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**Assignment: Building a Simple Web Application with AJAX, JSON, and APIs**

**Objectives:**

* 1. Understand the structure and usage of JSON in web applications.
  2. Learn the basics of Web APIs, their implementation, and interaction.
  3. Explore AJAX for creating dynamic and responsive web pages.

**Tasks:**

* 1. JSON Data Creation: Create a JSON file named data.json that contains at least 10 entries of sample data relevant to a topic of your choice (e.g., products, users, messages). Each entry should include at least 3 properties

2. Web API Introduction & Implementation:

* 1. Develop a simple RESTful API using Node.js and Express that serves the JSON data created in task 1.
  2. Implement two endpoints: /api/data to retrieve all entries and /api/data/:id to retrieve a single entry by id.

AJAX Review:

* 1. Create an HTML page that uses AJAX to fetch and display data from your API without refreshing the page. You'll probably want to also create a ROUTE for your html page in the same Node/Express program you created about for the API
  2. Implement two main features:A "Load All Data" button that retrieves and displays all entries from the /api/data endpoint.
  3. An input field where users can enter an id to fetch a specific entry from the /api/data/:id endpoint and display it.
  4. Enhance the user interface with CSS for better presentation.
  5. Add error handling in your AJAX calls to manage situations like non-existent ids or server issues.

**Submission Requirements:**

* 1. Source code for the JSON file, backend API, and the HTML page with AJAX.
  2. A brief README file documenting your design choices, any challenges faced, and how you tested your application.

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