function declaration

The **function declaration** defines a function with the specified parameters.

You can also define functions using the `Function` constructor and a `function expression`.

Syntax

```
function name([param,[, param,[..., param]]]) {
   [statements]
}
```

`name`

The function name.

`param`

The name of an argument to be passed to the function. Maximum number of arguments varies in different engines.

`statements`

The statements which comprise the body of the function.

Description

A function created with a function declaration is a `Function` object and has all the properties, methods and behavior of `Function` objects. See `Function` for detailed information on functions.

A function can also be created using an expression (see `function expression`).

By default, functions return `undefined`. To return any other value, the function must have a `return` statement that specifies the value to return.

Conditionally created functions

Functions can be conditionally declared, that is, a function statement can be nested within an `if` statement. Most browsers other than Mozilla will treat such conditional declarations as an unconditional declaration and create the function whether the condition is true or not, see this article for an overview. For this reason, they should not be used — for conditional creation use function expressions instead.

Function declaration hoisting

Function declarations in JavaScript are hoisting the function definition. You can use the function before you declared it:

```
hoisted();

function hoisted() {
  console.log('foo');
}
```

Note that `function expressions` are not hoisted:

```
notHoisted();

var notHoisted = function() {
   console.log('bar');
};
```

Examples

Using `function`

The following code declares a function that returns the total amount of sales, when given the number of units sold of products `a`, `b`, and `c`.

```
function calc_sales(units_a, units_b, units_c) {
   return units_a * 79 + units_b * 129 + units_c * 699;
}
```

Specifications

Specification	Status	Comment
ECMAScript Latest Draft (ECMA-262) The definition of 'Function definitions' in that specification.	Living Standard	
ECMAScript 2015 (6th Edition, ECMA-262) The definition of 'Function definitions' in that specification.	Standard	
ECMAScript 5.1 (ECMA-262) The definition of 'Function definition' in that specification.	Standard	
ECMAScript 3rd Edition (ECMA-262) The definition of 'Function definition' in that specification.	Standard	
ECMAScript 1st Edition (ECMA-262) The definition of 'Function definition' in that specification.	Standard	Initial definition. Implemented in JavaScript 1.0.

Browser compatibility

See also

- `Functions and function scope`

- `Function`
- `function expression`
- `function* statement`
- `function* expression`
- `Arrow functions`
- `GeneratorFunction`
- `async function`
- `async function expression`

Was this article helpful?

Thank you!