DAY-5: (Functions- Anonymous & IIFE)

1. Do the below programs in ANONYMOUS function:
   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

1) a) Print odd numbers in an array:

var oddNumbers = function(array1){

let temp=[];

    for (var i=0;i<array1.length;i++){

        if (array1[i]%2!==0){

             temp.push(array1[i]);

        }

    }

    return temp;

}

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

Output: [1,3,5]

1) b) Convert all the strings to title caps in a string array:

var titlecaps= function (text){

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

    for(var i=0;i<text.length;i++){

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

    }

    return text.join(' ');

}

console.log(titlecaps("Zen class guvi b32 batch switch"));

Output: Zen Class Guvi B32 Batch Switch

1) c) Sum of all numbers in an array:

var sumArray= function(array2){

    let sum=0;

    for(var i=0;i<array2.length;i++){

        sum=sum+array2[i];

    }

    return sum;

}

console.log(sumArray([10,20,30,40]));

Output: 100

1) d) Return all the prime numbers in an array:

var primeNum=[];

var prime=function(num){

    if(num==1){

        return false;

    }else{

    for(var i=2;i<=num/2;i++){

        if(num%i==0){

            return false;

        }

    }

    return true;

}

}

console.log(prime(17));

console.log(prime(18));

var array4=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15];

for(var index=0;index<array4.length;index++){

    if(prime(array4[index])){

        primeNum.push(array4[index]);

    }

}

console.log(primeNum);

Output: true

false

[2, 3, 5, 7, 11, 13]

1) e) 1. Return all the palindromes in an array:

var palindrome = function(array5){

    var arrayLength=array5.length;

    if(arrayLength%2==0){

        return false;

    }else{

        for(var i=0;i<arrayLength;i++){

            if(array5[i]!==array5[arrayLength-i-1]){

                return false;

            }

        }

        return true;

    }

}

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

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

console.log(palindrome([1,2,2,1]));

Output: true

false

false

1)f) Return median of two sorted arrays of the same size:

var 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 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));

}

Output: 16

1) g) Remove duplicates from an array:

let array5 = ['A', 'B', 'A', 'C', 'B'];

var duplicate=function (array5){

let uniqueChars = [...new Set(array5)];

return uniqueChars;

}

console.log(duplicate(array5));

console.log(duplicate(['p', 'k', 'p', 'o', 'k']));

Output: ['A', 'B', 'C']

['p', 'k', 'o']

1) h) Rotate an array by k times:

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

var rotateArray1 = function(nums, k) {

    for (let i = 0; i < k; i++) {

        nums.unshift(nums.pop());

    }

    return nums;

  }

console.log(rotateArray1(nums,2));

console.log(rotateArray1(nums,1));

Output: [4, 5, 1, 2, 3]

[3, 4, 5, 1, 2]

1. Do the below programs using IIFE function:
   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

(function (array1){

    var temp=[];

    for (var i=0;i<array1.length;i++){

        if (array1[i]%2!==0){

             temp.push(array1[i]);

        }

    }

    console.log(temp);

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

(function (text){

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

    for(var i=0;i<text.length;i++){

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

    }

    console.log( text.join(' '));

})("Zen class guvi b32 batch switch");

(function(array2){

    let sum=0;

    for(var i=0;i<array2.length;i++){

        sum=sum+array2[i];

    }

    console.log( sum );

})([10,20,30,40]);

(function(array5){

    var arrayLength=array5.length;

    if(arrayLength%2==0){

        return false;

    }else{

        for(var i=0;i<arrayLength;i++){

            if(array5[i]!==array5[arrayLength-i-1]){

                console.log (false);

            }

        }

        console.log (true);

    }

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

let array5 = ['A', 'B', 'A', 'C', 'B'];

(function (array5){

let uniqueChars = [...new Set(array5)];

console.log (uniqueChars);

})(array5);

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

(function (nums, k) {

    for (let i = 0; i < k; i++) {

        nums.unshift(nums.pop());

    }

    console.log (nums);

})(nums,2);