**How to compare two JSON have the same properties without order**

var obj1 = {"name":"Person 1","age":5};

var obj2 = {"age":5,"name":"Person 1"};

var isEqualsJson = (obj1,obj2)=>{

keys1 = Object.keys(obj1);

keys2 = Object.keys(obj2);

return keys1.length === keys2.length && Object.keys(obj1).every(key=>obj1[key]==obj2[key]);

}

console.log("JSON objects are equals: "+ isEqualsJson(obj1,obj2));

**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);

o/p: undefined undefined undefined undefined

**2.How to get value of the variable myvar as output**

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

console.log(myvar)//output: 1

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

var firstName='Kala';

var lastName='Vinosh';

var maritalStatus='Married';

var country='India' ;

var age=32;

console.log(firstName, lastName, maritalStatus, country, age );

o/p: // Kala Vinosh Married India 32

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

var firstName='Kala', lastName='Vinosh', maritalStatus='Married', country='India', age=32;

console.log(firstName, lastName, maritalStatus, country, age );

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

var x='welcome';

var bool=true;

var undefined=undefined;

var n=null;

console.log(x,bool,undefined,null);

6.

# var str1='I am 25 years old.';

# var str2='30 years old.';

# console.log(parseInt(str1),parseInt(str2))

# console.log(Number(str1),Number(str2))

# console.log(+str1,+str2)

o/p: NaN 30

NaN NaN

NaN NaN

**7. Write 6 statement which provide truthy & falsey values.**

var a=10,b='hello',e;

console.log(isNaN(a),isNaN(b)); // false true

console.log(typeof(a) === 'string') //false

console.log(typeof(b) === 'string') //true

var c=typeof(a);

console.log(typeof(c)==='number') //false

var d=null;

console.log(d,typeof(d)==='object') //null true

var l=parseInt(e);

console.log(l,typeof(l)==='undefined') //NaN false

console.log(e,typeof(e)==='undefined') undefined true

# Task 2: Simple Programs todo for Operators

1. Square of a number

# var n=5;

# console.log('square of a number is '+ n\*n)

# let num = Math.pow(4, 2);

# console.log('square of a number is '+ num)

1. Swapping 2 numbers

var a=5,b=4;

var [a,b]=[b,a]; //destructuring assignment [a, b] = [b, a] , is used to swap the value of two variables

console.log(a,b)

1. Addition of 3 numbers

var a=1,b=2,c=3;

console.log(a+b+c)

var a=[1,2,3];

var sum=0;

a.map(value=>sum+=value)

console.log(sum)

1. Celsius to Fahrenheit conversion

const celsius = 25

const fahrenheit = (celsius \* 1.8) + 32

console.log(`${celsius} degree celsius is equal to ${fahrenheit} degree fahrenheit.`);

1. Meter to miles

const meters=5000;

function getMiles(meters) {

return meters\*0.000621371192;

}

console.log(getMiles(meters))

1. Pounds to kg

const pounds=20;

function getKilogram(pounds) {

return pounds\*(1/2.2046);

}

console.log(getKilogram(pounds))

1. Calculate Batting Average

//Batting Average=Runs Scored/Number of dismissals

//Number of dismissals = Number of innings - Number of innings he remained Not Out

let runs = 10000, matches = 250, notOut = 50;

function battingAvg(runs,matches,notOut){

return runs/(matches-notOut);

}

console.log(battingAvg(runs,matches,notOut))

1. Calculate five test scores and print their average

const testScores=[62,80,98,75,66];

let len=testScores.length;

function avg(testScores,len){

let res=testScores.reduce((acc,value)=>acc+=value,0);

return res/len

}

console.log(avg(testScores,len))

1. Power of any number x ^ y.

let x=2;

let y=3;

let pow=Math.pow(x,y);

var res = 1;

for (let i=0;i<y;i++) {

res = res \* x;

}

console.log(pow,res)

1. Calculate Simple Interest

var p=1000, t=6, r=3, SI;

SI = (p \* t \* r) / 100;

console.log(SI)

1. Calculate area of an equilateral triangle

let a= 5

let area = ( 1.73 \* a\*a) / 4

console.log("Area of Equilateral Triangle is: "+area);

1. Area Of Isosceles Triangle

//A = ½[√(a2 − b2 ⁄4) × b]

let a=13;

let b=24;

let area=(Math.sqrt(a\*\*2-b\*\*2/4)\*b)/2;

//let area=(Math.sqrt(Math.pow(a,2)-Math.pow(b,2)/4)\*b)/2;

console.log(area)

1. Volume Of Sphere

//volume of a sphere is V=4/3πr3.

let r=10;

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

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

1. Volume Of Prism

//Volume = ( l \* b \* h ) / 2

let l = 18, b = 12, h = 9;

let v=(l \* b \* h )/2 ;

console.log(v)

1. Find area of a triangle.

//area = (base \* height) / 2

let b=3;

let h=8;

let area=(b\*h)/2;

console.log(area)

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

let actualCost=200;

let soldCost=150;

let dis=(actualCost-soldCost)/100;

console.log(dis)

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

let r=2;

let dia=r\*r;

let area=Math.PI\*dia;

//area=area.toFixed(2);

let cir=2\*Math.PI\*r;

console.log(dia,area,cir)

1. Given two numbers and perform all arithmetic operations.

let x = 5;

let y = 2;

let sum=0,sub=0,mul,div,mod,inc,dec,pow;

sum= x + y

sub = x - y

mul = x \* y

div= x / y

mod= x % y

inc=++x

dec=--y

pow= x \*\* 2

console.log(sum,sub,mul,div,mod,inc,dec,pow)

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

let x ='\*\*\*\*\*';

for(let i=0;i<5;i++){

console.log(x)

}

1. Calculate electricity bill?  
   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 w=100;

let total=w\*24\*31;

let bill=total/1000\*10;

console.log(bill);

1. Program To Calculate CGPA

let marks= [ 90, 80, 70, 80, 90 ];

let n=marks.length;

function CgpaCalc( marks, n)

{

let cgpa, sum = 0;

for(let i = 0; i < n; i++)

{

sum += (marks[i] / 10);

}

cgpa = sum / n;

return cgpa;

}

let cgpa = CgpaCalc(marks, n);

console.log("CGPA Percentage = " + (cgpa \* 9.5).toFixed(2));

# 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:

#  
##  
###  
####  
#####  
######  
#######

for (let line = "#"; line.length < 8; line += "#")

console.log(line);

2. 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>"]

var strArray= ["<option>Jazz</option>","<option>Blues</option>","<option>New Age</option>","<option>Classical</option>","<option>Opera</option>"];

for(i=0;i<strArray.length;i++)

console.log(strArray[i])

**Arrays**:

1.

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

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

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

function arrLen(arr){

let len=0;

while(arr[len]!=undefined)

len++

return len;

}

console.log(arrLen(arr))

2.

//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=[]

//Find the length of your foods array

foods.push('puri','briyani','vada','lemonrice','eggrice','parota','chapati','chickenrice','plaindosa','masaldosa','ediyappam','idli','dosa','paniyaram','pongal','sundal','tomato','pulirice','curd','egg','masalavada')

console.log(foods.length,foods[4])

3. 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"];

function dataHandling(input){

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

if(input[i]=="Mari")

input[i]="Munnabai";

}

return input

}

console.log(dataHandling(friends));

4. 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(input[i]!="CaptianAmerica")

console.log(input[i]);

else

break;

}

}

dataHandling(friends);

**5. Find the person is ur friend or not.**

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

function dataHandling(input, name){

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

if(input[i]==name)

return 'yes'

}

return 'no'

}

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

console.log(found);

**6.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"];

var friends=friends1.concat(friends2);

function dataHandling(input){

input.sort();

return input

}

console.log(dataHandling(friends));

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

let len=friends.length;

let mid=Math.round(len/2);

console.log("first item: "+friends[0],"Middle item: "+friends[mid],"last item: "+friends[len-1])

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

friends.unshift("Rishu")

friends.push("kala");

console.log(friends)

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

let len=friends.length;

for(i=0;i<len;i++){

friends[i]="Mr."+friends[i];

}

console.log(friends)

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

let len=friends.length;

for(i=0;i<len;i++){

friends[i]="Mr."+friends[i];

}

let str=friends.join();

console.log(str)

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

let len=friends.length;

let res=[];

for(i=0;i<len;i++){

let m=friends[i].match(/a/g);

if(m!=null)

res.push(friends[i])

}

console.log(res)

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

let len=friends.length;

let sum=friends.reduce((acc,value)=>acc+=value.length,0)

console.log("Average length: "+(sum/len).toFixed(2))

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

let len=friends.length;

let res=[];

for(i=0;i<len;i++){

let m=friends[i].charAt(0);

if(m=='M')

res.push(friends[i])

}

console.log(res)

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

let len=friends.length;

let max=0,n;

for(i=0;i<len;i++){

let m=friends[i].length

if(m>max){

max=m;

n=friends[i];

}

}

console.log("'"+n+"':"+max)

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

let len=friends.length;

let res=[],min,n;

for(i=0;i<len;i++){

let m=friends[i].length

res.push(m);

min=Math.max(...res);

if(m<min){

min=m;

n=friends[i];

}

}

console.log("'"+n+"':"+min)