1. Do the below programs in anonymous function & IIFE
   1. Print odd numbers in an array

//solution

var a=[1,2,3,4];

function odd(arr){

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

if(arr[i] % 2!== 0)

console.log(arr[i]);

}

}

odd(a)

* 1. Convert all the strings to title caps in a string array

//solution

function title(str){

str=str.toLowerCase().split(' ');

for (vari=0;i<str.length;i++){

str[i] =str[i].charAt(0).toUpperCase() + str[i].slice(1);

}

returnstr.join(' ');

}

console.log(title('guvi geek'))

* 1. Sum of all numbers in an array

//solution

var a=[1,2,3,4];

function sum(arr){

var sum1=0;

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

sum1 +=arr[i];

}

return sum1;

}

console.log(sum(a))

* 1. Return all the prime numbers in an array

//solution

var a=[1,2,3,4,5,6,7,8,9,10];

function prime(arr){

for(vari=2;i<arr;i++){

if(arr % i==0){

return false;

}

}

returnarr> 1;

}

console.log(a.filter(prime))

* 1. Return all the palindromes in an array

//solution

functionpalidrome(str){

for(vari=0;i<a.length/2;i++){

if(a[i] !== a[a.length -1 -i]){

return false;

}

}

return a;

}

var a='dad';

console.log(palidrome(a))

* 1. Return median of two sorted arrays of same size

//solution

function median(ar1,ar2,n){

vari=0;

var j=0;

var count=0;

var m1= -1, m2= -1;

for(count=0;count <= n;count++){

if(i==n){

m1=m2;

m2=ar2[0];

break;

}

else if(j==n){

m1=m2;

m2=ar1[i];

i++;

}

else{

m1=m2;

m2=ar2[j];

j++;

}

}

return (m1+m2)/2;

}

var ar1=[1,12,15,26,38];

var ar2=[2,13,17,30,45];

var n1=ar1.length;

var n2=ar2.length;

if(n1==n2)

console.log(median(ar1,ar2,n1));

* 1. Remove duplicates from an array

//solution

functionuniq(arr){

letuniqarr =[];

for (let i of arr){

if(uniqarr.indexOf(i)=== -1){

uniqarr.push(i);

}

}

console.log(uniqarr);

}

var a=[1,2,3,2,3];

uniq(a)

* 1. Rotate an array by k times

//solution

function rotate(a,n,k){

k=k % n;

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

if(i<k){

console.log(a[n+i-k] + " ");

}else{

console.log((a[i-k]) + " ");

}

}

return ;

}

let array=[1,2,3,4,5];

let n=array.length;

let k=2;

rotate(array,n,k);

1. Do the below programs in arrow functions
2. Print odd numbers in an array

//solution

var a=[1,2,3,4];

var res=a.filter((ele)=> ele%2!==0);

console.log(res)

1. Convert all the strings to title caps in a string array

//solution

varstr="guvi geek";

var res=str.split(" ").map(([firstChar,...rest])=>firstChar.toUpperCase()+rest.join("").toLowerCase()).join(" ");

console.log(res)

1. Sum of all numbers in an array

//solution

var a=[1,2,3,4];

var res=a.reduce((acc,val)=>acc+val,0);

console.log(res)

1. Return all the prime numbers in an array

//solution

var a=[1,2,3,4,5,6,7,8,9,10];

var res=a.filter(num=>{

for(let i=2;i<num;i++){

if (num % i===0)return false;

}

returnnum !==1;

});

console.log(res)

1. Return all the palindromes in an array

//solution

palidrome=(str="")=>{

if (str[0]=== str[str.length - 1]){

returnstr.length<= 1 ? true :palidrome(str.slice(1,-1))

}

return false;

}

console.log(["racecar","dad"].map((e,i)=>palidrome(e)).join());

**2.QUESTION**

**Problem**:

Write a function called “addFive”.  
Given a number, “addFive” returns 5 added to that number.

//solution

var numb = 10;

functionaddFive(num) {

var sum=5;

sum += num;

return sum;

}

console.log(addFive(numb))

**Problem**:

Write a function called “getOpposite”.  
Given a number, return its opposite

//solution

varnum = 5;

functiongetOpposite(num) {

return (-num)

}

var result = getOpposite(num)

console.log(result)

**Problem**:

Fill in your code that takes an number minutes and converts it to seconds.

//solution

var min = 5;

functiontoSeconds(min) {

return min \* 60;

}

var secs = toSeconds(min)

console.log(secs)

**Problem**  
Create a function that takes a string and returns it as an integer.

//solution

**varmystr = "5";**

**functiontoInteger(mystr) {**

**return +mystr**

**}**

**varmyint = toInteger(mystr)**

**console.log(myint)**

**Problem**

Create a function that takes a number as an argument, increments the number by +1 and returns the result.

//solution

varmyint = 0;

functionnextNumber(myint) {

returnmyint + 1;

}

varmyNextint = nextNumber(myint)

console.log(myNextint)

**Problem**

Create a function that takes an array and returns the first element.

//solution

vararr = [1, 2, 3];

functiongetFirstElement(arr) {

returnarr[0];

}

var data = getFirstElement(arr)

console.log(data)

**Problem**

Convert Hours into Seconds

Write a function that converts hours into seconds.

//solution

vararr = [1, 2, 3];

functionhourToSeconds(arr) {

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

for(var j=0;j<3;j++){

return arr[i] \* 3600;

}

}

}

var data = hourToSeconds(arr)

console.log(data

**Problem**

Find the Perimeter of a Rectangle  
Create a function that takes height and width and finds the perimeter of a rectangle.

//solution

functionfindPerimeter(num1,num2) {

return 2 \* (num1 + num2);

}

varperi = findPerimeter(6,7)

console.log(peri)

**Problem**

Less Than 100?  
Given two numbers, return true if the sum of both numbers is less than 100. Otherwise return false.

//solution

function lessThan100(num1,num2) {

var sum=num1+num2;

if(sum<100){

return true;

}else{

return false;

}

}

var res = lessThan100(22,15)

console.log(res)

**Problem**

There is a single operator in JavaScript, capable of providing the remainder of a division operation. Two numbers are passed as parameters. The first parameter divided by the second parameter will have a remainder, possibly zero. Return that value.

//solution

function remainder(num1,num2) {

if((num1 / num2)===0 ){

return 0;

}else{

return num1;

}

}

var res = remainder(1,3)

console.log(res)

**Problem**

**//solution**

**functionCountAnimals(tur,horse,pigs) {**

**return (tur \* 2)+(horse\*4)+(pigs\*4);**

**}**

**var legs = CountAnimals(2,3,5)**

**console.log(legs)**

**Problem**

Frames Per Second  
Create a function that returns the number of frames shown in a given number of minutes for a certain FPS.

//solution

function frames(num1,num2) {

return (num1\*60)\*num2;

}

var fps = frames(1,2)

console.log(fps)

**Problem**

Check if an Integer is Divisible By Five  
Create a function that returns true if an integer is evenly divisible by 5, and false otherwise.

//solution

functiondivisibleByFive(num1) {

return num1/5==1;

}

var divisible = divisibleByFive(5)

console.log(divisible)

**Problem**:

Write a function called “isEven”.  
Given a number, “isEven” returns whether it is even.

//solution

functionisEven(num){

return (num%2==0)===num

}

var even = isEven(5)

console.log(even)

**Problem**:  
Write a function called “areBothOdd”.  
Given 2 numbers, “areBothOdd” returns whether or not both of the given numbers are odd.

//solution

functionareBothOdd(num1, num2){

if(num1%2!==0 && num2%2!==0){

return true;

}else{

return false;

}

}

console.log(areBothOdd(1,3));

**Problem**:  
Write a function called “getFullName”.  
Given a first and a last name, “getFullName” returns a single string with the given first and last names separated by a single space.

//solution

functiongetFullName(firstName, lastName){

returnfirstName+" "+lastName;

}

console.log(getFullName("GUVI","GEEK"));

**Problem**:  
Write a function called “getLengthOfWord”.  
Given a word, “getLengthOfWord” returns the length of the given word.

//solution

functiongetLengthOfWord(word1){

if(word1==Number){

return -1;

}else{

return word1.length;

}

}

console.log(getLengthOfWord("GUVI"));

**Problem**:  
Write a function called “isSameLength”.  
Given two words, “isSameLength” returns whether the given words have the same length.

//solution

functionisSameLength(word1, word2){

if(word1.length==word2.length){

return true;

}else{

return false;

}

}

console.log(isSameLength("GUVI","GEEK"));

**Problem**:

Create a function to calculate the distance between two points defined by their x, y coordinates

//solution

functiongetDistance(x1,y1,x2,y2){

this.x = x1;

this.y = y1;

this.x1 = x2;

this.y1 = y2;

this.distanceTo = function() {

return Math.sqrt((Math.pow(this.x1-this.x,2))+(Math.pow(this.y1-this.y,2)))

};

}

var points = new getDistance (100,100,400,300);

console.log(points.distanceTo());

**Problem**:

Write a function called “getNthElement”.  
Given an array and an integer, “getNthElement” returns the element at the given integer, within the given array. If the array has a length of 0, it should return ‘undefined’.

//solution

functiongetNthElement(array,n){

return array[n];

}

console.log(getNthElement([1,3,5],1));

**Problem**:

Write a function called “getLastElement”.  
Given an array, “getLastElement” returns the last element of the given array. If the given array has a length of 0, it should return ‘-1’.

//solution

functiongetLastElement(array){

if(array.length!==0){

return array[array.length-1];

}if(array.length===0){

return -1;

}

}

console.log(getLastElement([1,2,3,4]));

**Problem**:

Write a function called “getProperty”.  
Given an object and a key, “getProperty” returns the value of the property at the given key. If there is no property at the given key, it should return undefined.

//solution

varobj = {

mykey: "value"

};

functiongetProperty(obj, key) {

if(key==Object.keys(obj)){

returnobj.mykey;

}else{

return "NA";

}

}

console.log(getProperty(obj,"mykey"))

**Problem**:

Write a function called “addProperty”.  
Given an object and a key, “addProperty” adds a new property on the given object with a value of true.

//solution

varobj = {

mykey: "value"

};

functionaddProperty(obj, key){

returnobj[key]=true;

}

console.log(addProperty(obj,"mykey"));

console.log(obj)

**Problem**:

Write a function called “removeProperty”.  
Given an object and a key, “removeProperty” removes the given key from the given object.

//solution

varobj={

name:"nk"

};

functionremoveProperty(obj, key){

return (delete obj[key]);

}

console.log(removeProperty(obj,"name"))

console.log(obj)

**Problem**:

Return an array, where the first element is the count of positives numbers and the second element is sum of negative numbers.

//solution

vararr = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

functioncountPositivesSumNegatives(arr) {

varpos=0;

var sum=0;

var a=[];

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

if(arr[i]>0){

pos++;

if(arr[i]<0){

sum +=arr[i];

}

}

}

a.push(pos);

a.push(sum);

return a;

}

console.log(countPositivesSumNegatives(arr));

**Problem**:

Create a function that receives an array of numbers and returns an array containing only the positive numbers

//solution

functiongetPositives(ar){

var a=[];

for(vari=0;i<ar.length;i++){

if(ar[i]>0){

a.push(ar[i]);

}

}

return a;

}

varar = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

var ar2 = getPositives(ar);

console.log(ar2);

**Problem**:

Write a function `powersOfTwo` which will return list of all powers of 2 from 0 to n (where n is an exponent).

//solution

functionpowersOfTwo(n){

for(vari=0;i<=n;i++){

var res=Math.pow(2,i);

}

return res;

}

console.log(powersOfTwo(2))

**Problem**:

Find the maximum number in an array of numbers

//solution

functionfindMax(ar)

{

returnMath.max(...ar);

}

varar = [-5, 10, -3, 12, -9, 5, 90, 0, 1];

var max = findMax(ar);

console.log("Max: ", max);

**Problem**:

Print the first 100 prime numbers

//solution

printPrimes(100);

// Function prints the first nPrimes numbers

functionprintPrimes(nPrimes)

{

var n = 0;

vari = 2;

while(n <nPrimes)

{

if (isPrime(i))

{

console.log(n, " → ", i);

n++;

}

i++;

}

}

// Returns true if a number is prime

functionisPrime(n)

{

for(let i = 2; i<= n/2; i++){

if(n % i === 0){

return false;

}

}

return true;

}

**Problem**:

Create a function that will return in an array the first “nPrimes” prime numbers greater than a particular number “startAt”

//solution

printPrimes(10);

// Function prints the first nPrimes numbers

functionprintPrimes(nPrimes)

{

var n = 0;

vari = 100;

while(n <nPrimes)

{

if (isPrime(i))

{

console.log(n, " → ", i);

n++;

}

i++;

}

}

// Returns true if a number is prime

functionisPrime(n)

{

for(let i = 2; i<= n/2; i++){

if(n % i === 0){

return false;

}

}

return true;

}

**Problem**:

Reverse a string

//solution

var s = reverseString("JavaScript");

console.log(s);

functionreverseString(s)

{

letnewString="";

for(let i=s.length -1;i>=0;i--){

newString +=s[i];

}

returnnewString;

}

**Problem**:

Create a function that will merge two arrays and return the result as a new array

//solution

var ar1 = [1, 2, 3];

var ar2 = [4, 5, 6];

varar = mergeArrays(ar1, ar2);

console.log(ar);

functionmergeArrays(ar1, ar2)

{

var result = [];

for(var el of ar1)

{

result.push(el);

}

for(var el of ar2){

result.push(el)

}

return result;

}

**Problem**:

Calculate the sum of numbers received in a comma delimited string

//solution

console.log(sumCSV("1.5, 2.3, 3.1, 4, 5.5, 6, 7, 8, 9, 10.9"));

functionsumCSV(s){

varsep=s.split(",");

var sum=0;

for (vari=0;i<sep.length;i++){

sum += parseFloat(sep[i]);

}

return sum;

}