**1.Do the below programs in anonymous function & IIFE:**

1. **print odd number in Array**

(function(arr){

arr.forEach(function(num){

if(num % 2 !== 0){

console.log(num);

}

});

})([1,2,3,4,5,6,7,8,9,10]);

##### **Output:**

1

3

5

7

9

**//B.convert all the strings to tittle caps in a string array;**

(function(arr){

arr.forEach(function(str, index) {

arr[index] = str.charAt(0).toUpperCase() + str.slice(1).toLowerCase();

});

console.log(arr);

})(["hello world","guvi geek","life long"]);

##### **Output:**

[ 'Hello world', 'Guvi geek', 'Life long' ]

**//C.sum of all number in an array:**

(function(arr){

var sum = 0;

arr.forEach(function(num){

sum += num;

});

console.log(sum);

})([10,14,20,15]);

##### **Output:**

59

**// D. Return all the prime number in an array:**

(function(arr) {

var primes = [];

arr.forEach(function(num) {

var isPrime = true;

if(num < 2) {

isPrime = false;

} else{

for(var i = 2; i<= Math.sqrt(num); i++){

if(num % i === 0){

isPrime = false;

break;

}

}

}

if(isPrime) {

primes.push(num);

}

});

console.log(primes);

})([1,2,3,4,5,6,7,8,9]);

##### Output:

[ 2, 3, 5, 7 ]

**// D. Return all the palindromes in an array:**

(function(arr) {

var palindromes = [];

arr.forEach(function(str) {

var reversed = str.split("").reverse().join("");

if(str === reversed) {

palindromes.push(str);

}

});

console.log(palindromes);

})(["racecar","hello","level","world","deified"]);

##### Output:

[ 'racecar', 'level', 'deified' ]

**// e. Return median of two sorted arrays of the same size :**

(function(arr1,arr2) {

var merged = arr1.concat(arr2);

merged.sort(function(a,b) {

return a - b;

});

var midIndex = Math.floor(merged.length/2);

var median = (merged.length % 2 === 0) ? (merged[midIndex - 1] + merged[midIndex])/2: merged[midIndex];

console.log(median);

})([1,3,5,7,9],[2,4,6,8,10]);

##### Output:

5.5

**// g. Remove duplicates from an array :**

(function(arr) {

var unique = [];

arr.forEach(function(item) {

if(unique.indexOf(item) === -1){

unique.push(item);

}

});

console.log(unique);

})([1,2,3,4,5,3,2,6,7,8,1,5]);

##### Output:

[ 1, 2, 3, 4, 5, 6, 7, 8 ]

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

(function(arr, k){

var len = arr.length;

k %= len;

var rotated = arr.slice(len - k).concat(arr.slice(0, len - k));

console.log(rotated);

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

##### Output:

[ 4, 5, 1, 2, 3 ]

**2.Do the below programs in arrow function**

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

const printOddNumbers = (arr) => {

arr.forEach((num) => {

if(num % 2 !== 0) {

console.log(num);

}

});

};

printOddNumbers([1,2,3,4,5,6,7,8,9,10]);

##### Output:

1

3

5

7

9

**//b.Convert all the strings to tittle caps in a string array:**

const convertToTittleCase = (arr) => {

return arr.map((str) => {

return str.charAt(0).toUpperCase() + str.slice(1).toLowerCase();

});

};

console.log(convertToTittleCase(["the quick brown fox","jumb over"]));

##### Output:

[ 'The quick brown fox', 'Jumb over' ]

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

const sumArray = (arr) => {

return arr.reduce((total,current) => total + current, 0);

};

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

##### Output:

15

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

const getPrimeNumbers = (arr) =>{

const isPrime = (num) => {

if(num < 2) return false;

for(let i = 2; i <= Math.sqrt(num);i++) {

if(num % i === 0){

return false;

}

}

return true;

};

return arr.filter((num) => isPrime(num));

};

console.log(getPrimeNumbers([1,2,3,4,5,6,7,8,9,10]));

##### Output:

[ 2, 3, 5, 7 ]

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

const getPalindromes = (arr) => {

const isPalindrome = (str) => {

const reversedStr = str.split("").reverse().join("");

return str === reversedStr;

};

return arr.filter((str) => isPalindrome(str));

};

console.log(getPalindromes(["racecar","level","hello","rotator"]));

##### Output:

[ 'racecar', 'level', 'rotator' ]