

Menu **▼**











CSS

JAVASCRIPT

SQL

PYTHON

JAVA

PHP

HOW TO

W3.CSS

JavaScript Functions

< Previous

Next >

A JavaScript function is a block of code designed to perform a particular task.

A JavaScript function is executed when "something" invokes it (calls it).

Example

```
// Function to compute the product of p1 and p2
function myFunction(p1, p2) {
  return p1 * p2;
}
```

Try it Yourself »

JavaScript Function Syntax

A JavaScript function is defined with the **function** keyword, followed by a **name**, followed by parentheses ().

Function names can contain letters, digits, underscores, and dollar signs (same rules as variables).

```
function name(parameter1, parameter2, parameter3) {
   // code to be executed
}
```

Function **parameters** are listed inside the parentheses () in the function definition.

Function **arguments** are the **values** received by the function when it is invoked.

Inside the function, the arguments (the parameters) behave as local variables.

Function Invocation

The code inside the function will execute when "something" **invokes** (calls) the function:

- When an event occurs (when a user clicks a button)
- When it is invoked (called) from JavaScript code
- Automatically (self invoked)

You will learn a lot more about function invocation later in this tutorial.

Function Return

When JavaScript reaches a return statement, the function will stop executing.

If the function was invoked from a statement, JavaScript will "return" to execute the code after the invoking statement.

Functions often compute a **return value**. The return value is "returned" back to the "caller":

Example

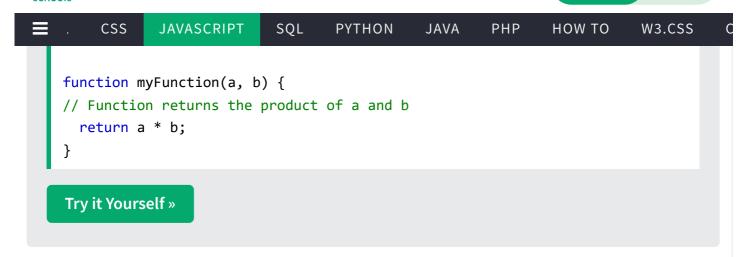












Why Functions?

With functions you can reuse code

You can write code that can be used many times.

You can use the same code with different arguments, to produce different results.

The () Operator

The () operator invokes (calls) the function:

Example

Convert Fahrenheit to Celsius:

```
function toCelsius(fahrenheit) {
  return (5/9) * (fahrenheit-32);
}
let value = toCelsius(77);
```

Try it Yourself »









Accessing a function without () returns the function and not the function result:

Example

```
function toCelsius(fahrenheit) {
  return (5/9) * (fahrenheit-32);
}
let value = toCelsius;
```

Try it Yourself »

Note

As you see from the examples above, toCelsius refers to the function object, and toCelsius() refers to the function result.

Functions Used as Variable Values

Functions can be used the same way as you use variables, in all types of formulas, assignments, and calculations.

PHP

JAVASCRIPT

SQL PYTHON JAVA

HOW TO

W3.CSS

```
let x = toCelsius(77);
let text = "The temperature is " + x + " Celsius";
```

You can use the function directly, as a variable value:

```
let text = "The temperature is " + toCelsius(77) + " Celsius";
```

Try it Yourself »

You will learn a lot more about functions later in this tutorial.

Local Variables

Variables declared within a JavaScript function, become **LOCAL** to the function.

Local variables can only be accessed from within the function.

Example

```
// code here can NOT use carName
function myFunction() {
  let carName = "Volvo";
 // code here CAN use carName
}
// code here can NOT use carName
```

Try it Yourself »