**Final Project**

Alphabet Drag Game

**Submitted By**

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**Organizer University:** Jagannath University **Venue:** International University of Business, Agriculture and Technology (IUBAT) **Dept./Institute/Centre:** Computer Science and Engineering (CSE) **Unique Batch Number:** 03 **Training Track/Course Name:** Front-End Development (ReactJS)

Project Description: Alphabet Drag Game

**1. Project Overview**

Alphabet Drag Game is a fun, educational, and interactive browser-based game that helps users—especially children—learn and reinforce the correct alphabetical order of the English alphabet. The game starts by displaying shuffled letters from A to Z in a grid layout. Users must drag the correct letter (starting from A) to the corresponding correct position in order to proceed. The game highlights correct moves and continues until all letters are placed in order.

**2. Project Objective**

The goal of this project is to create a user-friendly, engaging game that improves familiarity with alphabetical order. The game supports learning through interaction and rewards users for correct sequence identification. It is especially suitable for educational contexts or young learners.

**3. Features**

· **Shuffled Alphabet Grid:**  
On every game start or restart, the alphabet letters are randomly shuffled and displayed in a grid format.

· **Drag-and-Drop Mechanics:**  
Users can drag letters to their correct position. When the correct letter is dropped in the correct spot, it locks in place.

· **Progress Tracking:**  
A visual and interactive system allows users to know which letter comes next and which ones are completed.

· **Responsive Design:**  
The game adjusts gracefully for tablet and mobile devices using CSS Grid and media queries.

· **Restart Button:**  
Users can restart the game at any time to try again.

· **Victory Message:**  
Once all letters are placed in order, a congratulatory message is displayed.

**4. Technical Details**

**Frontend Development:**

· **HTML5:**  
Structures the layout of the page, including the container for the alphabet boxes and controls.

· **CSS3:**  
Styles the game interface, including colors, responsive grid layout, and animations for interaction feedback.

· **JavaScript (ES6):**  
Handles the game logic, such as drag-and-drop functionality, checking correctness, tracking expected order, and updating the interface dynamically.

**Game Logic:**

· Letters are shuffled and rendered into draggable boxes on page load.

· A user must drag the correct letter (in order from A to Z) to the correct position in the grid.

· When the correct letter is dropped in the correct position, it becomes un-draggable and visually changes to indicate success.

· The game continues until all letters are correctly placed.

**UI Elements:**

· **Container Grid:**  
Houses the draggable boxes representing the alphabet letters.

· **Restart Button:**  
Resets the game and reshuffles the letters.

· **Header & Styles:**  
Aesthetic user interface with vibrant colors to make the experience fun and inviting.

**5. Future Improvements**

· **Scoring System:**  
Introduce a timer or point system based on speed or accuracy.

· **Difficulty Modes:**  
Add different levels (e.g., lowercase letters, missing letters, timed challenge).

· **Sound Effects:**  
Add sound for correct or incorrect actions and victory celebration.

· **Drag Preview:**  
Enhance UI feedback during the drag process.

· **Accessibility Improvements:**  
Make the game keyboard-navigable for accessibility purposes.

**6. Conclusion**

Alphabet Drag Game is a visually appealing and educational game that effectively uses HTML, CSS, and JavaScript to reinforce alphabetical order in an interactive way. The responsive design and drag-and-drop mechanics provide an intuitive user experience. Future improvements can make the game even more engaging and adaptable for a broader audience.

This project will be fully responsive, ensuring accessibility for a wide range of devices. Furthermore, additional features and improvements can be added over time, making the game more enjoyable and competitive for users.