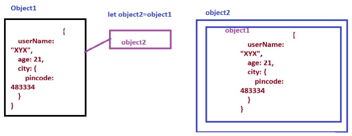
Shallow Copy

orginal object me root ke sath sath nested object me bhi change karti hai

1. Equal method se shallow copy



Object1

```
{
  userName: "XYX",
  age: 21,
  city: {
    pincode: 483334
  }
}
```

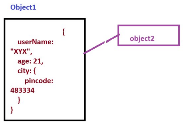
let object2=object1

object2

```
object1
{
  userName: "XYX",
  age: 21,
  city: {
    pincode: 483334
  }
}
```

object.assign() se shallow copy (you do not pass any empty object)

```
let object2 = object.assign(object1);
```



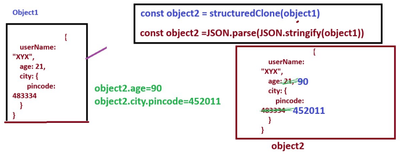
Object1

```
{
  userName: "XYX",
  age: 21,
  city: {
    pincode: 483334
  }
}
```

DEEP COPY ->

original object is different and duplicate is different, if you make changes in duplicate object do not reflect changes in original object

original object and duplicate object dono alag alog bante hai ek dusre koi lena dena nhi hai agar duplicate me changes karoge to orginal object me koi changes nhi honge.



```
const object2 = structuredClone(object1)

const object2 =JSON.parse(JSON.stringify(object1))
```

Object1

```
{
  userName: "XYX",
  age: 21,
  city: {
    pincode: 483334
  }
}
```

object2.age=90
object2.city.pincode=452011

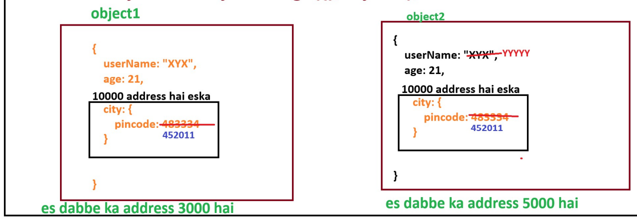
```
{
  userName: "XYX",
  age: ~~21,~~ 90
  city: {
    pincode: ~~483334~~ 452011
  }
}
```

object2

EDGES CASES

```
const object2 ={...object1};//2nd using spread
object2.age = 26;
object2.city.pincode = 452011;
```

1. let object2 = Object.assign({},object1);



object1

```
{
  userName: "XYX",
  age: 21,
10000 address hai eska
  city: {
    pincode: ~~483334~~
           452011
  }

}
```

es dabbe ka address 3000 hai

object2

```
{
  userName: "~~XYX",~~ YYYYY
  age: 21,
10000 address hai eska
  city: {
    pincode: ~~483334~~
           452011
  }

}
```

es dabbe ka address 5000 hai

let object2.userName="YYYYY";// object2 ke andar root level vala object alag address me hai es se original object ka username change nhi hoga
let object2.city.pincode=452011;// object2 ke andar nested level vala object same address vala hai jo orginal object me hai esi karan se original object ke nested object me changes ho jayenge.

object ke upar assign method me empty object pass karte hai ya aap spread operator ka use karke ek object kee property ko dusre object me copy karte hai us case me original object ke root vale level me koi changes nhi honge but nested vale object, chahe original object ka ho ya copy object ka nested object ka ho dono me changes ho jayenge.