CODING EXERCISES

Exercise 1: Function Basics

Create a function called greet that takes a name as a parameter and logs a greeting message with the name to the console. Then, call the function with your name.

Exercise 2: Function Expression

Create a function expression named add that takes two numbers as parameters and returns their sum. Call the function to add 5 and 7, then log the result.

Exercise 3: Is Even

Write a function called isEven that takes a number as a parameter and returns true if it's even and false if it's odd. Test the function with various numbers.

Exercise 4: Local vs. Global Scope

Declare a global variable globalVar with a value. Then, create a function that declares a local variable with the same name globalVar. Log the values of both variables inside and outside the function. What do you observe?

Exercise 5: Function Hoisting

Write a function named hoistedFunction and call it before the function declaration in your code. Does it work? Explain the behavior..

Exercise 6: Higher-Order Function

Create a higher-order function called mathOperation that takes two numbers and a callback function as parameters. The callback function should perform a mathematical operation. Use this higher-order function to add, subtract, multiply, and divide two numbers.

Create a function counter that returns a function. The returned function should increment a counter variable every time it's called. Use this to create two counters and observe if they share the same state.

Exercise 8: Function as a Parameter

Write a function called applyFunction that takes a function and an array as parameters. It should apply the given function to each element of the array and return a new array with the results.

Exercise 9: Callback Functions

Create a function getUserData that simulates fetching user data from a server. It should accept a callback function as a parameter. Call the callback function with a user object once the data is retrieved.