**Reflective Journal Entry**

**Architecture**

* **Frontend Development Comparison**: The project leveraged Express HTML for basic page rendering, which is straightforward but less dynamic. JavaScript was used to enhance pages with interactive elements. The Angular SPA transformed the customer interface into a highly interactive and responsive experience, allowing for real-time updates without page reloads.
* **Choice of MongoDB**: MongoDB, a NoSQL database, was selected for its flexibility in handling data structures which change over time, its scalability, and its strong performance with large data sets, making it ideal for dynamic web applications where data structures can evolve.

**Functionality**

* **JSON vs. JavaScript**: JSON (JavaScript Object Notation) is a lightweight data-interchange format, easily readable by humans and parsed by machines. Unlike JavaScript, which is a programming language, JSON is merely a way to represent data structures. It seamlessly ties together frontend and backend by serving as a universal data format for sending and receiving API requests and responses.
* **Refactoring and UI Components**: Throughout the development process, refactoring was essential for enhancing performance and maintainability. For example, converting repetitive code into reusable Angular components (e.g., a unified booking form) not only streamlined the codebase but also improved the UI consistency across different parts of the application.

**Testing**

* **API Testing**: Testing involved verifying the functionality and security of API endpoints. Using tools like Postman, I simulated requests to endpoints for creating, retrieving, updating, and deleting data (CRUD operations) to ensure they handled data correctly and securely.
* **Security Testing**: With security being paramount, particularly for the administrative functions, testing focused on authentication mechanisms and ensuring that data transmissions were encrypted and that endpoints were protected against unauthorized access.

**Reflection**

* **Professional Growth**: This course has significantly bolstered my full stack development skills, particularly in Angular and Express, which are highly sought after in the industry. It has improved my ability to design and implement both the client and server sides of an application, making me a more versatile and marketable candidate.
* **Skills Development**: Key skills developed include creating and managing a RESTful API, performing CRUD operations with a MongoDB database, implementing secure authentication, and developing dynamic SPAs. These skills are critical for modern web development roles and increase my readiness for advanced projects and employment opportunities.