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CS499

Milestone Four

The artifact I selected is the Travlr Getaways web application. I originally developed this in CS 465 Full Stack Development. The application uses a hybrid approach which combines server rendered views with Express and Handlebars, and a Single Page Application (SPA) for administrative use built with Angular. For Category Three is the MongoDB schema and seed-data integration that underpins the Travlr application’s persistence layer.

I chose this artifact for my ePortfolio because it shows my ability to take an existing full-stack application’s data model and make updates to increase performance and usability. The enhanced Booking schema demonstrates relational modeling in NoSQL. I used Mongoose to tie together Users, Trips, and Bookings. The accompanying API controllers illustrate best practices in backend design for secure JWT authentication, strict authorization checks to prevent users from seeing or deleting others’ bookings, and updates to flip trip availability. On the front end, my single React component unifies user registration, login, booking display, and cancellation logic, highlighting proficiency with React hooks, conditional rendering, and state management.

For this category the course outcomes I completed with the enhancements are Outcome 3: I compared trade-offs between relational (SQL) vs. document (NoSQL) models when designing the Booking reference, settling on embedded vs. referenced data based on query patterns, Outcome 4: Employed Mongoose, Express middleware, Passport, and React hooks, demonstrating mastery of current industry-standard tools, and Outcome 5: Built secure password hashing and JWT auth, validated user ownership in controllers to prevent unauthorized data access.

Overall, I feel comfortable with the enhancements made and the process of making them. I did have some difficulties while making the enhancements, but I was able to work through them to complete the plan and add additional features that felt necessary for the application. Working with Mongoose was challenging because of a port issue but after resolving the issue I was able to complete my enhancements and test them properly. I felt it was necessary to implement a login and registration process so users would not need to be manually added to the backend. Also, the navbar needed to be adjusted to fit the new pages that were added for booking and login/registration. These enhancements tested my skills and boosted my confidence when I was able to complete them.