

PHP is mostly used for building websites. It typically runs on the web server and is accessed via a web browser. When developing with PHP on your computer environment, it is important to launch a local server environment such as WAMP or MAMP.

Basic Syntax:

`<?php ... ?>` Indicates the start and end tag of a php statement
`$<var>` All variable names are prefaced with '\$'
`' '` Single quotes denote strings
`.` The concatenation symbol
`%` Begin Format string rule:
`%[0].[0-9]+[f,d,s]`
`[0]` - pad with spaces or 0
`.` - indicates a period
`[0-9]+` - specify number of decimals
`f` = floating point
`d` = decimal
`s` = string

Variable Declarations:

`$stringx = 'hello' | "hello";` (double or single quotes)
`$inty = [0-9]+;`
`$floatz = [0-9]+\.[0-9]+;`
`$boolean1 = true | false;`
`$array2 = array('x', 'y', 'z', ...);`
`$array3 = array('key' => 'value'); ... $array3['key']` denotes 'value'
`class X {`
`function X(){`
`...`
`}`
`}`
`$nullx = null;`

Logic:

`if(condition){ ... }`
`elseif(condition) { ... }`
`else { ... }`
`while(){ ... }`
`for($i = 1; $i < 10; $i++){ ... }`

Special String Characters:

`\n` Newline (ASCII 10)
`\t` Tab
`\\` \
`\$` \$
`\"` "
`\0 .. \777` Octal (base 8) number
`/x0 .. /xFF` Hexadecimal (base 16) number

Array Functions:

`array_diff(arr1, arr2, ...);`
 returns values in array one that are not present in other arrays
`array_flip(arr);`
 keys from array become values and vice versa
`array_intersect(arr1, arr2);`
 returns array of intersecting elements
`array_merge(arr1, arr2);`
 returns second array appended to first
`array_pop(arr);`
`array_push(arr, var1, var2);`
`array_search(var, arr);`
`array_count(arr, var1, var2);`
`in_array(var, arr);` - returns bool
`sort(arr);`
`count(arr);`

String Functions:

`echo (str);`
 Outputs all parameters
`bin2hex(str);`
 converts binary string to hexadecimal
`explode(delimiter, str [, int limit]);`
 returns array of substrings split by delimiters
`implode([glue,] str);`
 joins array elements into string (glue is optional delimiter)
`hex2bin(str);`
`trim(str);`
`strcmp(str);`
`strlen(str);`
`substr(str, start [, length]);`
`strtolower(str);`
`strtoupper(str);`

Reg-Ex Functions:

`preg_match(pattern, str);`
 Returns # of matches for pattern
`preg_replace(pattern, replacement, str [, limit [, count]]);`
 Returns string with replacements
`preg_split(pattern, str [, limit [, flag]]);`
 Returns array split at pattern
`preg_grep(pattern, str [, flag]);`
 Returns array of matches from the input string