The artifact is a Mongoose schema used in my Travlr Getaways project which is a full stack web application developed during my coursework to manage and display travel packages. The schema defines the structure and constraints for the "Trip" documents stored in a MongoDB collection. It was originally created as part of building a RESTful API with Node.js, Express, and MongoDB.

I selected this artifact for my ePortfolio because it demonstrates my ability to design and enhance a database schema using Mongoose in a Node.js environment which is an essential skill for modern full stack development. For the enhancements I added ‘maxlength’ constraints to fields such as ‘code’, ‘name’, ‘resort’, and ‘description’ to ensure consistency and readability. I implemented a custom validator on the ‘start’ date field to make sure that trip dates occur in the future. I also added a regex ‘match’ rule to the ‘image’ field to validate acceptable image URL formats. These enhancements show my understanding of data validation, schema design best practices, and defensive programming. Doing so ensures data integrity at the database level.

Yes, I met the course outcome related to designing and developing computing solutions using software engineering and database principles. The enhancements reflect my growth in applying practical database modeling techniques and using validation mechanisms to enforce business logic directly in the schema. I have no updates to my outcome-coverage plans. This enhancement aligns directly with the planned goals for the Databases category.

While enhancing the schema, I deepened my understanding of Mongoose's built-in validation options and the importance of proactively validating user input at the model level. I learned how to apply custom functions within schemas like date comparisons and use regular expressions for URL validation. One challenge I faced was making sure that the custom validator for the trip start date functioned properly across different time zones and formats. I overcame this by using JavaScript's built-in ‘Date’ object for reliable comparisons. This enhancement has made the schema more production ready while contributing to a more professional and scalable application.