**Day 4 task**

1.Do the below programs in anonymous function & IIFE

* 1. Print odd numbers in an array
  2. Convert all the strings to title caps in a string array
  3. Sum of all numbers in an array
  4. Return all the prime numbers in an array
  5. Return all the palindromes in an array
  6. Return median of two sorted arrays of the same size.
  7. Remove duplicates from an array
  8. Rotate an array by k times

2. Do the below programs in arrow functions.

1. Print odd numbers in an array
2. Convert all the strings to title caps in a string array
3. Sum of all numbers in an array
4. Return all the prime numbers in an array
5. Return all the palindromes in an array

1)

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

**Answer**:

**Anonymous function:**

var odd=function(arr){

    for(var i=0;i<arr.length;i++){

        if(arr[i]%2!==0){

            console.log(arr[i])

        }

    }

}

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

**IIFE function:**

(function(arr){

    for(var i=0;i<arr.length;i++){

        if(arr[i]%2!==0){

            console.log(arr[i])

        }

    }

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

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

**Answer**:

**Anonymous function:**

var cap=function(str){

    str=str.toLowerCase().split(" ")

   for(i=0;i<str.length;i++){

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

    }

    console.log(str.join(" "))

}

cap("hello world")

**IIFE function:**

(function(str){

       str=str.toLowerCase().split(" ")

   for(i=0;i<str.length;i++){

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

   }

   console.log (str.join(" "))

})("hello world")

**c.** **Sum of all numbers in an array**

**Answer:**

**Anonymous:**

sum=0

var add=function(arr){

    for(i=0;i<arr.length;i++){

        sum=arr[i]+sum

    }

    console.log(sum)

}

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

**IIFE:**

(function(arr){

    var sum=0

    for(i=0;i<arr.length;i++){

        sum=arr[i]+sum

    }

    console.log(sum)

})

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

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

**Answer:**

**Anonymous:**

var prime=function(arr){

    arr=arr.filter((number)=>{

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

if(number%i===0) return false

        }

        return true

    })

    console.log(arr)

}

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

**IIFE:**

(function(arr){

    arr=arr.filter((number)=>{

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

if(number%i===0) return false

        }

        return true

    })

    console.log(arr)

})([2,3,4,5,6,7])

**e.** **Return all the palindromes in an array**

**Answer:**

**Anonymous:**

var palindrome=function(arr){

    for(i=0;i<arr.length;i++){

var arr1=arr[i].split("").reverse().join("")

if(arr1==arr[i]){

    console.log(arr[i])

}

}

}

palindrome(["madam","malayalam","hello"])

**IIFE:**

(function(arr){

    for(i=0;i<arr.length;i++){

        arr1=arr[i].split("").reverse().join("")

        if(arr1==arr[i]){

            console.log(arr[i])

        }

        }

})(["madam","malayalam","hello"])

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

**Answer:**

**Anonymous:**

var arr1=[1,2,3,4]

var arr2=[6,7,8,9]

var arr3=(arr1.concat(arr2))

var n=arr3.length

var median=function(){

if(n%2==0){

    console.log((arr3[n/2]+arr3[n/2-1])/2)

}

else{

    console.log(Math.floor(n/2))

}

}

median()

**IIEF:**

(function(arr){

    var arr1=[1,2,3,4]

    var arr2=[6,7,8,9]

    var arr3=(arr1.concat(arr2))

var n=arr3.length

if(n%2==0){

    console.log((arr3[n/2]+arr3[n/2-1])/2)

}

else{

    console.log(Math.floor(n/2))

}

})()

g. **Remove duplicates from an array**

**Answer:**

**Anonymous:**

**Method 1:**

var dup=function(arr){

        arr=[...new Set(arr)]

    console.log(arr)

}

dup([1,2,2,3,3,4])

**Method 2:**

var dup=function(arr){

    var newarray=arr.filter((val,index)=>arr.indexOf(val)==index)

    console.log(newarray)

}

dup([1,2,2,3,3,4])

**IIFE:**

**Method:1**

(function(arr){

    arr=[...new Set(arr)]

    console.log(arr)

})([1,2,2,3,3,4])

**Method 2:**

(function(arr){

    var newarray=arr.filter((val,index)=>arr.indexOf(val)==index)

    console.log(newarray)

})([1,2,2,3,3,4])

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

**Answer:**

**Anonymous:**

var k=3

var rotate=function(arr){

    for(i=0;i<k;i++){

        arr.unshift(arr.pop())

    }

    console.log(arr)

}

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

**IIFE:**

(function(arr){

    var k=3

    for(i=0;i<k;i++){

        arr.unshift(arr.pop())

    }

    console.log(arr)

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

**2)**

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

**Answer:**

var odd=(arr)=>{for(var i=0;i<arr.length;i++){

    if(arr[i]%2!==0){

        console.log(arr[i])

    }

}

}

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

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

**Answer:**

var cap=(str)=>{

    str=str.toLowerCase().split(" ")

   for(i=0;i<str.length;i++){

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

    }

    console.log(str.join(" "))

}

cap("hello world")

**c. Sum of all numbers in an array**

**Answer:**

var add=(arr)=>{

    sum=0

    for(i=0;i<arr.length;i++){

        sum=arr[i]+sum

    }

    console.log(sum)

}

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

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

var prime=(arr)=>{

    arr=arr.filter((number)=>{

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

if(number%i===0) return false

        }

        return true

    })

    console.log(arr)

}

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

e. Return all the palindromes in an array

palindrome=(arr)=>{

    for(i=0;i<arr.length;i++){

        var arr1=arr[i].split("").reverse().join("")

        if(arr1==arr[i]){

            console.log(arr[i])

        }

        }

}

palindrome(["madam","malayalam","hello"])