# TASK 3

## 1. Print odd numbers in an array

```
//Anonymous function
var array = [1,2,3,4,5,6,7];
var odd = function(){
    var str = "";
    for(var i in array){
        if(array[i]%2!==0)
        str = str + " " + array[i];
    }
    console.log(str);
}
odd(array);

//IIFE function
(function (){
    var string = "";
    for(var i in array){
        if(array[i]%2!==0)
        string = string + " " + array[i];
    }
    console.log(string);
})
(array);
```

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

```
//Anonymous function
var array = "heyya how are you";
var titleCaps = function(){
    var str = array.toLowerCase().split(" ");
    for(var i in str){
        str[i] = str[i][0].toUpperCase() + str[i].slice(1);
    }
    console.log(str);
}
titleCaps(array);
```

```
//output is [ 'Heyya', 'How', 'Are', 'You' ]

//IIFE function
(function (){
    var string = array.toLowerCase().split(" ");
    for(var i in string){
        string[i] = string[i][0].toUpperCase() + string[i].slice(1);
    }
    console.log(string);
})
(array);
```

### 3. Sum of all numbers in an array

```
//Anonymous function
var array = [1,2,3,4,5];
var sum = function() {
    var add = 0;
    for(var i in array){
        add += parseInt(array[i]);
    }
    console.log(add);
}
sum(array);

//IIFE function
(function(){
    var addition = 0;
    for(var i in array){
        addition += parseInt(array[i]);
    }
    console.log(addition);
})
(array);
```

### 4. Return all the prime numbers in an array

```
//Anonymous function
var prime = function (input) {
    var num = [];
    for (var i in input) {
        var count = 0;
        for (var j = 1; j<=input[i]; j++) {
            if (input[i] % j === 0) {
                count = count + 1;
            }
        }
        if (count === 2) {
            num.push(input[i]);
        }
    }
    return num;
};
console.log(prime([1,2,3,4,5,6,7,8,9]));

//IIFE function
(function(input) {
        var num = [];
    for (var i in input) {
        var count = 0;
        for (var j = 1; j<=input[i]; j++) {
            if (input[i] % j === 0) {
                count = count + 1;
            }
        }
        if (count === 2) {
            num.push(input[i]);
        }
    }
    return console.log(num);
})
([1,2,3,4,5,6,7,8,9]);
//output is [ 2, 3, 5, 7 ]
```

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

```
//Anonymous function
var palindrome = function(array){
    var str = "";
    var rev = "";
    for(var i in array){
        rev = array[i].split("").reverse().join("");
        if(rev===array[i]){
        str = str + " " + array[i];
        }
    }
    return str;
}
palindrome([);

//IIFE function
(function(array){
    var string = "";
    var rev = "";
    for(var i in array){
        rev = array[i].split("").reverse().join("");
        if(rev===array[i]){
        string = string + " " + array[i];
        }
    }
    return console.log(string);
})
(["hello", "radar"]);
//output is radar
```

### 6. Return median of two sorted arrays of same size

```
//Anonymous function
var median = function(array1, array2){
    var median = 0;
    for(var i in array1){
        array1.push(array2[i]);
    }
    array1.sort();
    console.log(array1);
```

```
    var number1 = parseFloat(array1[(array1.length/2)-1]);
    var number2 = parseFloat(array1[array1.length/2]);
    median = (number1+number2)/2;
    console.log(median);
}
median([3,2,1,4,2],[9,2,6,3,1]);
//output is 2.5

//IIFE function
(function (arr1, arr2){
    var median = 0;
    for(var i in arr1){
        arr1.push(arr2[i]);
    }
    arr1.sort();
    for(i in arr1){
        for(var j=i+1; j<arr1.length;j++){
            if(arr1[i]>arr1[j])
            arr1[j]=arr1[i];
        }
    }
    console.log(arr1);
    var number1 = parseFloat(arr1[(arr1.length/2)-1]);
    var number2 = parseFloat(arr1[arr1.length/2]);
    median = (number1+number2)/2;
    console.log(median);
})
([1,2,8,3,6],[8,4,6,1,5]);
//output is 4.5
```

### 7. Remove duplicates from an array

```
//Anonymous function
var arr = [1,2,8,3,6,1,2];
let uniqueArr = [];
var duplicates = function(){
    for(let i of arr) {
        if(uniqueArr.indexOf(i) === -1) {
            uniqueArr.push(i);
        }
```

```
    }
    console.log(uniqueArr);

}
duplicates(arr);
// output is [ 1, 2, 8, 3, 6 ]

//IIFE function
(function (){
    for(let i of arr) {
        if(uniqueArray.indexOf(i) === -1) {
            uniqueArray.push(i);
        }
    }
    console.log(uniqueArray);
})
(arr);
```

### 8. Rotate an array by k times and return the rotated array

```
// anonymous function
var rotate = function(num, k) {
    for (let i = 0; i < k; i++) {
        num.unshift(num.pop());
    }
    return num;
};
console.log(rotate([1,2,3,4,5], 2));
// output is [ 4, 5, 1, 2, 3 ]

//IIFE function
var array = [1,2,3,4,5];
var k =3;
(function() {
    for(var i=0; i<k; i++){
        array.unshift(array.pop());
    }
    console.log(array);
})
```

```
();
// output is [ 3, 4, 5, 1, 2 ]
```