**Programs in anonymous function & IIFE**

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

(function(arr) {

const oddNumbers = arr.filter(num => num % 2 !== 0);

console.log(oddNumbers);

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

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

(function(arr) {

const titleCaps = arr.map(str => str.charAt(0).toUpperCase() + str.slice(1).toLowerCase());

console.log(titleCaps);

})(['hello', 'world', 'javascript', 'is', 'fun']);

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

(function(arr) {

const sum = arr.reduce((acc, num) => acc + num, 0);

console.log(sum);

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

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

(function(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;

};

const primes = arr.filter(isPrime);

console.log(primes);

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

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

(function(arr) {

const isPalindrome = str => str === str.split('').reverse().join('');

const palindromes = arr.filter(isPalindrome);

console.log(palindromes);

})(['madam', 'racecar', 'hello', 'world', 'level']);

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

(function(arr1, arr2) {

const mergeAndSort = [...arr1, ...arr2].sort((a, b) => a - b);

const mid = mergeAndSort.length / 2;

const median = (mergeAndSort[mid - 1] + mergeAndSort[mid]) / 2;

console.log(median);

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

**7. Remove duplicates from an array**

(function(arr) {

const uniqueArray = [...new Set(arr)];

console.log(uniqueArray);

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

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

(function(arr, k) {

const rotatedArray = arr.slice(-k).concat(arr.slice(0, -k));

console.log(rotatedArray);

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

**Programs in arrow functions.**

### 1. Print odd numbers in an array

const printOddNumbers = arr => arr.filter(num => num % 2 !== 0);

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

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

const toTitleCaps = arr => arr.map(str => str.charAt(0).toUpperCase() + str.slice(1).toLowerCase());

console.log(toTitleCaps(['hello', 'world', 'javascript', 'is', 'fun']));

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

const sumOfNumbers = arr => arr.reduce((acc, num) => acc + num, 0);

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

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

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;

};

const getPrimeNumbers = arr => arr.filter(isPrime);

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

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

const isPalindrome = str => str === str.split('').reverse().join('');

const getPalindromes = arr => arr.filter(isPalindrome);

console.log(getPalindromes(['madam', 'racecar', 'hello', 'world', 'level']));