**JavaScript Coding Exercise 4:**

Easy Level

1. Write a Function (Traditional)

Create a function called greet that takes a name as a parameter and returns a greeting message.

// Example input: greet("Alice")

// Example output: "Hello, Alice!"

2. Arrow Function for Sum

Write an arrow function add that takes two numbers as input and returns their sum.

// Example input: add(3, 7)

// Example output: 10

Intermediate Level

3. Factorial Using a Function

Create a function factorial that calculates the factorial of a given number. Use a traditional function.

// Example input: factorial(5)

// Example output: 120 (because 5 \* 4 \* 3 \* 2 \* 1 = 120)

4. Check Palindrome

Write an arrow function isPalindrome that checks if a given string is a palindrome.

// Example input: isPalindrome("madam")

// Example output: true

Hard Level

5. Function Returning Another Function

Write a function createMultiplier that takes a number n and returns another function that multiplies its input by n.

// Example usage:

const multiplyBy2 = createMultiplier(2);

console.log(multiplyBy2(5)); // Output: 10

6. Closures for Counter

Create a function createCounter that returns a function to count. Each time the returned function is called, it should increase the count by 1.

// Example usage:

const counter = createCounter();

console.log(counter()); // Output: 1

console.log(counter()); // Output: 2

console.log(counter()); // Output: 3