Javascript

Different Object methods

create()

values()

entries()

keys()

freeze()

assign()

fromEntries()

seal()

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Object.create( )

The Object.create() method is used to create a new object and link it to the prototype of an existing object. It returns a new object with the specified prototype object and properties.

```javascript
let Student = {
  name: "Sheera",
  age: 23,
  display() {
    console.log("Name:", this.name);
  }
};

let std1 = Object.create(Student);

std1.name = "Mani";
std1.display();

// Output: Name: Mani
```

Object Creation

With same properties
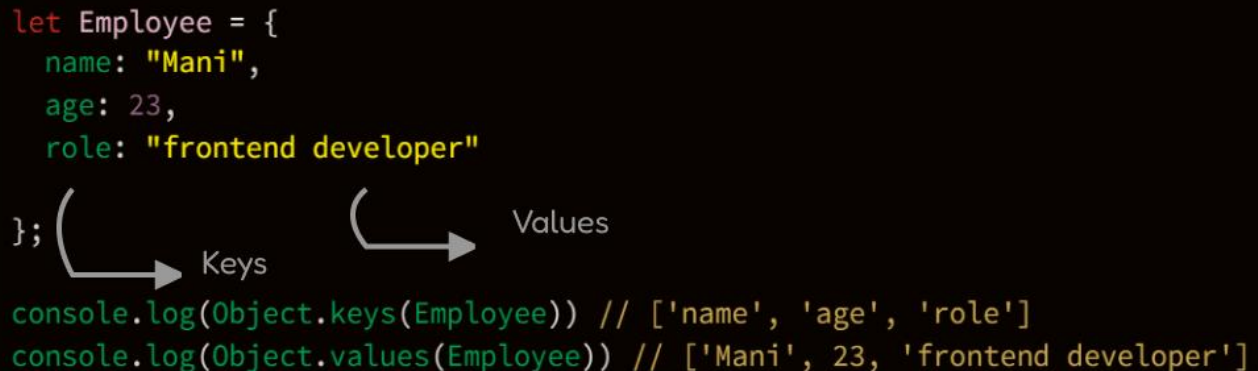
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Object.keys( ) and Object.values( )

Object.keys() creates an array containing the keys of an object.

Object.values() creates an array containing the values of an object.

```javascript
let Employee = {
  name: "Mani",
  age: 23,
  role: "frontend developer"
};
                    Values
                Keys
console.log(Object.keys(Employee)) // ['name', 'age', 'role']
console.log(Object.values(Employee)) // ['Mani', 23, 'frontend developer']
```

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Object.entries( ) & Object.fromEntries( )

- Object.entries() creates a nested array of the key/value pairs of an object.
- Object.fromEntries() does the exact opposite of Object.entries(). It takes an array of key value pairs and convert them into single object

```javascript
let Employee = {
  name: "Mani",
  age: 23,
  role: "frontend developer"

};

let EmployeeArray = [ ["name","Mani"],["age", 23 ], [ "role", "frontend
developer"]]

console.log(Object.entries(Employee))
// [ ["name","Mani"],["age", 23 ], [ "role", "frontend developer"]]

console.log(Object.fromEntries(EmployeeArray))
//{name: 'Mani', age: 23, role: 'frontend developer'}
```

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Object.seal( ) & Object.freeze( )

Common Points

- Both Object.freeze() and Object.seal() prevents a JavaScript object from being altered.

Once if it has been frozen or sealed:

- You can't add new properties .
- You can't remove existing properties.

  Then why do we need two methods ?? 🤔 Yes! you got it right.....There are differences as well...Lets see what they are

Differences

- Object.seal() marks existing properties as non-configurable, which means their values can be changed as long as they are writable.

CONFUSED??

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	Create	Read	Update	Delete
Object.freeze()	No	Yes	No	No
Object.seal()	No	Yes	Yes	No

```javascript
const frozen = Object.freeze({ username: 'Mani' });
const sealed = Object.seal({ username: 'Mani' });

//Adding new property
frozen.name = 'Serisha';  // frozen = { username: 'Mani' }
sealed.name = 'Serisha';  // sealed = { username: 'Mani' }

//removing an existing one
delete frozen.username;      // frozen = { username: 'Mani' }
delete sealed.username;      // sealed = { username: 'Mani' }

//updating the existing one
frozen.username = 'Serisha';  // frozen = { username: 'Mani' }
sealed.username = 'Serisha';  // sealed = { username: 'Serisha' }
```

Notice the difference between freeze and seal for update

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---Important Note---

Remember that both methods perform a **shallow freeze/seal** on the object. This means that nested objects and arrays are not frozen or sealed and can be changed.

To prevent this, you need the concept of **deep freezing** of objects which I will be discussing in upcoming posts.....

Also I have intentionally skipped the method **Object.assign()** to give indepth explanation on that.

So Stay Tuned !....😁

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