1. Do the below programs in anonymous function & IIFE

a.Print odd numbers in an array

```
1.  let arrayNumber = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13];
2.  let resultArray = (function (arrayNumber) {
3.
4.      return (arrayNumber.filter((item) => {
5.
6.          return item % 2 !== 0
7.
8.      }))
9.  })(arrayNumber);
10.
11. console.log("All odd numbers in an array: " + resultArray);
```

Output:

All odd numbers in an array: 1,3,5,7,9,11,13

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

```
let stringArray = ["naresh", 'did', 'not', 'study', 'well','for','hackathon']

let resultStringArray = (function (stringArray) {

    return (stringArray.map((item) => {

        return item.toUpperCase()

    }))
})(stringArray);

console.log("All upper case string in an array: " + resultStringArray)
```

Output:

All upper case string in an array: NARESH,DID,NOT,STUDY,WELL,FOR,HACKATHON

C. Sum of all numbers in an array

```
let arrayNumber = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

let resultSumArray = (function (arrayNumber) {

    return (arrayNumber.reduce((currentTotal, item) => {

        return currentTotal + item

    }, 0))
})(arrayNumber);

console.log("Sum of numbers in an array: " + resultSumArray)
```

output:

Sum of numbers in an array: 91

d. Return all the prime numbers in an array

```
let arrayNumber = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

let resultPrimeArray = (function (arrayNumber) {

    return (arrayNumber.filter((item) => {

        for (i = 2; i < item; i++) {
            if (item % i === 0)
                return false
        }

        return true

    }))
})(arrayNumber);

console.log("Prime numbers in an array: " + resultPrimeArray)
```

Output:

Prime numbers in an array: 1,2,3,5,7,11,13

e.Return all the palindromes in an array

```
let arrayNumber = [11, 20, 34, 44, 55, 60, 74, 88, 93, 101, 111, 120, 133];
let resultPallindromeArray = (function (arrayNumber) {

    return (arrayNumber.filter((item) => {

        let temp = item + ""

        if ((temp.split('').reverse().join('')) === item + "")
            return true

        return false

    }))
})(arrayNumber);

console.log("Pallindrome numbers in an array: " + resultPallindromeArray);
```

Output:

Pallindrome numbers in an array: 11,44,55,88,101,111

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

```
let arr1 = [1, 2, 3, 4, 5, 8, 10]
let arr2 = [8, 9, 10, 12, 16]

let resultMedian = function (arr1, arr2) {

    let result = []

    let lenArr1 = arr1.length

    let lenArr2 = arr2.length

    if (lenArr1 % 2 === 0) {

        console.log("Median of array 1: " + arr1[lenArr1 / 2])

    } else {

        console.log("Median of array 1: " + arr1[(lenArr1 + 1) / 2])
    }

    if (lenArr2 % 2 === 0) {

        console.log("Median of array 2: " + arr2[lenArr2 / 2])

    } else {

        console.log("Median of array 2: " + arr2[(lenArr2 + 1) / 2])
    }

    return
}(arr1, arr2)
```

Output:

Median of array 1: 5

Median of array 2: 12

g.Remove duplicates from an array

```
let arrayWithDup = [22, 22, 11, 10, 11, 56, 10, 1, 2, 6, 7, 56, 3, 9]

let resultArrayWoDup = ((arrayWithDup, index) => {

    return [...new Set(arrayWithDup)]

})(arrayWithDup)

console.log("Array without Duplicates " + resultArrayWoDup)
```

Output:

Array without Duplicates 22,11,10,56,1,2,6,7,3,9

h.Rotate an array by k times

```
let arrforrotation = [0, 1, 5, 6, 7, 9]
let resultArrayShifted = ((array, k) => {

    for (let i = 0; i < k; i++) {
        let temp = array.shift()
        array.push(temp)
    }
    return array

})(arrforrotation, 3)

console.log("Array roatated k times: " + resultArrayShifted);
```

Output:

Array roatated k times: 6,7,9,0,1,5

2.https://medium.com/@reach2arunprakash/guvi-zen-class-javascript-warm-up-programming-problems-15973c74b87f

a. Write a function called “addFive”.
Given a number, “addFive” returns 5 added to that number.

Input:

addFive(5);

```
let addFive = (num) => {
    return num + 5
}

console.log("Calling Add Five Function:" + addFive(10))
```

Output:

Calling Add Five Function:15

b. Write a function called “getOpposite”.
Given a number, return its opposite

Input:
getOpposite(10);

getOpposite(1.1);
getOpposite(“a”);

```
let getOppposite = (data) => {

    if (data === 0)
        return 0

    if (Number.isInteger(data)) {
        return (-data)
    } else {
        return -1
    }

}

//calling get Opposite Function //returing -1 for decimal and string

console.log("Opposite of 10 is: " + getOppposite(10))
console.log("Opposite of 1.1 is: " + getOppposite(1.1))
console.log("Opposite of a is: " + getOppposite('a'))
```

Output:

Opposite of 10 is: -10

Opposite of 1.1 is: -1

Opposite of a is: -1

c. Create a function that takes a string and returns it as an integer.

Examples
toInteger(“100”) ⟶ 100

```
let strToNum = (str) => {

    return +str

}

console.log("Converting string to num: " + strToNum('100'))
```

Output:

Converting string to num: 100

d. Create a function that takes a number as an argument, increments the number by +1 and returns the result.

Examples

nextNumber(10) ⟶ 11

```
let addOne = (num) => {
    return num + 1
}

console.log("Calling Add One Function:" + addOne(10))
```

Output:

Calling Add One Function:11

e. Create a function that takes an array and returns the first element.

Examples

getFirstElement([1, 2, 3,4]) ⟶ 1

```
let firstArrayEle = (arr) => {
    return arr[0]
}

let arr = [1, 2, 3, 4]

console.log("First Element for array is: " + firstArrayEle(arr))
```

Output:

First Element for array is: 1

3.Do the below programs in arrow functions

a.Print odd numbers in an array

```
let numberArray = [1, 2, 3, 4, 5, 6, 98, 101, 467]

console.log("Odd Numbers in Number Array are: " + numberArray.filter((item) => {

    return item % 2 !== 0

}))
```

Output:

Odd Numbers in Number Array are: 1,3,5,101,467

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

```
let stringArray = ["naresh", "did", "not", "study", "well", "for", "hackathon"]

stringArray = stringArray.map((item) => {

    return item.toUpperCase()

})
```

```
console.log("Converted String Array is: " + stringArray)
```

Output:

Converted String Array is: NARESH,DID,NOT,STUDY,WELL,FOR,HACKATHON

c.Sum of all numbers in an array

```
let numberArray = [1, 2, 3, 4, 5, 6, 98, 101, 467]
let sum = numberArray.reduce((currentTotal, item) => {

    return currentTotal + item

}, 0)

console.log("Sum of elements in Number Array: " + sum)
```

Output:

Sum of elements in Number Array: 687

d.Return all the prime numbers in an array

```
let numberArray = [1, 2, 3, 4, 5, 6, 98, 101, 467]
console.log("Prime Number is Array are: " +
    numberArray.filter((item) => {

        for (let i = 2; i < item; i++) {
            if (item % i === 0)
                return false;
        }
        return item !== 1;

    }))
```

Output:

Prime Number is Array are: 2,3,5,101,467

e.Return all the palindromes in an array

```
let arrayPallindrome = [111, 102, 505, 323, 612, 776, 707, 121]

console.log("Pallindrome Numbers in array are: " +
    arrayPallindrome.filter((item) => {

        let temp = item + "";

        if (temp.split('').reverse().join('') === item + "")
            return true

        return false

    }))
```

Output:

Pallindrome Numbers in array are: 111,505,323,707,121