Assignment IV

1. Compare JSON having the same properties without order:

a. var obj1 = {name: "person 1", age:5};

b. var obj2 = {age:5, name: "person 1"};

Solution:

We will have to check if both the objects share the same prototype. If yes, then we can iterate through each property of an object and check if the other object has the same property value.

eg:

let isEqual = true;

if (Object.prototype.toString.call(obj1) === Object.prototype.toString.call(obj2))

{

{

if (! Object.keys(obj1).length !== Object.keys(obj2).length)

{

isEqual = false;

} else

{

let properties = Object.keys(obj1);

for prop in properties

{

if(! (obj1[prop] === obj2[prop]) )

{

isEqual = false;

break;

}

}

}

console.log(isEqual);

}

}

2. Use the Rest Countries Api and print all the country flags in the console

let xhr = new xmlhttprequest();

xhr.responseType = "json";

xhr.open("GET", "https://restcountries.com/v3.1/all");

xhr.send();

xhr.onload = function ()

{

if (xhr.readyState === xhr.DONE && xhr.status === 200 )

{

for (var response of xhr.response)

console.log(response.flag);

}

}

3. Print all the countries name, region, sub region and population:

let xhr = new xmlhttprequest();

xhr.responseType = "json";

xhr.open("GET", "https://restcountries.com/v3.1/all");

xhr.send();

xhr.onload = function ()

{

if (xhr.readyState === xhr.DONE && xhr.status === 200 )

{

for (var response of xhr.response) console.log(response.name,"-",response.region,"-",response.subregion,"-",response.population);

}

}

4. GUVI: Zen Class — Variables Arrays & Objects

Task 1: Simple Programs todo for variables:

1. Declare four variables without assigning values and print them in console

var a , b, c ,d; console.log(a,b,c,d)

1. How to get value of the variable myvar as output

var myvar =1; console.log(myvar);

1. Declare variables to store your first name, last name, marital status, country and age in multiple lines

var f\_name;

var l\_name;

var marital\_status;

var country;

var age;

5. Declare variables and assign string, boolean, undefined and null data types

var str = "string"; var boolean = true; var undefined; var nul = null;

6. Convert the string to integer

var num = "1"

parseInt => var num1 = parseInt(num);

Number => var num1 = Number(num);

plus sign =>var num2 = +num;

7. Write 6 statements which provide truthy & falsey values.

0 => false {} => true

-0 => false [] => true

null => false 1 => true

undefined => false "0" => true

NaN => false new Date() => true

false => false -32 => true

infinity => true

Task 2: Simple Programs todo for Operators

1. Square of a number => console.log(a\*a) or console.log(Math.pow(a,2))
2. Swapping 2 numbers => c = a+b; a = c - a; b = c-b;
3. Addition of 3 numbers => a+b+c;
4. Celsius to Farenheit => (Tc x 1.8) + 32;
5. Meter to Miles => meters x 0.000621371;
6. Pounds to Kg => pounds x 0.453529
7. Calculate Batting Average => total\_Score / Number\_of\_Matches
8. Calculate 5 test scores and print their average => console.log(total\_score/5);
9. Power of any number => x\*\*y or Math.pow(x,y)
10. Simple Interest => Principal \* interest \* time
11. Area of an Equilateral Triangle => (3\*\*(⅓)/4)\*a\*a
12. Area Of Isosceles Triangle => b\*h/2
13. Volume Of Sphere => Math.PI\*4\*(r\*\*3)/3
14. Volume Of Prism => 0.5\*a\*b\*h
15. Find area of a triangle. => b\*h/2
16. Give the Actual cost and Sold cost, Calculate Discount Of Product. => (Actual - Sold/Actual) \*100
17. Given the radius of a circle and find its diameter, circumference and area. => 2\*r, Math.PI\*D,Math.PI\*r\*r
18. Given two numbers and perform all arithmetic operations. => a+b,a-b,a\*b,a/b,a%b
19. Display the asterisk pattern as shown below(No loop needed):

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

console.log(`\*\*\*\*

\*\*\*\*

\*\*\*\*

\*\*\*\*

\*\*\*\*`);

21. Calculate CGPA => (sem\_1+....+sem\_n)/n

Task 3: Simple Programs todo for Condition , Looping and Arrays

1. # for(var row = 1; row <=7; row++) {

## for(var column =1; column <=row; column++)

### console.log('#');

#### }

#####

######

#######

1. var strArray= ["<option>Jazz</option>", //Print the contents of array

,"<option>Blues</option>",

,"<option>New Age</option>",

,"<option>Classical</option>",

,"<option>Opera</option>"]

strArray.forEach((val,ind) => console.log(val)) //Count elements in Array

1. var myarray=[11,22,33,44,55]

count = 0;

myarray.forEach((val,ind)=> count++);

console.log(count)

1. let Food = [a,b,c,d,e,f,g,h,j,i,k,l,m,n,o,p,q,r,s,t,u,v] //few foods arranged as per my fav

5th fav dish => Food[4];

fav food count => Food.length;

1. let friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

change the element that is currently “Mari” to “Munnabai”.

function dataHandling(input){

for (var i = 0; i < input.length; i++) {

if (i > 3)

break;

else

friends[i] = "Imaginary Friend :)";

}

}

dataHandling(friends);

1. Starting from the friends variable below, Loop and Print the names till you meet CaptianAmerica.

const friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

function dataHandling(input){

for (var i = 0; i < input.length; i++) {

if(friends[i]=="CaptainAmerica")

break;

else

console.log(friends[i]);

}

}

dataHandling(friends);

7. Find the person is ur friend or not.

const friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

function dataHandling(input, name){

var isFound = false;

for (var i = 0; i < input.length; i++) {

if(friends[i] == name)

{

isFound = true;

break;

}

}

return isFound;

}

let found = dataHandling(friends,”Jeff”);

console.log(found);

8. We have two lists of friends below. Use array methods to combine them into one alphabetically-sorted list.

var friends1 = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

var friends2 = [

“Gabbar”,

“Rajinikanth”,

“Mass”,

“Spiderman”,

“Jeff”,

“ET”

];

function dataHandling(input){

for (var name of friends2)

{

if(!friends1.includes(name))

{

friends1.push(name);

}

}

console.log(friends1.sort((a,b) => a-b));

}

dataHandling(friends1);

1. Get the first item, the middle item and the last item of the array

firstItem = array[0];

middleItem = array[Math.Ceil((array.length-1)/2)];

lastItem = array[array.length-1];

2. Add your name to the end of the friends array, and add another name to beginning.

friends.push("Gokul");

friends.shift("Hari");

3. Add Mr or Ms to the names in the friends array.

friends.map((a) =>"Mr.".concat(a));

4. Concat all the names the friends array and return as comma “,” seperated string.

friends.join(",");

5. Find the friends names who has letter ‘a’ and return the list.

friends.filter( friend => friend[0]=='a' );

6. Find the avg length of all the friends names. Get the individual length of the names and do the avg.

totalChar = friends.reduce((p,c)=>p.length+c.length);

avg = totalChar/friends.length;

7. Find the names and return the list starting with letter M.

friends.filter( friend => friend.charAt[0]=='M' );

8. Find the name with max characters and return the name.

var max = 0;

var maxElement;

friends.forEach((val,i) => { if(val.length > max)

{

max = val.length;

maxElement = val;

}

});

9. Find the name with min characters and return the name.

var min= 0;

var minElement;

friends.forEach((val,i) => { if(val.length < min)

{

min = val.length;

minElement = val;

}

});

10. Find the average in the array below.

Make sure you add only the numbers and do avg.

const friendsInfo = [6, 12, ‘Mari’, 1, true, ‘Munnabai’, ‘200’, ‘CaptianAmerica’, 8, 10];

var sum = 0;

var count = 0;

friendsInfo.filter((val)=> if(typeof val == 'number')

{

sum = sum + val;

count = count + 1;

});

console.log(sum/count);

11. Print the contents of the input variable

var input = [

[“0001”, “Roman Alamsyah”, “Bandar Lampung”, “21/05/1989”, “Membaca”],

[“0002”, “Dika Sembiring”, “Medan”, “10/10/1992”, “Bermain Gitar”],

[“0003”, “Winona”, “Ambon”, “25/12/1965”, “Memasak”],

[“0004”, “Bintang Senjaya”, “Martapura”, “6/4/1970”, “Berkebun”]

]

function dataHandling(input){

for (var i = 0; i < input.length; i++) {

for (var j = 0; j < input[i].length-1 ; j++)

console.log(input[i][j]);

}

}

12. Add a new key value pair to myobject

key : ten

value : ten

=> myObject[ten] = 'ten';