <?php echo $_POST["age"]; ?> years  
old.
```



---

## When to use method="post"?

Information sent from a form with the POST method is invisible to others and has no limits on the amount of information to send.

However, because the variables are not displayed in the URL, it is not possible to bookmark the page.

# The PHP \$\_REQUEST Variable

---

The predefined \$\_REQUEST variable contains the contents of both \$\_GET, \$\_POST, and \$\_COOKIE.

The \$\_REQUEST variable can be used to collect form data sent with both the GET and POST methods.

## Example

```
Welcome <?php echo $_REQUEST["fname"]; ?>!<br>  
You are <?php echo $_REQUEST["age"]; ?> years old.
```

# Reference

---

<http://www.w3schools.com/php>