

JS Functions

Learning Objectives

- writing functions in JavaScript
 - calling functions
 - using function parameters
 - learning what 'scope' is
-

Functions

Functions are a fundamental concept in JavaScript. They contain a set of statements - in other words: They contain JavaScript code. Functions have to be defined. When a function is defined it can be called an arbitrary number of times.

Function Declarations

You can define a function using a **function declaration** which consists of:

- the function keyword
- the function name
- the function body (JavaScript statements / JavaScript code)

```
function greet() {  
  console.log("Hi Friends!");  
  console.log("Nice to be here.");  
}
```

! Defining a function does not cause the JavaScript code in the function body to be executed. You have to call the function for the code to be executed.

Parameters

Functions can accept parameters. Parameters can be used like predefined variables inside the function body. When declaring a function we are free to choose a name for the parameters, but descriptive, short names should be chosen.

```
function printLetter(name) {  
  console.log("Hi " + name + ", hope you are fine. Love, Johnny");  
}  
  
function printSum(first, second, third) {  
  const sum = first + second + third;
```

```
    console.log("The sum of your numbers is: " + sum);  
}
```

Function Calls

When functions are defined you can call them by writing their name, followed by parentheses ("round brackets"). If the functions consume parameters you can pass them as arguments in the brackets.

```
greet();  
/*  
This will cause the following to be logged into the console:  
Hi Friends!  
Nice to be here.  
*/  
  
printLetter("Max");  
printLetter("Jordan");  
/*  
This will cause the following to be logged into the console:  
Hi Max, hope you are fine. Love, Johnny  
Hi Jordan, hope you are fine. Love, Johnny  
*/  
  
printSum(1, 2, 3);  
printSum(3, 4, 5);  
/*  
This will cause the following to be logged into the console:  
The sum of your numbers is: 6  
The sum of your numbers is: 12  
*/
```

Scope

The scope defines where variables are visible and where they can be referenced. In JavaScript there are different kinds of scope, for example:

- global scope
- function scope

Function scope

Variables defined **inside a function** are not accessible from outside. But all variables **outside of the function** can be accessed from inside the function body:

```
const globalVariable = "some Text";
```

```
function myFunction() {  
  const localVariable = true;  
  
  console.log(globalVariable);  
  console.log(localVariable);  
}  
  
myFunction();  
// logs:  
// some Text  
// true  
  
console.log(localVariable); // Error! Variable not available outside of  
function
```

Global scope

A variable is in the **global scope** when it is declared outside of any function, in a JavaScript file. Global variables are visible and can be accessed from anywhere in that JavaScript file after declaration.

Resources

[MDN docs: Functions](#) [MDN docs: Scope](#)