**Copy by value and Copy by reference:**

Copy by value is for primitive data types such as strings, number and Boolean types.

let str = “Hello”

let str1=str;

Here a copy of str is assigned to str1.

Copy by reference is for Objects like List, JSON

let user = { name:”Jhon”};

let admin = user;

Here The object is stored somewhere in memory and the same reference is shared among user and admin

Memory management for Objects will be very difficult and also while storing the large data. Creating multiple clones of a single object will leads to poor memory management and bulk memory will get occupied which is not required all the time. Hence sharing the same reference is encouraged through copy by reference. In case if you want to create a clone/duplicate yes, we do can create it.

**Ways to create a clone of an Object:**

**Using for loop and assign the data.**

let user = {name: “Raj”, age:25};

let clone={}

for(var key in user){

clone[key]=user[key];

}

**Object.asign**

let user = {name: "John",age: 30};

let clone = Object.assign({}, user);

console.log(clone);

clone.name="Raj";

Now we got a deep copy of user to clone

**Using JSON**

let food = {name:"rice",time:20};

let clonefood = JSON.parse(JSON.stringify(food));

console.log(clonefood);

This another way to create a deep copy.

JSON.stringify/parse only work with Number and String and Object literal without function or Symbol properties.