1. **DO THE BELOW PROGRAMS IN ANONYMOUS FUNCTION & IIFE**

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

a.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        let odd=function(arr){
                        console.log(arr)
                        for(var i=0;i<arr.length;i++)
                        {
                          if(arr[i]%2!==0)
                              console.log(arr[i]);
                        }
        }
        let srr=[1,2,3,4,5,6,7,8];
        odd(srr);
    </script>
</body>
</html>
```

a.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
            function(arr){
                        console.log(arr)
                        for(var i=0;i<arr.length;i++)
                        {
                          if(arr[i]%2!==0)
                              console.log(arr[i]);
                        }
                    }
        )([1,2,3,4,5,6,7,8])
     </script>
</body>
```

```
</html>
```

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

b.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        var titleCase = function(str){
        var newStr = str.split(' ').map(w => w[0].toUpperCase() +
w.substring(1).toLowerCase()).join(' ');
        console.log(newStr);}
        let str="hello welcome to guvi";
        titleCase(str);
    </script>
</body>
</html>
```

b.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
        function(str){
        var newStr = str.split(' ').map(w => w[0].toUpperCase() +
w.substring(1).toLowerCase()).join(' ');
        console.log(newStr);}
        )("hello welcome to guvi");
    </script>
</body>
</html>
```

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

c.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>

        let sum=function(arr){
                    let sum=0;
                    console.log(arr)
                    for(var i=0;i<arr.length;i++)
                    {
                      sum=sum+arr[i];

                    }
                    console.log(sum);
                }
        sum([1,2,3,4,5,6,7,8]);
     </script>
</body>
</html>
```

c.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
            function(arr){
                    let sum=0;
                    console.log(arr)
                    for(var i=0;i<arr.length;i++)
                    {
                      sum=sum+arr[i];

                    }
                    console.log(sum);
                }
```

```
        )([1,2,3,4,5,6,7,8])
     </script>
</body>
</html>
```

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

d.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>

        let prime=function(arr){
                for(var j=0;j<arr.length;j++)
                {
                    var count=0;
                    for(var i=0;i<=arr[j];i++)
                    {
                        if(arr[j]%i==0)
                        count++;
                    }
                    if(count==2)
                        console.log(arr[j]);
                }
            }
    prime([13,22,3,17,8,6,5,10]);
</script>
</body>
</html>
```

d.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
```

```
        function(arr){
                for(var j=0;j<arr.length;j++)
                {
                    var count=0;
                    for(var i=0;i<=arr[j];i++)
                    {
                        if(arr[j]%i==0)
                        count++;
                    }
                    if(count==2)
                        console.log(arr[j]);
                }
            }
        )([2,13,22,3,17,8,6,5]);
</script>
</body>
</html>
```

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

e.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
       let palindrome=function(array){
                for(var i=0;i<array.length;i++)
                {
                    var string = array[i].split('');
                    var reverseString = string.reverse();
                    var reverse = reverseString.join('');
                    if(array[i] == reverse)
                        console.log(array[i]);
                }
            }
palindrome(["guvi","rotator","nayana","level","civic"]);
</script>
</body>
</html>
```

e.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
       (
        function(array){
                for(var i=0;i<array.length;i++)
                {
                    var string = array[i].split('');
                    var reverseString = string.reverse();
                    var reverse = reverseString.join('');
                    if(array[i] == reverse)
                        console.log(array[i]);
                }
            }
       )(["guvi","rotator","nayana","level","civic"])
</script>
</body>
</html>
```

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

f.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
let Comput=function(arr, n)
{
    if (n % 2 == 0)
    {
    var z = n / 2;
    var e = arr[z];
    var q = arr[z - 1];
    var ans = (e + q) / 2;
    return ans;
    }
    else
    {
    var z = Math.floor(n / 2);
    return arr[z];
    }
```

```
}
var arr1 = [ 7,8,9,10,11,12];
var arr2 = [ 1,2,3,4,5,6];
var i = arr1.length;
var j = arr2.length;
var l = i+j;
const arr3 = arr1.concat(arr2);
arr3.sort(function(a, b) {
return a - b;
});
Compute(arr3, l);
</script>
</body>
</html>
```

f.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
   var arr1 = [ 7,8,9,10,11,12];
    var arr2 = [ 1,2,3,4,5,6];
    var i = arr1.length;
    var j = arr2.length;
    var l = i+j;
    const arr3 = arr1.concat(arr2);
    arr3.sort(function(a, b) {
return a - b;
});
(
    function(arr, n)
{
    if (n % 2 == 0)
    {
    var z = n / 2;
    var e = arr[z];
    var q = arr[z - 1];
    var ans = (e + q) / 2;
    console.log(ans);
    }
    else
    {
    var z = Math.floor(n / 2);
    console.log(arr[z]);
```

```
    }
})(arr3, 1);
</script>
</body>
</html>
```

**g. Remove duplicates from an array**

g.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        let duplicate=function(arr){
        let j=0;
        let temp=Array();
        for(var i=0;i<arr.length;i++)
        {
            if(arr[i]!=arr[i+1])
            temp[j++]=arr[i];
        }
        console.log(temp);
    }
        duplicate([1,1,2,3,4,4,4,5,5,6,7,7,7,7,8]);
    </script>
</body>
</html>
```

g.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
            function(arr){
            let j=0;
            let temp=Array();
```

```
            for(var i=0;i<arr.length;i++)
            {
                if(arr[i]!=arr[i+1])
                temp[j++]=arr[i];
            }
            console.log(temp);
        }
        )([1,1,2,3,4,4,4,5,5,6,7,7,7,7,8]);
    </script>
</body>
</html>
```

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

h.1 using anonymous function

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        let rotate=function(arr,k){
        let temp=Array();
        let j=0;
        for(var i=k;i<arr.length;i++){
            temp[j++]=arr[i];
        }
        for(var i=0;i<k;i++)
        {
            temp[j++]=arr[i];
        }
        for(var i=0;i<arr.length;i++){
            arr[i]=temp[i];
        }
        console.log(arr)
    }
        rotate([1,2,3,4,5,6,7],2);
    </script>
</body>
</html>
```

h.2 using IIFE

```
<!DOCTYPE html>
<html lang="en">
<head>
```

```
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        (
            function(arr,k){
        let temp=Array();
        let j=0;
        for(var i=k;i<arr.length;i++){
            temp[j++]=arr[i];
        }
        for(var i=0;i<k;i++)
        {
            temp[j++]=arr[i];
        }
        for(var i=0;i<arr.length;i++){
            arr[i]=temp[i];
        }
        console.log(arr)
    })([1,2,3,4,5,6,7],2);
    </script>
</body>
</html>
```

2. **DO THE BELOW PROGRAMS IN ARROW FUNCTIONS.**

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
                let odd=(arr)=>{
                       for(var i=0;i<arr.length;i++)
                       {
                         if(arr[i]%2!==0)
                             console.log(arr[i]);
                       }
        }
        odd([1,2,3,4,5,6,7,8]);
```

```
    </script>
</body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        var titleCase = (str)=>{
        var newStr = str.split(' ').map(w => w[0].toUpperCase() +
w.substring(1).toLowerCase()).join(' ');
        console.log(newStr);}
        let str="hello welcome to guvi";
        titleCase(str);
    </script>
</body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
        let sum=(arr)=>{
                        let sum=0;
                        console.log(arr)
                        for(var i=0;i<arr.length;i++)
                        {
                          sum=sum+arr[i];
                          }
                        console.log(sum);
                    }
        sum([1,2,3,4,5,6,7,8]);
    </script>
```

```
</body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
                let prime=(arr)=>{
                for(var j=0;j<arr.length;j++)
                {
                    var count=0;
                    for(var i=0;i<=arr[j];i++)
                    {
                        if(arr[j]%i==0)
                        count++;
                    }
                    if(count==2)
                        console.log(arr[j]);
                }
            }
    prime([13,22,3,17,8,6,5,10]);
    </script>
</body>
</html>
```

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

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <script>
                let palindrome=(array)=>{
                for(var i=0;i<array.length;i++)
                {
                    var string = array[i].split('');
```

```
                    var reverseString = string.reverse();
                    var reverse = reverseString.join('');
                    if(array[i] == reverse)
                        console.log(array[i]);
                }
            }
palindrome(["guvi","rotator","nayana","level","civic"]);
    </script>
</body>
</html>
```