Basic Types

#### **Learning Outcome Addressed**

  4. Check the data type of a value stored in a variable

### Basic Types

#### Key concepts

* What is a value? A value is data that we store and manipulate. Examples of values include the number 13 and the name "Mary".
* What is a type? A type helps us group similar values on which common operations can be performed.

The type determines the operations and methods that can be performed on that value. JavaScript has six primitive types: string , number , undefined , null , boolean , and symbol. There is also a compound type or object.

For example, we can easily multiply the values of the number type in the sequence 13, 3, 67, and 89, but we can't multiply the values in a sequence of strings, such as: "JS", "is", and "cool".

For example, you can retrieve the length of a string. Let's say, you call the length method on the "a" string:

 "a".length  
 //returns 1

Knowing how JavaScript types work is very important, so you can manipulate data and predict how the language will behave.

* Number type examples are as follows:

let currentWindSpeed = 50  
let currentTemperature = 81

* String type examples are as follows:

let city = "Dublin"  
let zip = "94568"

* Boolean type examples are as follows:

let isWarm = true  
let isWindy = true

* typeof operator Remember how we used the typeof operator for? The typeof operator returns a string indicating the **type** of the evaluated argument or operand.

Here are some ways you can use typeof:

//this is a string type  
console.log(typeof 'pinecone') // it's of type string  
   
//define a variable and find out it type  
let diameter = 4.2  
console.log(typeof diameter) //it's of type number  
   
// if try to get the type of an undeclared variable, the expected output will be: "undefined"  
console.log(typeof conifer);  
   
//arrays  
const chapters = [1, 2, 4]  
typeof chapters === 'object'; //true  
console.log(typeof chapters) //it's of type object  
   
//objects  
const denmark = {area:42924, population: 5820000}  
console.log(typeof denmark) //it's of type object

Please refer to the [mdn docs](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/typeof" \t "_blank) for further information about the typeof operator.

More examples:

console.log(typeof currentWindSpeed) //string  
console.log(typeof city) //number  
console.log(typeof isWindy) //boolean

#### Task instructions

Open the basic-types-01 folder and write code in the main.js file.

* Create a variable called myFirstName. Assign myFirstName a string value that represents your name.
* Create another variable called numberOfCities. Assign numberOfCities a number value that represents the number of cities you visited last year.
* Create another variable called havingFun. Assign havingFun a Boolean value that reflects whether you're having fun.

When you're done, check the box to test your code.

Task

Create 3 variables and set them to the given instructions. Also, type check them with the typeof operator in the console.