**Gateway Placement Drive Experience**

**Round 1: Technical Test**

**Duration:** 2 hours

**Platform:** Gateway's own coding platform

**Description:** The platform is equipped with a high-quality code editor, suggestions, and an efficient evaluation system.

**Questions:**

1. **Create a Toggle Button using Pure JavaScript**
   * Develop a toggle button that switches between "ON" and "OFF" states.
2. **Create a Counter App using React.js**
   * Build a simple counter application with increment and decrement functionalities.
3. **Simple SQL Query**
   * Write a basic SQL query to retrieve specific data from a given dataset.
4. **Data Structures and Algorithms Question**
   * **Problem:** Given a string representing nested DOM elements, check if the string forms a valid DOM tree.
   * **Concepts Involved:** String manipulation, stack.
5. **.NET Web APIs**
   * Create an API endpoint using .NET framework.

**Round 2: HR and Technical Interview**

**Duration:** 35-40 minutes

**Format:** Offline at the company's office

**HR Questions:**

1. **Introduction and Family Background**
   * Describe yourself and provide a brief overview of your family background.
2. **Future Goals**
   * Where do you see yourself in the next 5 years?
3. **Follow-up Questions**
   * Additional questions based on your answers to the above questions.

**Technical Questions: (pure resume based)**

1. **Explain JWT Token Flow**
   * Describe how JSON Web Tokens (JWT) work in authentication and authorization processes.
2. **Authentication vs. Authorization**
   * Differentiate between authentication and authorization.
3. **MongoDB Query Related to Joins and Aggregates**
   * Provide examples of MongoDB queries involving joins and aggregates.
4. **Middleware**
   * Explain what middleware is and its purpose.
5. **HTTP vs. WebSocket**
   * Compare HTTP and WebSocket, their working mechanisms, and the protocols they use.
6. **Usage of Multer**
   * Explain why Multer is used in Node.js applications.

**Round 3: Online Technical Interview**

**Duration:** 20 minutes

**Format:** Online

**HR Questions:**

1. **Introduction and Family Background**
   * Reiterated questions from the second round.
2. **Future Goals**
   * Similar follow-up questions based on your previous answers.

**Technical Questions:**

1. **React Hooks**
   * Discuss various React hooks and their use cases.
2. **Context API vs. Redux**
   * Compare Context API and Redux, and describe scenarios where each would be appropriate.