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.

script

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);

for(var i in data)

{

    console.log(data[i].name);

}

}

Index.html

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

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

    <title>Document</title>

</head>

<body>

    <script src="script.js"></script>

</body>

</html>

1. Give a write up on Difference between copy by value and copy by reference.

|  |  |
| --- | --- |
| **Copy by value** | **Copy by reference** |
| Used in case of primitive datatypes. | Used in case of composite datatypes. |
| The value is actually copied. There are two distinct, independent copies. | Only a reference to the value is copied. If the value is modified through the new reference, that change is also visible through the original reference. |
| A distinct copy of the value is passed to the function; changes to it have no effect outside the function. | A reference to the value is passed to the function. If the function modifies the value through the passed reference, the modification is visible outside the function. |
| Two distinct values are compared (often byte by byte) to see if they are the same value. | Two references are compared to see if they refer to the same value. Two references to distinct values are not equal, even if the two values consist of the same bytes. |

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

a. Using the spread (...) operator.

b. Using the Object.assign() method.

c. Using the JSON.stringify() and JSON.parse() methods