Building an Online Education Platform

Objective: Develop a fully responsive online education platform where users can browse educational courses, view instructor details, and enroll in courses. The website should feature multiple pages including Home, Courses, Instructors, and Enrollment.

Task Breakdown:

1. **Overview of HTML and CSS**

   o **Task:** Set up the basic HTML structure and apply CSS for styling.

   o **Requirements:**

      ▪ Use semantic HTML5 elements for layout organization (such as header, nav, main, footer).

      ▪ Style the website using external CSS, focusing on fonts, color schemes, and layout properties.

2. **UI/UX and Web Design**

   o **Task:** Design a user-friendly interface with a professional look.

   o **Requirements:**

      ▪ Create a consistent and accessible navigation system.

      ▪ Design a homepage with a carousel displaying featured courses.

3. **JavaScript Interactivity**

   o **Task:** Add dynamic functionalities using JavaScript.

   o **Requirements:**

      ▪ Develop interactive tabs for course categories on the home page.

      ▪ Implement a dynamic search feature to filter courses by keywords or instructors.

4. **Responsive Design**

   o **Task:** Ensure the website is responsive across all devices.

   o **Requirements:**

      ▪ Use media queries for responsive layouts, ensuring accessibility on mobile devices.

      ▪ Test responsiveness on various devices and browsers.

5. **Advanced JavaScript and TypeScript**

   o **Task:** Use advanced scripting for enhanced user interaction.

- o **Requirements:**
  - Use TypeScript for more robust code management, especially for handling course and enrollment data.
  - Fetch and display course data from a JSON file using asynchronous JavaScript.

6. **Instructor and Course Details**

   - o **Task:** Create detailed pages for each instructor and course.

   - o **Requirements:**
     - Each course page should provide detailed descriptions, prerequisites, and user reviews.
     - Instructor pages should include biographies, course lists, and user-generated ratings.

7. **Enrollment Features**

   - o **Task:** Implement functionality for users to enroll in courses.

   - o **Requirements:**
     - Create forms for user enrollment, including personal details and course selection.
     - Use JavaScript to validate form inputs and handle submissions.

8. **Advanced CSS Techniques**

   - o **Task:** Implement advanced CSS features for better visual appeal.

   - o **Requirements:**
     - Use CSS animations to enhance user interaction, such as hover effects on course cards.
     - Implement advanced layout techniques using Flexbox and CSS Grid.