1. Do the below programs in anonymous function & IIFE

1)Print odd numbers in an array

```
anonymous : function(array){
            for(var i = 0 ; i< array.length ; i++){</pre>
                 if(array[i]%2!=0){
                   console.log(array[i])
                }
             }
           }
          (function(array){
IIFE:
         for(var i = 0; i< array.length; i++){</pre>
                 if(array[i]%2!=0){
                   console.log(array[i])
                 }
             }
         })([1,2,3,4])
<u>Arrow Function</u> oddNumbers = (array) => {
             for(var i = 0; i< array.length; i++){</pre>
                if(array[i]%2!=0){
                   console.log(array[i])
                }
             }
```

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

```
<u>anonymous</u>: function (str) {
              str = str.toLowerCase().split(' ');
              for (var i = 0; i < str.length; i++) {
               str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);
              return str.join(' ');
            }
IIFE : (function (str) {
              str = str.toLowerCase().split(' ');
              for (var i = 0; i < str.length; i++) {
               str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);
              }
              return str.join(' ');
            })("MY NAME IS MANIMARAN");
Arrow Function : titleCase = (str) => {
              str = str.toLowerCase().split(' ');
              for (var i = 0; i < str.length; i++) {
               str[i] = str[i].charAt(0).toUpperCase() + str[i].slice(1);
              }
              return str.join(' ');
            }
3)Sum of all numbers in an array
<u>anonymous</u>: function(array){
```

```
var sum = 0;
           for(var i = 0; i< array.length; i++){
              sum = sum + array[i];
            }
            return sum;
          }
          (function(array){
IIFE:
        var sum = 0;
           for(var i = 0 ; i< array.length ; i++){</pre>
              sum = sum + array[i];
            }
            return sum;
        })([1,2,3,4])
           sum = (array)=>{
Arrow:
        var sum = 0;
           for(var i = 0; i< array.length; i++){</pre>
              sum = sum + array[i];
            }
            return sum;
4)Return all the prime numbers in an array
  Anonymous Function:
           function(numArray){
              numArray = numArray.filter((number) => {
               for (var i = 2; i <= Math.sqrt(number); i++) {
                 if (number % i === 0) return false;
                return true;
              });
```

```
console.log(numArray);
           }
 IIFE
            function(numArray){
              numArray = numArray.filter((number) => {
               for (var i = 2; i <= Math.sqrt(number); i++) {
                if (number % i === 0) return false;
               }
               return true;
              });
              console.log(numArray);
           })([1,2,3,4])
  Arrow Function:
    primeNumber = (numArray) => {
              numArray = numArray.filter((number) => {
               for (var i = 2; i <= Math.sqrt(number); i++) {
                if (number % i === 0) return false;
               }
               return true;
              });
              console.log(numArray);
           }
                  }
5) Return all the palindromes in an array
function isPalindrome(N)
  {
```

```
let str = "" + N;
    let len = str.length;
    for (let i = 0; i < parseInt(len / 2, 10); i++)
    {
       if (str[i] != str[len - 1 - i ])
          return false;
    }
    return true;
 }
Anonymous Function: function (arr, n)
 {
    // Traversing each element of the array
    // and check if it is palindrome or not
    for (let i = 0; i < n; i++)
    {
       let ans = isPalindrome(arr[i]);
       if (ans == false)
          return false;
    }
    return true;
 }
 IIFE:
        ( function (arr, n)
    {
       // Traversing each element of the array
       // and check if it is palindrome or not
```

```
for (let i = 0; i < n; i++)
          let ans = isPalindrome(arr[i]);
          if (ans == false)
             return false;
       }
       return true;
     })([1,2,3], 3)
Arrow:
Palindrome = (arr, n) =>
  {
     // Traversing each element of the array
     // and check if it is palindrome or not
     for (let i = 0; i < n; i++)
     {
       let ans = isPalindrome(arr[i]);
       if (ans == false)
          return false;
     }
     return true;
  }
Q.Return median of two sorted arrays of same size
G.Remove duplicates from an Array
Anonymous Function: function(array){
               let dup = [...new Set(array)];
               console.log(dup);
```

```
}
IIFE:
                (function(array){
                let dup = [...new Set(array)];
                console.log(dup);
               })([1,1,2,3,4])
H.Rotate an array by K times
function reverse(array, li, ri){
while(li < ri){
    int temp = a[li];
   a[li]= a[ri];
    a[ri] = temp;
    li++;
   ri--;
  }
}
Anonymous function: function(array, k){
                 k = k % a.length;
                  if(k < 0){
                    k += a.length;
                   }
                   reverse(a, 0, a.length - k - 1);
                   reverse(a, a.length - k, a.length - 1);
                   reverse(a, 0, a.length - 1);
```

}

```
\begin{split} & \text{IIFE}: \; (\text{function}(\text{array}\;,\,k) \{ \\ & k = k\;\% \; \text{a.length}; \\ & \text{if}(k < 0) \{ \\ & k += \text{a.length}; \\ & \} \end{split} & \text{reverse}(a,\,0,\,\text{a.length}\;-\,k\;-\,1); \\ & \text{reverse}(a,\,\text{a.length}\;-\,k,\,\text{a.length}\;-\,1); \\ & \text{reverse}(a,\,0,\,\text{a.length}\;-\,1); \\ & \text{reverse}(a,\,0,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,0); \\ & \text{reverse}(a,\,0,\,0,\,
```