**TASK 2**

**1. Load the rest countries data using your html and script.js file and run a for loop on the data and print all the country name in the console.**

**2. Write a write up on Difference between copy by value and copy by reference.**

**3. How to copy by value a composite datatype (array objects).**

**SOLUTIONS**

**Ans 1.** Image is provided in the files.

**Ans 2.** In Copy by value in a primitive datatype a value is assigned to a variable. When it is assigned to another variable only the value is assigned i.e., they refer to two different memory locations. Any changes in the second variable doesn’t affect the first variable.

var a = 17

var b = ‘xyz’

var x = a

var y = b

console.log(a, b, x, y)

**Output:** 17 ‘xyz’ 17 ‘xyz’

In copy by reference in a non-primitive datatype when a value is assigned to the variable and it is then assigned to another variable, they refer to same memory location thus when one changes the values in the allocated memory it is reflected in the other as well.

var arr1 = [1,2,3];

var arr2 = arr1;

arr2[0] = 10;

arr1[2] = 88;

console.log(arr1, arr2)

Output: [10,2,88] [10,2,88]

**Ans 3.** There are 3 ways to copy by value for composite data types.

1. Using the spread (...) operator
2. Using the Object.assign() method
3. Using the JSON.stringify() and JSON.parse() methods