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CS-499

23 May 24

Milestone 2 Narrative

The artifact I've chosen to enhance is a program called Travlr Getaways, a RESTful API application developed between March and April 2024 as part of the course CS-465 Full Stack Development 1. As a full-stack application, it offers ample opportunities for enhancement, allowing me to demonstrate my growth and proficiency as a developer while addressing critical functionalities in backend development.

Justification for Inclusion:

The inclusion of the trips.js file from the "Travlr Getaways" project in my ePortfolio is warranted due to its representation of critical functionalities in backend development, particularly in handling trip-related operations. This artifact showcases my proficiency in designing and implementing robust RESTful APIs using Node.js and Express, as well as my ability to interact with MongoDB databases using Mongoose.

Specific Components Demonstrating Skills:

1. **Error Handling and Input Validation:** The code demonstrates effective error handling and input validation using Express-validator middleware. It checks for validation errors before proceeding with trip creation or update operations, ensuring data integrity and preventing malformed requests.

2. Asynchronous Programming: The use of asynchronous functions and the `await` keyword in handling database operations exemplifies my understanding of asynchronous programming in JavaScript, enabling non-blocking execution and enhancing application responsiveness.
3. Middleware Usage: The `getUser` middleware function showcases my knowledge of middleware usage in Express to authenticate users before performing sensitive operations, enhancing application security.

Artifact Improvement:

Throughout the enhancement process, the `trips.js` file underwent improvements aimed at enhancing functionality, security, and maintainability. These enhancements included:

1. Incorporating input validation and sanitization techniques to prevent injection attacks and ensure data integrity.
2. Implementing consistent error handling mechanisms to provide informative messages to clients and enhance user experience.
3. Adding descriptive inline comments to clarify complex logic and error handling, improving code readability and maintainability.

Meeting Course Objectives:

The enhancement of the `trips.js` file aligns with the outlined course objectives, particularly those related to designing and evaluating computing solutions, and developing a security mindset. By improving error handling, input validation, and security measures, the artifact demonstrates my proficiency in implementing secure and reliable backend solutions.

Reflecting on the Enhancement Process:

During the enhancement process, I gained valuable insights into best practices in RESTful API development, including error handling, input validation, and middleware usage. I learned to prioritize security considerations and enhance user experience through informative error messages. Challenges faced included managing asynchronous operations effectively and ensuring compatibility with existing codebase architecture. Overall, the process facilitated my growth as a backend developer and reinforced the importance of adhering to industry standards and best practices.