

Continue to PHP

PHP String

A string is a sequence of characters, like "Hello world!".

A string can be any text inside quotes. You can use single or double quotes:

Example

```
<?php
$x = "Hello world!";
$y = 'Hello world!';
echo $x;
echo "<br>";
echo $y;
?>
```

PHP Integer

An integer is a whole number (without decimals). It is a number between -2,147,483,648 and +2,147,483,647.

Rules for integers:

- An integer must have at least one digit (0-9)
- An integer cannot contain comma or blanks
- An integer must not have a decimal point
- An integer can be either positive or negative
- Integers can be specified in three formats: decimal (10-based), hexadecimal (16-based - prefixed with 0x) or octal (8-based - prefixed with 0)

In the following example \$x is an integer. The PHP var_dump () function returns the data type and value:

Example

```
<?php
$x = 5985;
var_dump($x);
?>
```

PHP Float

A float (floating point number) is a number with a decimal point or a number in exponential form.

In the following example \$x is a float. The PHP var_dump() function returns the data type and value:

Example

```
<?php
$x = 10.365;
var_dump($x);
?>
```

PHP Boolean

A Boolean represents two possible states: TRUE or FALSE.

```
$x = true;
```

```
$y = false;
```

Booleans are often used in conditional testing. You will learn more about conditional testing in a later chapter of this tutorial.

PHP Array

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

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";
    }
}
// create an object
$herbie = new Car();
// show object properties
echo $herbie->model;
?>
```

PHP NULL Value

Null is a special data type which can have only one value: NULL.

A variable of data type NULL is a variable that has no value assigned to it.

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:

Example

```
<?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.

We will not talk about the resource type here, since it is an advanced topic.

A string is a sequence of characters, like "Hello world!".

PHP String Functions

In this chapter we will look at some commonly used functions to manipulate strings.

Get The Length of a String

The PHP `strlen()` function returns the length of a string.

The example below returns the length of the string "Hello world!".

Example

```
<?php
echo strlen("Hello world!"); // outputs 12
?>
```

The output of the code above will be: 12.

Count The Number of Words in a String

The PHP `str_word_count()` function counts the number of words in a string:

Example

```
<?php
echo str_word_count("Hello world!"); // outputs 2
?>
```

The output of the code above will be: 2.

Reverse a String

The PHP `strrev()` function reverses a string:

Example

```
<?php
echo strrev("Hello world!"); // outputs !dlrow olleH
?>
```

The output of the code above will be: !dlrow olleH.

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"); // outputs 6
?>
```

The output of the code above will be: 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":

```
<?php
echo str_replace("world", "Dolly", "Hello world!"); // outputs Hello Dolly!
?>
```

Example

The output of the code above will be: Hello Dolly!

PHP Constants

A constant is an identifier (name) for a simple value. The value cannot be changed during the script.

A valid constant name starts with a letter or underscore (no \$ sign before the constant name).

Note: Unlike variables, constants are automatically global across the entire script.

Create a PHP Constant

To create a constant, use the `define ()` function.

Syntax

`define (name, value, case-insensitive)`

Parameters:

- *name*: Specifies the name of the constant
- *value*: Specifies the value of the constant
- *case-insensitive*: Specifies whether the constant name should be case-insensitive.

Default is false

The example below creates a constant with a **case-sensitive** name:

Example

```
<?php
define("GREETING", "Welcome to W3Schools.com!");
echo GREETING;
?>
```

The example below creates a constant with a **case-insensitive** name:

Example

```
<?php
define("GREETING", "Welcome to W3Schools.com!", true);
echo greeting;
?>
```

Constants are Global

Constants are automatically global and can be used across the entire script.

The example below uses a constant inside a function, even if it is defined outside the function:

Example

```
<?php
define("GREETING", "Welcome to W3Schools.com!");
function myTest() {
    echo GREETING;
}
myTest();
?>
```

PHP Operators

Operators are used to perform operations on variables and values.

PHP divides the operators in the following groups:

- Arithmetic operators
- Assignment operators
- Comparison operators
- Increment/Decrement operators
- Logical operators
- String operators
- Array operators

PHP Arithmetic Operators

The PHP arithmetic operators are used with numeric values to perform common arithmetical operations, such as addition, subtraction, multiplication etc.

Operator	Name	Example	Result
+	Addition	\$x + \$y	Sum of \$x and \$y
-	Subtraction	\$x - \$y	Difference of \$x and \$y
*	Multiplication	\$x * \$y	Product of \$x and \$y
/	Division	\$x / \$y	Quotient of \$x and \$y
%	Modulus	\$x % \$y	Remainder of \$x divided by \$y
**	Exponentiation	\$x ** \$y	Result of raising \$x to the \$y'th power (Introduced in PHP 5.6)

PHP Assignment Operators

The PHP assignment operators are used with numeric values to write a value to a variable. The basic assignment operator in PHP is "=". It means that the left operand gets set to the value of the assignment expression on the right

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

PHP Comparison Operators

The PHP comparison operators are used to compare two values (number or string):

Operator	Name	Example	Result
==	Equal	\$x == \$y	Returns true if \$x is equal to \$y
===	Identical	\$x === \$y	Returns true if \$x is equal to \$y, and they are of the same type
!=	Not equal	\$x != \$y	Returns true if \$x is not equal to \$y
<>	Not equal	\$x <> \$y	Returns true if \$x is not equal to \$y
!==	Not identical	\$x !== \$y	Returns true if \$x is not equal to \$y, or they are not of the same type
>	Greater than	\$x > \$y	Returns true if \$x is greater than \$y
<	Less than	\$x < \$y	Returns true if \$x is less than \$y
>=	Greater than or equal to	\$x >= \$y	Returns true if \$x is greater than or equal to \$y
<=	Less than or equal to	\$x <= \$y	Returns true if \$x is less than or equal to \$y

PHP Increment / Decrement Operators

The PHP increment operators are used to increment a variable's value.

The PHP decrement operators are used to decrement a variable's value.

Operator	Name	Description
++\$x	Pre-increment	Increments \$x by one, then returns \$x
\$x++	Post-increment	Returns \$x, then increments \$x by one
--\$x	Pre-decrement	Decrements \$x by one, then returns \$x
\$x--	Post-decrement	Returns \$x, then decrements \$x by one

PHP Logical Operators

The PHP logical operators are used to combine conditional statements.

Operator	Name	Example	Result
and	And	\$x and \$y	True if both \$x and \$y are true
or	Or	\$x or \$y	True if either \$x or \$y is true
Xor	Xor	\$x xor \$y	True if either \$x or \$y is true, but not both
&&	And	\$x && \$y	True if both \$x and \$y are true
 	Or	\$x \$y	True if either \$x or \$y is true
!	Not	!\$x	True if \$x is not true

PHP String Operators

PHP has two operators that are specially designed for strings.

Operator	Name	Example	Result
.	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	Name	Example	Result
+	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
!=	Inequality	\$x != \$y	Returns true if \$x is not equal to \$y
<>	Inequality	\$x <> \$y	Returns true if \$x is not equal to \$y
!==	Non-identity	\$x !== \$y	Returns true if \$x is not identical to \$y