**Copy by value a composite datatype:**

**Array:**

let arr1 = [1,2,3,4,5];

console.log(arr1); // **it will print 1,2,3,4,5**

let arr2 = arr1.slice(); // **slice function will copy the values from arr1. If any changes made to the arr2** it will not reflect to arr1

console.log(arr2); // **it will print 1,2,3,4,5**

arr2[0]=6;

console.log(arr1); // **it will result 1,2,3,4,5**

console.log(arr2); // **it will result 6,2,3,4,5**

**Objects:**

let obj1 = {name:'Jeeva', age:22, city:'Coimbatore'};

let obj2 = Object.assign({},obj1); //**it helps in cloning the object so that if we do any updates on second obj it will not reflect to obj1**

console.log(obj1);

obj1.name='mark';

obj1.Phone=98457;

console.log(obj2);

obj2.name='Louis';

console.log(obj2);

console.log(obj1);

**Difference between copy by value and copy by reference:**

**Copy by Value:**

* It will copy only the value of variable not the reference
* So when we perform any changes then it will not reflect to the parent variable
* It can be performed only on primitive data types

**Copy by reference:**

* It will copy the value along with the reference(i.e memory)
* So when we perform any updates or changes to the child variable it will reflect to the parent variable
* It can be performed only on composite data types(array and objects)

**Question 1:**

**HTML code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <script src='script.js'></script>

    <h1>API Demo</h1>

</body>

</html>

**JS code:**

*var* req = new *XMLHttpRequest*();

req.open('GET','https://restcountries.eu/rest/v2/all',true);

req.send();

req.onload =*function*(){

*var* data = JSON.parse(this.response);

    console.log(data);

*let* i=0;

    for(i=0;i<data.length;i++)

    {

        console.log(data[i].name);

    }

};