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

Code: Anonymous function

let odd = function(arr){

    let odd=[];

    for(let i=0;i<arr.length;i++){

        if(arr[i]%2 != 0){

            odd.push(arr[i])

        }

    }

    return odd;

};

console.log(`odd nos in an array : ${odd([1,2,3,4,5,6])}`)

Output: odd nos in an array : 1,3,5,7,9

Code: IIFE function

(function(arr){

    let odd=[];

    for(let i=0;i<arr.length;i++){

        if(arr[i]%2 != 0){

            odd.push(arr[i])

        }

    }

    console.log(`${odd.join(" ")}`)

    })

    ([1,2,3,4,5,6,7,8,9]);

Output: 1 3 5 7 9

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

Code: Anonymous function

let str = function(arr){

    let x = [];

    for(let i=0;i<arr.length;i++){

        arr[i] = arr[i].split('');

        arr[i][0]=arr[i][0].toUpperCase();

        arr[i]=arr[i].join('');

        x.push(arr[i])

    }

    return x.join(" ");

};

console.log(str(["hello","how","are","you"]));

Output: Hello How Are You

Code: IIFE Function

(function(arr){

    let s = [];

    for(let i=0;i<arr.length;i++){

        arr[i] = arr[i].split('');

        arr[i][0]=arr[i][0].toUpperCase();

        arr[i]=arr[i].join('');

        s.push(arr[i])

    }

    console.log(`${s.join(" ")}`)

})

(["hello","how","are","you"]);

Output: Hello How Are You

* 1. Sum of all numbers in an array

Code: Anonymous Function

let sum = function(arr){

    let sum=0;

    for(let i=0;i<arr.length;i++){

        sum+=arr[i]

    }

    console.log(`${sum}`);

};

sum([1,2,3,4,5,6,7,8,9]);

Output: 45

Code: IIFE Function

(function(arr){

    let sum=0;

    for(let i=0;i<arr.length;i++){

        sum+=arr[i]

    }

    console.log(`${sum}`);

})([1,2,3,4,5,6,7,8,9]);

Output: 45

* 1. Return all the prime numbers in an array

Code: Anonymous Function

let prime = function(arr){

    let temp =[];

    for(let i=0;i<arr.length;i++){

        var flag=0;

        if(arr[i]==1 ){

            flag=1;

        }else{

        for(let j=2;j<arr[i];j++){

            if(arr[i]%j===0){

                flag=1;

                break;

            }

        }

        }

        if(flag===0){temp.push(arr[i])}

    }

    console.log(`Prime Nos: ${temp.join(" ")}`)

}

prime([1,2,3,4,5,6,7,8,9]);

Output: Prime Nos: 2 3 5 7

Code: IIFE Function

(function(arr){

    let temp =[];

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

            var flag=0;

            if(arr[i]==1 ){

                flag=1;

            }else{

            for(let j=2;j<arr[i];j++){

                if(arr[i]%j===0){

                    flag=1;

                    break;

                }

            }

            }

            if(flag===0){temp.push(arr[i])}

        }

        console.log(`Prime Nos: ${temp.join(" ")}`)

    })([1,2,3,4,5,6,7,8,9]);

Output: Prime Nos: 2 3 5 7

* 1. Return all the palindromes in an array

Code: Anonymous Function

let palindrome = function(arr){

    let temp=[];

    for(let i=0;i<arr.length;i++){

        let s =arr[i].toString();

        s= s.split('').reverse().join('');

        if(s==arr[i]){

            temp.push(arr[i])

        }

    }

    console.log(`Palindrome: ${temp.join(" ")}`);

};

palindrome([121,"Saniya",12321,"did","cannot",258])

Output: Palindrome: 121 12321 did

Code: IIFE Function

(function(arr){

    let temp=[];

    for(let i=0;i<arr.length;i++){

        let s =arr[i].toString();

        s= s.split('').reverse().join('');

        if(s==arr[i]){

            temp.push(arr[i])

        }

    }

    console.log(`Palindrome: ${temp.join(" ")}`);

})

([121,"Saniya",12321,"did","cannot",258]);

Output: Palindrome: 121 12321 did

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

Code: Anonymous function

let median = function(arr1, arr2, 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 = arr2[0];

            break;

        }

        else if(j==n){

            m1 = m2;

            m2 = arr1[0];

            break;

        }

        if(arr1[i]<=arr2[j]){

            m1 = m2;

            m2 = arr1[i];

            i++;

        }

        else{

            m1 = m2;

            m2 = arr2[j];

            j++

        }

    }

    return (m1+m2)/2;

}

var arr1 = [10,20,30,40,50];

var arr2 = [5,10,15,20,25];

var n1 = arr1.length;

var n2 = arr2.length;

if(n1==n2)

console.log(`Median: ${median(arr1, arr2, n1)}`);

else

console.log("Arrays are not of same size");

Output: Median is 20

Code: IIFE function

(function(arr1, arr2, 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 = arr2[0];

            break;

        }

        else if(j==n){

            m1 = m2;

            m2 = arr1[0];

            break;

        }

        if(arr1[i]<=arr2[j]){

            m1 = m2;

            m2 = arr1[i];

            i++;

        }

        else{

            m1 = m2;

            m2 = arr2[j];

            j++

        }

    }

    return (m1+m2)/2;

});

var arr1 = [10,20,30,40,50];

var arr2 = [5,10,15,20,25];

var n1 = arr1.length;

var n2 = arr2.length;

if(n1==n2)

console.log(`Median: ${(arr1, arr2, n1)}`);

else

console.log("Arrays are not of same size");

Output: Median is 20

* 1. Remove duplicates from an array

Code: Anonymous Function

let array = function(arr){

    let x = new Set(arr);

    let str=[]

    x.forEach(function(value){

        str.push(value);

    });

    console.log(`Array with no repetitive elements: ${str}`);

    };

    array([1,2,2,3,3,3,4,4,4,5,5])

Output: Array with no repetitive elements: 1,2,3,4,5

Code: IIFE Function

(function(arr){

    let x = new Set(arr);

    let str=[]

    x.forEach(function(value){

        str.push(value);

    });

    console.log(`Array with no repetitive elements: ${str}`)

})

([1,2,2,3,3,3,4,4,4,5,5]);

Output: Array with no repetitive elements: 1,2,3,4,5

* 1. Rotate an array by k times

Code: Anonymous function

let rotate = function(arr,k){

    let temp=[];

    for(let i=0;i<k;i++){

        temp.push(arr.pop());

    }

    arr = temp.reverse().concat(arr)

    console.log(`Rotating array by ${k} times : ${arr}`)

    }

    rotate([1,2,3,4,5,6],2)

Output: 5,6,1,2,3,4

Code: IIFE function

(function(arr,k){

    let temp=[];

    for(let i=0;i<k;i++){

        temp.push(arr.pop());

    }

    arr = temp.reverse().concat(arr)

    console.log(`${arr}`)

})

([1,2,3,4,5,6],4);

Output: 3,4,5,6,1,2

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

Code:

odd = (arr) => {

    let odd=[];

    for(let i=0;i<arr.length;i++){

        if(arr[i]%2 != 0){

            odd.push(arr[i])

        }

    }

    return odd;

};

console.log(`${odd([1,2,3,4,5,6,7,8,9]).join(" ")}`)

Output: 1 3 5 7 9

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

Code:

str = (arr) =>{

    let x = [];

    for(let i=0;i<arr.length;i++){

        arr[i] = arr[i].split('');

        arr[i][0]=arr[i][0].toUpperCase();

        arr[i]=arr[i].join('');

        x.push(arr[i])

    }

    return x.join(" ");

}

console.log(`${str(["hi","how","are","you"])}`)

Output: Hi How Are You

* 1. Sum of all numbers in an array

Code:

sum = (arr) => {

    let sum=0;

    for(let i=0;i<arr.length;i++){

        sum+=arr[i]

    }

    console.log(`${sum}`);

}

sum([1,2,3,4,5,6,7,8,9]);

Output: 45

* 1. Return all the prime numbers in an array

Code:

prime = (arr) => {

    let temp = [];

    for(let i=0;i<arr.length;i++){

        var flag=0;

        if(arr[i]==1 ){

            flag=1;

        }else{

        for(let j=2;j<arr[i];j++){

            if(arr[i]%j===0){

                flag=1;

                break;

            }

        }

        }

        if(flag===0){temp.push(arr[i])}

    }

    console.log(`Prime Nos: ${temp.join(" ")}`)

}

prime([1,2,3,4,5,6,7,8,9])

Output: Prime Nos: 2 3 5 7

* 1. Return all the palindromes in an array

Code:

palindrome = (arr) => {

    let temp=[];

    for(let i=0;i<arr.length;i++){

        let s =arr[i].toString();

        s= s.split('').reverse().join('');

        if(s==arr[i]){

            temp.push(arr[i])

        }

    }

    console.log(`Palindromes: ${temp.join(" ")}`);

}

palindrome([121,"Saniya",12321,"did","cannot",258])

Output: Palindromes: 121 12321 did