1. How to compare two JSON have the same properties without order?
   1. var obj1 = { name: "Person 1", age:5 };
2. var obj1 = { name: "Person 1", age:5 };
3. var obj2 = { age:5, name: "Person 1" };
4. var temp = 0;
5. let objKey1 = Object.keys(obj1);
6. let answer = objKey1.forEach(a=> a in obj2 ? temp++ : 0);
7. console.log(temp == Object.keys(obj2).length ? "Same property" : "Different property")
8. Use the rest countries API url -><https://restcountries.eu/rest/v2/all> and display all the country flags in console
9. var request = new XMLHttpRequest();
10. request.open('GET', 'https://raw.githubusercontent.com/rvsp/restcountries-json-data/master/res-countries.json');
11. request.send();
12. request.onload=function(){
13. var data = JSON.parse(request.response);
14. for(let i=0; i<data.length; i++)
15. console.log(data[i].flag);
16. }
17. Use the same rest countries and print all countries name, region, sub region and population
18. var request = new XMLHttpRequest();
19. request.open('GET', 'https://raw.githubusercontent.com/rvsp/restcountries-json-data/master/res-countries.json');
20. request.send();
21. request.onload=function(){
22. var data = JSON.parse(request.response);
23. for(let i=0; i<data.length; i++)
24. console.log(data[i].name, data[i].subregion, data[i].region, data[i].population);
25. }
26. <https://medium.com/@reach2arunprakash/www-guvi-io-zen-d395deec1373>

**Task 1: Simple Programs todo for variables**

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

let a;

let b;

let c;

let d;

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

let a = 10;

console.log(a);

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

let [first name, last name] = [Daniel, Robinson];

let marital\_status = M;

let country = India;

let age = 28;

1. Declare variables to store your first name, last name, marital status, country and age in a single line

let database = {firstname : "Daniel", lastname : "Robinson", Maritalstatus : "M", country : "India", age : 28}

console.log(database);

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

let val1 = "daniel";

let val2 = true;

let val3 = undefined;

let val4 = null;

1. Convert the string to integer

let val1 = "2";

let val2 = 1;

console.log(+val1 + val2);

1. Write 6 statement which provide truthy & falsey values

Any value apart from the following are considered as truthy

* False
* Null
* Undefined
* “” - > ‘’
* Nan
* null

console.log(false || "daniel"); O/P = daniel

**Task 2: Simple Programs todo for Operators**

1. Square of a number

let a = 4;

console.log(a \* a);

1. Swapping 2 numbers

let a = 4;

let b = 2;

[a, b] = [b, a];

console.log(a, b);

1. Addition of 3 numbers

let a = 4;

let b = 2;

let c = 3;

console.log(a + b + c);

1. Celsius to Fahrenheit conversion

let C = 4;

let f = (C\*1.8)+32;

console.log(f);

1. Meter to miles

let meter = 10;

let miles = (meter/1609).toFixed(6);

console.log(miles);

1. Pounds to kg

let pounds = 1;

let kg = (pounds/2.205);

console.log(kg);

1. Calculate Batting Average

let totalscores = 2000;

let played = 40;

let notout = 5;

console.log((totalscores/(played-notout)).toFixed(2));

1. Calculate five test scores and print their average

let totalscores = 200;

let played = 5;

let notout = 3;

console.log((totalscores/(played-notout)).toFixed(2));

1. Power of any number x ^ y.

let a = 2;

let pow = 2;

console.log(Math.pow(2,2);

1. Calculate Simple Interest

let principalBalance = 20000;

let ROI = 0.14;

let time = 2;

console.log("S.I = "+ (principalBalance\*ROI\*time).toFixed(2));

1. Calculate area of an equilateral triangle

let side1 = 10;

let side2 = 20;

let side3 = 30;

let s = (side1 + side2 + side3)/2;

let area = Math.sqrt(s \* (s - side1) \* (s - side2) \* (s - side3));

console.log(area);

1. Area Of Isosceles Triangle

let b = 2;

let h = 3;

let answer = (1\*b\*h)/2;

console.log(answer);

1. Volume Of Spheres

let r = 3;

let volume = (4\*Math.PI\*r\*r\*r); //(4. π. r\*r\*r )/ 3

console.log(volume.toFixed(2));

1. Volume Of Prism

let h = 3;

let b = 2;

let volume = (b\*h); //V=Bh (base area \* height)

console.log(volume);

1. Find area of a triangle.

let l = 3;

let b = 2;

let area = (l\*b); //a = l\*b (length \* breadth)

console.log(area);

1. Give the Actual cost and Sold cost, Calculate Discount Of Product

let actualCost = 200;

let soldCost = 180;

console.log("Discount "+ (actualCost-soldCost)/actualCost\*100+"%");

1. Given their radius of a circle and find its diameter, circumference and area.

let radius = 3;

let a = (Math.PI\*Math.pow(radius,2)).toFixed(2);

let c = 2\*Math.PI\*radius;

let d = 2\*radius;

console.log("Area : ", a + "\nDiameter : ", d +"\nCircumference : ", c.toFixed(2));

1. Given two numbers and perform all arithmetic operations.

let a = 2;

let b = 3;

console.log(a\*b);

console.log(a+b);

console.log(a/b);

console.log(a-b);

console.log(a\*\*b);

console.log(a%b);

console.log(a++);

console.log(a--);

1. Display the asterisk pattern as shown below(No loop needed):

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

console.log("\*\*\*\*");

console.log("\*\*\*\*");

console.log("\*\*\*\*");

console.log("\*\*\*\*");

console.log("\*\*\*\*");

1. Calculate electricity bill?

let units = 50; //Each units cost 2rs

console.log("Bill :", units\*2);

1. For example, a consumer consumes 100 watts per hour daily for one month. Calculate the total energy bill of that consumer if per unit rate is 10?

let daysinMonth = 30;

let totalhours = daysinMonth\*24;

let watts = 100;

console.log("Bill to customer : ", ((totalhours\*watts)/1000)\*10);//1000 watts = 1 unit

1. Program To Calculate CGPA

let obj = {

Mathematics : 8,

Social : 9,

Science : 7,

English : 10,

Tamil : 8

}

let temp = 0;

for (let val in obj)

temp = temp + obj[val];

console.log("CGPA : ", temp/(Object.keys(obj).length));

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

* 1. Write a loop that makes seven calls to console.log to output the following triangle:

#

##

###

####

#####

let arr = [];

let n = 7;

for (let x = 0; x<n; x++){

arr.push("#");

console.log(...arr);}

* 1. Iterate through the string array and print it contents

var strArray= ["<option>Jazz</option>",

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

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

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

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

Arrays:

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

write a code to count the elements in the array . Don’t use length property

**let arr = [11,22,33,44,55];**

**let temp = 0;**

**for (let x = 0; ; x++)**

**{**

**if(arr[x]===undefined)**

**break;**

**temp = temp + 1;**

**}**

**console.log(temp);**

Declare an empty array;

let arr = [];

— — — — — — — — — — — — — — -

Create an array called foods holds the names of your top 20 favorite foods, starting with the best food.

let foods=[“idly”,”dosa”, ”dosa1”, ”dosa3”, ”dosa4”, ”dosa5”, ”dosa6”, ”dosa7”, ”dosa8”, ”dosa9”, ”dosa10”, ”dosa11”, ”dosa12”, ”dosa13”, ”dosa14”, ”dosa15”, ”dosa16”, ”dosa17”, ”dosa18”, ”dosa19”, ”dosa20”];

— — — — — — — — — — — — — — — -

Foods variable holds the names of your top 20 favorite foods, starting with the best food. How can you find your fifth favorite food?

let foods=[“idly”,”dosa”, ”dosa1”, ”dosa3”, ”dosa4”, ”dosa5”, ”dosa6”, ”dosa7”, ”dosa8”, ”dosa9”, ”dosa10”, ”dosa11”, ”dosa12”, ”dosa13”, ”dosa14”, ”dosa15”, ”dosa16”, ”dosa17”, ”dosa18”, ”dosa19”, ”dosa20”];

console.log(foods[4]);

Find the length of your foods array

— — — — — — — — — — — — — — — -

Starting from the existing friends variable below, change the element that is currently “Mari” to “Munnabai”.

let friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

**Program:**

**let friends = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];**

**friends.splice(0,1,"Munnabai");**

**console.log(friends);**

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

const friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

**let friends = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];**

**for(let i =0; friends[i] != "CaptianAmerica"; i++)**

**console.log(friends[i]);**

— — — — — — — — — — — — — — — -

Find the person is ur friend or not.

const friends = [

“Mari”,

“MaryJane”,

“CaptianAmerica”,

“Munnabai”,

“Jeff”,

“AAK chandran”

];

**let friends = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];**

**let temp = "";**

**function dataHandling(arr, n){**

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

**temp = (arr[i] == n) ? "found" : "notfound";**

**if(temp == "found" )**

**break;}**

**return temp;**

**}**

— — — — — — — — — — — — — — — -

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(friends1,friends2){

let value = friends1 +","+ friends2;

console.log(value.split(",").sort());}

dataHandling(friends1, friends2);

— — — — — — — — — — — — — — — -

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

var friends1 = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];

console.log(friends1[0]);

console.log(friends1[((friends1.length-1)/2).toFixed(0)]);

console.log(friends1[friends1.length-1]);.

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

var friends1 = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];

friends1.push("last addition");

friends1.splice(0,0,"First Addition");

console.log(friends1);

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

var friends1 = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];

for (let x of friends1)

console.log("Mrs.",x);

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

var friends1 = ["Mari","MaryJane","CaptianAmerica","Munnabai","Jeff","AAK chandran"];

console.log(friends1.join(","));

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

var friends1 = ["Mari","MaryJane","Cptinmeric","Munnabai","Jeff","AAK chandran"];

let ans = [];

let fuc=(val)=>{

temp = val.split("");

for(let i of temp){

if(i == "a"){

ans.push(val);

break;}}

return ans;}

for(let x of friends1)

fuc(x);

console.log(ans);

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

let arr = ["Daniel","Blessy","Darwin"]

let temp = 0;

for(let x of arr)

temp = temp + x.length;

console.log(temp/arr.length)

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

let arr = ["Daniel","Blessy","Darwin", "Marvin"];

let stringVal=(temp)=> (temp.indexOf("M") == 0) ? ans.push(temp) : null;

let ans = [];

for (let x of arr)

stringVal(x);

console.log(...ans);

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

let arr = ["Danie","Blessy","Maaarvin","Darwinn","Amithab Mama"];

let ans = [];

for (let x of arr)

ans.push(x.length);

let temp = ans.concat().sort((a,b)=> a-b);

let temp1 = ans.indexOf(temp[(temp.length)-1]);

console.log(arr[temp1]);

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

let arr = ["Danie","Blessy","Maaarvin","Darwinn","Amithab Mama"];

let ans = [];

for (let x of arr)

ans.push(x.length);

let temp = ans.concat().sort((a,b)=> b-a);

let temp1 = ans.indexOf(temp[(temp.length)-1]);

console.log(arr[temp1]);

— — — — — — — — — — — — — — — -

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];

let arr = [];

let temp = 0;

friendsInfo.forEach((temp)=> (typeof(temp)== "number") ? arr.push(temp):"False")

for (let x of arr)

temp = temp + x;

console.log((temp/arr.length).toFixed(0))

— — — — — — — — — — — — — — — -

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++) {

console.log(input[i]);

}

}

dataHandling(input);

— — — — — — — — — — — — — — — -

Objects:

What the output

myobject = {1:one,”11":1,”name”:”arun”}

console.log(myobject.11);

console.log(myobject.name);

Answer : We would get an error because Integer key can be called from object only using square [] bracket.

Actual coding should be following:

console.log(myobject[11]);

console.log(myobject.name);

Add a new key value pair to myobject

key : ten

value : ten

myobject = {1:one,”11":1,”name”:”arun”}

myobject.ten = "ten"; //your code goes here

console.log(myobject);

{"1":"one","11":1,"name":"arun","ten":"ten"} // Quotes might not get displayed that fine.