Front-End Development Using JavaScript – Research-Based Assignment

Instructions:
This assignment is designed to introduce you to the basic concepts of front-end development using JavaScript. You may not have studied JavaScript yet but use this as an opportunity to research and learn about the topic. Answer each question based on your findings.

Questions:

1. **Introduction to JavaScript:**

   o   What is JavaScript, and why is it important in front-end web development?

   o   Provide examples of some common uses of JavaScript in modern web applications.

2. **JavaScript and Web Technologies:**

   o   How does JavaScript interact with HTML and CSS in front-end development?

   o   Explain the role of the Document Object Model (DOM) in JavaScript with an example.

3. **JavaScript Syntax and Basics:**

   o   What are variables in JavaScript, and how do you declare them?

   o   Explain the difference between var, let, and const in JavaScript.

4. **User Interaction with JavaScript:**

   o   How does JavaScript handle user interactions, such as clicking a button or submitting a form?

   o   Research and provide a simple example of a JavaScript function that responds to a button click.

5. **JavaScript Frameworks and Libraries:**

   o   What are JavaScript frameworks and libraries, and how do they help in front-end development?

   o   Name at least two popular JavaScript frameworks or libraries and briefly explain their use cases.

Submission Guidelines:

- Answer each question in your own words based on research.

- Provide examples or code snippets where applicable.

Deadline: March 24, 2025 @5PM

Good luck with your research and learning journey into JavaScript! 🚀