



JS

All About Maps





Map

- Before ES6, JavaScript had only arrays & Objects as Data structures
- Objects are used for storing keyed collections.
- Arrays are used for storing ordered collections.

ES6 Data Structures

- Map
- Set
- WeakMap
- WeakSet





Map Overview

- Map is a collection of keyed data items, just like an Object. But the main difference is that Map allows keys of any type.
- A Map remembers the original insertion order of the keys.
- A Map has a property that represents the size of the map.





Methods and properties

- new Map() creates the map.
- map.set(key, value) stores the value by the key.
- map.get(key) returns the value by the key, undefined if key doesn't exist in map.
- map.has(key) returns true if the key exists, false otherwise.
- map.delete(key) removes the value by the key.
- map.clear() removes everything from the map.
- map.size returns the current element count.





Map creation

You can create a JavaScript Map by:

- Passing an Array to new Map()
- Create a Map and use Map.set()

new Map()

```
// Create a Map
const fruits = new Map([
    ["apples", 500],
    ["bananas", 300],
    ["oranges", 200]
]);
```





Map.set()

```
// Create a Map
const fruits = new Map();

// Set Map Values
fruits.set("apples", 500);
fruits.set("bananas", 300);
fruits.set("oranges", 200);
```

The set() method can also be used to change existing Map values.





Map.get()

gets the value of a key in a Map

```
fruits.get("apples"); // Returns 500
```

Create a map from an object

```
let srcObject = {
  name: "John Snow",
  title: "King in the North"
};
let map = new Map(Object.entries(srcObject));

console.log( map.get('name') ); //output: John Snow
```





Map Iteration

For looping over a map, there are 3 methods:

- map.keys() returns an iterable for keys,
- map.values() returns an iterable for values,
- map.entries() returns an iterable for entries [key, value], it's used by default in for..of.



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https://www.linkedin.com/in/dhaneshmane/

