JavaScript practice Assignment

1. Write a program to declare and initialize variables of different data types (string, number, boolean, array, object).
2. Implement a function to check the data type of a variable and log it to the console.
3. Write a function to demonstrate the difference between global scope and local scope variables.
4. Create a program to demonstrate the use of template literals to concatenate strings and variables.
5. Implement a program to determine the day of the week based on a given number using a switch statement.
6. Write a program to check if a number is even or odd using if...else statement.
7. Write a function to find the average of numbers in an array using a while loop.
8. Create a program to iterate over an array of objects representing students and print their names and grades using a for...of loop.
9. Create a program to iterate over an array of names and print each name to the console using a for...of loop.
10. Create an event handler function to change the background color of a button when clicked.
11. Write a program to manipulate the DOM by adding and removing elements dynamically.
12. Implement a constructor function to create objects representing different cars with properties like brand, model, and year.
13. Write a program to find the maximum value in an array using a callback function.
14. Create a function to fetch data from an API and process it using a callback function.
15. Create a class representing a person with properties like name, age, and method to greet.
16. Implement a function to calculate the area of a rectangle using class and constructor.
17. Create a closure to maintain a counter that increments each time a function is called.
18. Convert a regular function to an arrow function.
19. Implement a class Animal with properties name and sound. Create a method makeSound() that logs the sound of the animal to the console.
20. Create subclasses Dog and Cat that inherit from the Animal class. Override the makeSound() method for each subclass to make a specific sound (e.g., bark for Dog, meow for Cat).
21. Write a program to demonstrate the use of super keyword in subclass constructors to call superclass constructors and methods.