1. Do the below programs in anonymous function & IIFE

1..Print odd numbers in an array

(function(arr) {

let result = []

arr.forEach(function(num) {

if (num % 2 !== 0) {

result.push(num)

}

})

console.log(result)

})

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

o/p:

[1,3,5,7,9]

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

(function(arr) {

for (var i = 0; i < arr.length; i++) {

arr[i] = arr[i].toLowerCase().replace(/\b\w/g, function(char) {

return char.toUpperCase()

})

}

console.log(arr)

})(["pine", "banana", "mango", "grape"])

o/p:

[ 'Pine', 'Banana', 'Mango', 'Grape']

3..Sum of all numbers in an array

(function(arr) {

var sum = 0

arr.forEach(function(num) {

sum += num

})

console.log("Sum:", sum)

})([10, 20, 30, 40,50])

o/p:

**Output:**

Sum: 150

4..Return all the prime numbers in an array

function prime(counter, val){

for ( counter; counter <= val; counter++) {

var notPrime = false

for (var i = 2; i <= counter; i++) {

if (counter%i===0 && i!==counter) {

notPrime = true

}

}

if (notPrime === false) {

console.log(counter)

}

}

}

prime(2, 100)

**Output:**

2  
3  
5  
7  
11

5..Return all the palindromes in an array

(function(arr) {

function isPalindrome(str) {

var cleanedStr = str.replace(/[^a-zA-Z0-9]/g, '').toLowerCase()

return cleanedStr === cleanedStr.split('').reverse().join('')

}

var palindromeArray = arr.filter(function(item) {

return isPalindrome(item)

})

console.log("Palindromes:", palindromeArray)

})( ["MADAM","SIR","CIVIC" , "222" , "LEVEL" , "LOGES" , "354" , "GUVI" , "454" , "CODE"])

o/p:

##### Output:

Palindromes: [ 'MADAM', 'CIVIC', '222', 'LEVEL', '454' ]

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

(function(arr1, arr2) {

var combinedArray = arr1.concat(arr2)

combinedArray.sort(function(a, b) {

return a -

})

var length = combinedArray.length

var medianIndex = Math.floor(length / 2)

var median = (combinedArray[medianIndex - 1] + combinedArray[medianIndex]) / 2

console.log("Median:", median)

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

o/p:

Median: 4.5

7..Remove duplicates from an array

(function(arr) {

var uniqueArray = arr.filter(function(item, index, array) {

return array.indexOf(item) === index

});

console.log(uniqueArray)

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

o/p:

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

8..Rotate an array by k times

(function(arr, k) {

var len = arr.length

var rotations = k % len

var rotatedArray = arr.slice(rotations).concat(arr.slice(0, rotations))

console.log(rotatedArray)

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

o/p:

[ 3, 4, 5, 1, 2 ]

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1. Do the below programs in arrow functions.

1..rint odd numbers in an array

const array = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

const printOddNumbers = arr => {

let result = []

arr.forEach(num => {

if (num % 2 !== 0) {

result.push(num)

}

})

console.log(result)

}

printOddNumbers(array)

##### Output:

[ 1, 3, 5, 7, 9 ]

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

const stringArray = [ 'pine', 'banana', 'mango', 'grape']

const convertToTitleCase = arr => {

return arr.map(str => str.toLowerCase().replace(/\b\w/g, char => char.toUpperCase()))

}const titleCaseArray = convertToTitleCase(stringArray)

console.log(titleCaseArray)

o/p:

[ 'Pine', 'Banana', 'Mango', 'Grape' ]

3..Sum of all numbers in an array

const array = [10, 20, 30, 40, 50]

const sumOfNumbers = arr => {

return arr.reduce((accumulator, currentValue) => accumulator + currentValue, 0)

};

const result = sumOfNumbers(array)

console.log("Sum:", result

o/p:

sum: 150

4.. const array = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

const isPrime = num => {

if (num <= 1) return false

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

if (num % i === 0) {

return false

}

}

return true

};

const primeNumbers = arr => arr.filter(num => isPrime(num))

console.log("Prime Numbers:", primeNumbers(array)

o/p:

Prime Numbers: [ 2, 3, 5, 7 ]

5..Return all the palindromes in an array

const array = ["MADAM","SIR","CIVIC" , "222" , "LEVEL" , "LOGES" , "354" , "GUVI" , "454" , "CODE"]

const isPalindrome = str => {

const cleanedStr = str.replace(/[^a-zA-Z0-9]/g, '').toLowerCase()

return cleanedStr === cleanedStr.split('').reverse().join('')

}

const palindromeArray = arr => arr.filter(item => isPalindrome(item))

console.log("Palindromes:", palindromeArray(array))

##### Output:

Palindromes: [ 'MADAM', 'CIVIC', '222', 'LEVEL', '454' ]

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