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**4-2 Milestone Three: Enhancement Two: Algorithms and Data Structure**

The artifact I chose is my Wild Oasis Animal Sanctuary webbsite, which I originally created earlier in the course as a static website. Over the past week, I enhanced the project by replacing the static HTML with Handlebars templates, allowing me to dynamically render data using JSON. I also set up a MongoDB animal schema, seeded the database, and successfully connected the backend so that the data is now viewable on my localhost through Mongo Compass. These updates represent a major step forward in making the application interactive and data-driven.

I selected this artifact for my ePortfolio because it demonstrates my growth in fullstack development, especially in combining front-end and back-end functionality. The use of Handlebars showcases my ability to apply algorithms and data structures in a real application, since I had to structure the data model, design templates, and manage how data flows between the client and server. The addition of the MongoDB schema and seeded data highlights my skills in databases and schema design, which are essential for building scalable applications. Compared to the original static version, the project is now dynamic, modular, and better aligned with professional development practices.

I believe I met the course outcomes I planned to address in Module One, particularly in software design and engineering and databases. With this enhancement, I can now demonstrate the ability to design reusable components and implement a database that reflects real-world use cases. I still plan to expand more on algorithms and data structures in future enhancements, but this milestone made strong progress toward those outcomes as well.

Enhancing and modifying the artifact taught me a lot about integrating multiple layers of a fullstack application. Replacing static HTML with Handlebars forced me to think about separation of concerns and how templates interact with data. Setting up the MongoDB schema and seeding the database was both challenging and rewarding. I had to debug issues with connections and data formatting, but once I got it running, it was exciting to see the data reflected live in Mongo Compass. One of the biggest lessons I learned is the importance of testing each piece step by step, since small errors in schema definitions or seed files can cause major issues. Overall, the process improved both my technical skills and my confidence in tackling backend development.