

JavaScript Data Types

JavaScript has 8 Datatypes

String
Number
Bigint
Boolean
Undefined
Null
Symbol
Object

The Object Datatype

The object data type can contain both built-in objects, and user defined objects:

Built-in object types can be:

objects, arrays, dates, maps, sets, intarrays, float arrays, promises, and more.

JavaScript Function

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).

The parentheses may include parameter names separated by commas:
(*parameter1, parameter2, ...*)

The code to be executed, by the function, is placed inside curly brackets: {}

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)

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":

JavaScript Objects

Real Life Objects

In real life, objects are things like: houses, cars, people, animals, or any other subjects.

Object Properties

A real life car has properties like weight and color:

`car.name = Fiat, car.model = 500, car.weight = 850kg, car.color = white.`

Car objects have the same properties, but the values differ from car to car.

Object Methods

A real life car has methods like start and stop:

`car.start(), car.drive(), car.brake(), car.stop().`

Car objects have the same methods, but the methods are performed at different times.

How to Define a JavaScript Object

- Using an Object Literal
- Using the `new` Keyword
- Using an Object Constructor

JavaScript Object Literal

An object literal is a list of name:value pairs inside curly braces `{}`.

Using the new Keyword

This example create a new JavaScript object using `new Object()`

JavaScript Primitives

A primitive value is a value that has no properties or methods.

3.14 is a primitive value

A primitive data type is data that has a primitive value.

JavaScript defines 7 types of primitive data types:

- `string`
- `number`
- `boolean`
- `null`
- `undefined`
- `symbol`
- `bigint`

JavaScript Object Methods

Object methods are actions that can be performed on objects.

A method is a function definition stored as a property value.

`this` refers to the person object:

`this.firstName` means the `firstName` property of person.

`this.lastName` means the `lastName` property of person.