Javascript - Day -5 : Functions

1. Do the below programs in anonymous function & IIFE

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

let arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];

let oddNumbers = function(arr) {

return arr.filter(function(num) {

return num % 2 !== 0;

});

}(arr);

console.log(oddNumbers);

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

let arr = ['hello', 'world', 'javascript'];

let titleCaps = function(arr) {

return arr.map(function(str) {

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

});

}(arr);

console.log(titleCaps);

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

let arr = [1, 2, 3, 4, 5];

let sum = function(arr) {

return arr.reduce(function(total, num) {

return total + num;

}, 0);

}(arr);

console.log(sum);

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

let arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];

let isPrime = function(num) {

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

if (num % i === 0) {

return false;

}

}

return num > 1;

};

let primeNumbers = function(arr) {

return arr.filter(function(num) {

return isPrime(num);

});

}(arr);

console.log(primeNumbers);

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

function findPalindromes(arr) {

const palindromes = [];

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

const str = arr[i];

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

if (str === reversedStr) {

palindromes.push(str);

}

}

return palindromes;

}

const arr = ['level', 'hello', 'racecar', 'world'];

const palindromes = findPalindromes(arr);

console.log(palindromes); **6. Return median of two sorted arrays of the same size**.

let arr1 = [1, 3, 5];

let arr2 = [2, 4, 6];

let median = function(arr1, arr2) {

let mergedArr = [...arr1, ...arr2].sort((a, b) => a - b);

let mid = Math.floor(mergedArr.length / 2);

return mergedArr.length % 2 !== 0 ? mergedArr[mid] : (mergedArr[mid-1] + mergedArr[mid])/2;

}

console.log(median(arr1, arr2));

**7. Remove duplicates from an array**

function removeDuplicates(arr) {

const seen = {};

const unique = [];

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

const element = arr[i];

if (!seen[element]) {

seen[element] = true;

unique.push(element);

}

}

return unique;

}

const arr = [1, 2, 2, 3, 4, 4, 5];

const uniqueArr = removeDuplicates(arr);

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

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

let arr = [1, 2, 3, 4, 5];

let k = 2;

let rotateArray = function(arr, k) {

for(let i=0; i<k; i++) {

arr.unshift(arr.pop());

}

return arr;

}

console.log(rotateArray(arr, k));

2 . Do the below programs in arrow functions.

1. Print odd numbers in an array

const printOddNumbers = (arr) => {

arr.forEach((element) => {

if (element % 2 !== 0) {

console.log(element);

}

});

};

const arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];

printOddNumbers(arr);

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

const stringArray = ["hello world", "goodbye moon"];

const titleCapsArray = stringArray.map(str => {

return str.toLowerCase().split(' ').map(word => {

return word.charAt(0).toUpperCase() + word.slice(1);

}).join(' ');

});

console.log(titleCapsArray);

// Output: ["Hello World", "Goodbye Moon"]

1. Sum of all numbers in an array

const sumArray = (arr) => {

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

}

const arr = [1, 2, 3, 4, 5];

const sum = sumArray(arr);

console.log(sum); // 15

1. Return all the prime numbers in an array

const sumArray = (arr) => {

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

}

const arr = [1, 2, 3, 4, 5];

const sum = sumArray(arr);

console.log(sum); // 15

1. Return all the palindromes in an array

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 findPrimeNumbers = (arr) => {

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

}

const arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];

const primeArr = findPrimeNumbers(arr);

console.log(primeArr); // [2, 3, 5, 7]