

## Javascript Collectionn

Monday, March 14, 2022 5:40 PM

- Apart from array and Object java script has specific Object to represent specific collection types

### Set

- It is like an array but stores unique values only
- Duplicate values are simply ignored.

```
1 Issue: 1
> let s1= new Set([2,3,5,2,6]);
< undefined
> s1
< ▶ Set(4) {2, 3, 5, 6}
> s1.add(14)
< ▶ Set(5) {2, 3, 5, 6, 14}
> s1.add(5)
< ▶ Set(5) {2, 3, 5, 6, 14}
> for(let value of s1)
  console.log(value)
2
3
5
6
14
undefined
< undefined
> s1.delete(6)
< true
> s1.delete(10)
< false
>
```

- Note set can be initialized using sc
- We can add new items
- Duplicate values are ignored
- Values can be accessed using for-
  - Values may be stored in a o than supplied.
  - Order is not guaranteed.

- We can delete the value.

### Map

- Map is like a dictionary of key value pairs
- Values can be accessed using key as an index
- Keys are unique
- Values may be duplicate

```
> let m=new Map();
< undefined
> m.set("IN","India");
< ▶ Map(1) {'IN' => 'India'}
> m.set("FR","France");
< ▶ Map(2) {'IN' => 'India', 'FR' => 'France'}
> m.set("DE", "Germany");
< ▶ Map(3) {'IN' => 'India', 'FR' => 'France', 'DE' => 'Germany'}
> m["IN"]
< undefined
> m.get("IN")
< 'India'
> m.get("PK")
< undefined
> m.set("IN", "Bharat")
< ▶ Map(3) {'IN' => 'Bharat', 'FR' => 'France', 'DE' => 'German
y'}
> m.has("IN")
< true
> m.has("UK")
< false
```

- We can set key value pair
- We can get value based on key

- We get undefined for invalid key

- We can change the value for a key

- We can check if a key is present or not

### weakMap and weakSet

- Normally when a reference refers to an object it is retained in memory and is not garbage collected while cleaning the memory
- Sometimes we may have very large amount of data that we are no sure we will use in future.
- We may prefer them to be present if there is no memory shortage, but would like them to be removed if there is a memory shortage
- Anything present in weakXYZ can be garbage collected if it is not present anywhere else.