**/ 1.Do the below program in anonymous function and IIFE**

**// a.Print the Odd numbers in an Array**

**// Anonymous function**

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

var Odd = [];

var OddNumber = function (arr){

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

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

Odd.push(arr[i])

}

}

return Odd;

}

console.log(OddNumber(arr));

---------------------------------------------------------------------------------

**//IIFE function**

(function (arr){

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

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

Odd.push(arr[i])

}

}

console.log(Odd);

})(arr)

------------------------------------------------------------------------------

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

**// Anonymous function**

var TitleCase = function titlecase(str){

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

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

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

}

return str.join(' ');

}

console.log(TitleCase("gUVI gEEK"));

----------------------------------------------------------------------------------

**// IIFE function**

var str = "guvi GeeK";

(function titlecase(str){

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

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

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

}

console.log(str.join(' '));

})(str);

----------------------------------------------------------------------------------

**// C.Sum of all numbers in an array**

**// Anonymous function**

let arr = [12, 3, 4, 15];

var Sum\_Array=function sum(arr) {

let sum = 0;

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

sum += arr[i];

return sum;

}

console.log(Sum\_Array(arr));

-------------------------------------------------------------------------------

**// IFFE function**

(function (arr) {

let sum = 0;

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

sum += arr[i];

console.log(sum)

} )(arr);

--------------------------------------------------------------------------------

**// d. Return all the prime numbers in an array**

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

var PrimeNumber = function isprime (num){

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

if(num % i === 0){

return false;

}

} return num >1;

};

console.log(array.filter(PrimeNumber));

**// IIFE function**

(function isprime (num){

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

if(num % i === 0)

return false;

}

}

return num >1;

})

console.log(array.filter(isprime));

**//-------------------------------------------------------------------------------------------------------------**

**// f.Return median of two sorted arrays of same size**

**// Anonymous function**

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

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

var n1 = ar1.length;

var n2 = ar2.length;

var Median = function median(ar1,ar2,n){

var i = 0;

var j = 0;

var count;

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[0];

break;

}

if(ar1[i] <= ar2[j])

{

m1 = m2;

m2 = ar1[i];

i++;

}

else{

m1 = m2;

m2 = ar2[j];

j++;

}

}

return (m1 + m2)/2;

}

if (n1 == n2)

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

else

console.log("Doesn't work for arrays of unequal size");

//--------------------------------------------------------------------------------------------

**// g.remove duplicates from an array**

**// // Anonymous function**

var getUnique = function getUnique(arr){

let uniqueArr = [];

for(let i of arr) {

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

uniqueArr.push(i);

}

}

console.log(uniqueArr);

}

const array = [1, 2, 3, 2, 3];

getUnique(array);

**// // IFFE function**

var arr = [1, 2, 3, 2, 3]

let uniqueArr = [];

(function getUnique(arr){

for(let i of arr) {

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

uniqueArr.push(i);

}

}

console.log(uniqueArr);

})(arr);

**//--------------------------------------------------------------------------------------------**

**// h.Rotate an array by k times**

**// Anonymous function**

var ArrayRotate= function arrayRotate(arr, reverse) {

if (reverse) arr.unshift(arr.pop());

else arr.push(arr.shift());

return arr;

}

console.log(ArrayRotate([1, 2, 3, 4, 5]));

**// IIFE function**

function arrayRotate(arr, reverse) {

if (reverse) arr.unshift(arr.pop());

else arr.push(arr.shift());

return arr;

}

console.log(arrayRotate([1, 2, 3, 4, 5]));

**//-------------------------------------------------------------------------------------------**

2.

var num =10;

function addFive(num){

return num+5

}

var result = addFive(num);

console.log(result);

// --------------------------------------------------------------------------------

var num = 5;

function getOpposite(num) {

if(Number.isInteger(num)){return num\*(-1);}

else{return-1}

}

var result = getOpposite(num)

console.log(result)

// --------------------------------------------------------------------------------

var min = 5;

function toseconds (min){

return (min\*60);

}

var result= toseconds(min);

console.log(result);

// ---------------------------------------------------------------------------------

var mystr = "5";

function toInteger(mystr){

return (parseInt(mystr));

}

var result = toInteger(mystr);

console.log(result);

// ------------------------------------------------------------------------------

var myint = -3;

function nextNumber(myint){

return (myint+1);

}

var result = nextNumber(myint);

console.log(result);

// -------------------------------------------------------------------------------

var arr = [80,5,100];

function getFirstElement (arr){

return (arr[0]);

}

var result = getFirstElement(arr);

console.log(result);

// ---------------------------------------------------------------------------------

var arr = [2,10,24];

function hourToSeconds (arr){

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

arr[i]=arr[i]\*3600;

}

return arr

}

var result = hourToSeconds(arr);

console.log(result);

// ---------------------------------------------------------------------------------

function findPerimeter(num1,num2){

return (num1\*2)+(num2\*2);

}

var result = findPerimeter(6,7);

console.log(result)

// -------------------------------------------------------------------------------

function lessThan100(num1,num2){

if(num1+num2 <100){

return true

}

else {

return false

}

}

var result = lessThan100(83,34);

console.log(result);

// -----------------------------------------------------------------------------

function CountAnimals (tur,horse,pigs){

var a = 2\*tur;

var b = 4\*(horse+pigs);

return a+b

}

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

console.log(legs)

// -------------------------------------------------------------------------------

function Integer\_is\_Divisible\_By\_Five (num){

if(parseInt(num%5) === 0 ){

return true;

}else {

return false;

}

}

var Integer\_Divisible = Integer\_is\_Divisible\_By\_Five(5);

console.log(Integer\_Divisible);

// ---------------------------------------------------------------------------------

function isEven(num){

if(parseInt(num)===num){

if(num%2 === 0){return true}

else{return false}

}

else{return-1}

}

var Even = isEven("11h");

console.log(Even);

// ---------------------------------------------------------------------------------

function areBothOdd(num,num1){

if((num%2 !== 0) &&(num1%2 !==0))

{return true}

else{return false}

}

var BothOdd = areBothOdd(0,0);

console.log(BothOdd);

// // ---------------------------------------------------------------------------------

function getFullName(firstName, lastName){

if((firstName !== '') && (lastName !== '')){ return firstName +' '+lastName}

else{return firstName + lastName}

}

var FullName = getFullName("GUVI","GEEK");

console.log(FullName);

// ---------------------------------------------------------------------------------

function getLengthOfWord(word1){

if(typeof(word1) === String){return word1.length}

else{return -1}

}

var GetLengthWord = getLengthOfWord("guvi");

console.log(GetLengthWord);

// ---------------------------------------------------------------------------------

function getDistance(x1,y1,x2,y2){

var d1 =(x1-x2)\*(x1-x2); d2 = (y1-y2)\*(y1-y2);

return d1+d2

}

console.log(getDistance(100,100,400,300))

// ---------------------------------------------------------------------------------

function getNthElement(arr,n){

if(arr.length >0){

return arr [n-0];

}else{return undefined}

}

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

// ---------------------------------------------------------------------------------

function getLastElement(arr){

if(arr.length >0){

return arr[arr.length-1]; }

else{return -1}

}

console.log(getLastElement([4]))

//---------------------------------------------------------------------------------

var obj = {mykey:"value"};

function getProperty(obj,mykey){

obj.key=true;return obj

}

console.log(getProperty(obj))

// ---------------------------------------------------------------------------------

// Find the Maximum number in an array of number

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

function getMaxOfArray(arr) {

return Math.max.apply(null,arr);

}

var max = getMaxOfArray(arr);

console.log(max);

// ---------------------------------------------------------------------------------

**3.** // **Do the below programs in arrow functions**

**// a.Print odd numbers in an array**

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

var Odd = [];

var OddNumber = (arr)=>{

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

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

Odd.push(arr[i]);

}

}

return Odd;

};

console.log(OddNumber(arr));

//--------------------------------------------------------------------------------------

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

var TitleCase = (str)=>{

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

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

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

}

return str.join(' ');

};

console.log(TitleCase("gUVI gEEk"));

**// c.Sum of all numbers in an Array**

let arr = [12, 3, 4, 15];

var Sum\_Array = (arr)=>{

let sum = 0;

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

sum += arr[i];

return sum;

};

console.log(Sum\_Array(arr));

**// d. Return all the prime numbers in an array**

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

var PrimeNumber =(num)=>{

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

if(num % i === 0){

return false;

}

} return num >1;

};

console.log(array.filter(PrimeNumber));

//-----------------------------------------------------------------------------------