# DAY 05

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

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

let odd = arr.filter(function(num){

    return num%2 !== 0;

})

console.log(odd);

/\*----------OUTPUT-------------

[ 1, 3, 5, 7, 9 ]

\*/

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

let arr = ['kiran', 'baby', 'guvi'];

let cap = arr.map(function(letter){

    return letter[0].toUpperCase() + letter.slice(1).toLowerCase();

})

console.log(cap);

/\*----------OUTPUT-------------

[ 'Kiran', 'Baby', 'Guvi' ]

\*/

1. Sum of all numbers in an array

let arr = [1, 2, 3, 4, 5, 6, 7];

let sum = arr.reduce(function(num1, num2){

    return num1+num2;

})

console.log(`sum: ${sum}`);

/\*----------OUTPUT-------------

sum: 28

\*/

1. Return all the prime numbers in an array

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

let prime = arr.filter(function(num){

    for(let i=2; i<num; i++){

        if(num%i === 0){

            return false;

        }

    }

    return num !== 1;

});

console.log(prime);

/\*----------OUTPUT-------------

[ 2, 3, 5, 7 ]

\*/

e. Return all the palindromes in an array

let arr = ['121', 'ball', 'aba'];

let palin = arr.filter(function(str){

    let rev = str.split('').reverse().join('');

    if(str === rev)

        return str;

})

console.log(palin);

/\*----------OUTPUT-------------

[ '121', 'aba' ]

\*/

1. Return median of two sorted arrays of same size

let arr1 = [1, 5, 8];

let arr2 = [2, 4, 6];

let pushArray = function(){

    for(i of arr2){

        arr1.push(i);

    }

}

let mergeArray = function(){

    arr1 = arr1.sort(function(a, b){

        return a-b;

    });

}

let median = function(){

    if(arr1.length%2 !== 0){

        return "Sorry array sizes must be the same";

    }

    else{

        let righttMidIndex = arr1.length/2;

        let leftMidIndex = righttMidIndex - 1;

        let midIndexValue = (arr1[leftMidIndex] + arr1[righttMidIndex])/2;

        return midIndexValue;

    }

}

pushArray();

mergeArray();

console.log("Median: ", median());

/\*----------OUTPUT-------------

Median:  4.5

\*/

1. Remove duplicates from an array

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

let rmDuplicate = arr.filter(function(value, index){

    return arr.indexOf(value) == index ;

})

console.log(rmDuplicate);

/\*----------OUTPUT-------------

[ 1, 2, 3, 4, 5 ]

\*/

1. Rotate an array by k times

let arr = [1, 2, 3, 4, 5, 6]

let rotate = function(array, k){

    let temp = [];

    let len = array.length;

    let i = 0;

    k = k % len;

    while(i<len){

        temp[(i+k)%len] = array[i];

        i++;

    }

    return temp;

}

console.log(rotate(arr, 4));

/\*----------OUTPUT-------------

[ 3, 4, 5, 6, 1, 2 ]

\*/

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

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

let odd = () => arr.filter( num =>  num%2 !== 0)

console.log(odd());

/\*----------OUTPUT-------------

[ 1, 3, 5, 7, 9 ]

\*/

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

let arr = ['kiran', 'baby', 'guvi'];

let cap = arr.map(letter => letter[0].toUpperCase() + letter.slice(1).toLowerCase())

console.log(cap);

/\*----------OUTPUT-------------

[ 'Kiran', 'Baby', 'Guvi' ]

\*/

1. Sum of all numbers in an array

let arr = [1, 2, 3, 4, 5, 6, 7];

let sum = arr.reduce((num1, num2) => {

    return num1+num2;

})

console.log(`sum: ${sum}`);

/\*----------OUTPUT-------------

sum: 28

\*/

1. Return all the prime numbers in an array

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

let prime = arr.filter((num) => {

    for(let i=2; i<num; i++){

        if(num%i === 0){

            return false;

        }

    }

    return num !== 1;

});

console.log(prime);

/\*----------OUTPUT-------------

[ 2, 3, 5, 7 ]

\*/

1. Return all the palindromes in an array

let arr = ['121', 'ball', 'aba'];

let palin = arr.filter((str) => {

    let rev = str.split('').reverse().join('');

    if(str === rev)

        return str;

})

console.log(palin);

/\*----------OUTPUT-------------

[ '121', 'aba' ]

\*/