1. Briefly describe the artifact. What is it? When was it created?

The artifact to be improved is a web application developed using MongoDB as the primary database, taken from CS 340: Client-Server Development. The initial purpose of the application was to manage and display data related to the Austin Animal Center Outcomes dataset. The project involved designing a structured database schema, performing CRUD (Create, Read, update, Delete) operations, and adding user authentication functionality for secure access to data. The first deployment of this artifact was accomplished while taking the CS 340 course

1. Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?

This artifact is part of my e-Portfolio, as it illustrates my skills in managing databases and server-side programming. The project showcases my proficiency in working with NoSQL databases, specifically MongoDB, and highlights my strengths in managing large datasets, implementing secure user authentication, and integrating backend services. Moreover, the project's improvements further develop my skills in software engineering best practices.

1. Did you meet the course outcomes you planned to meet with this enhancement in Module One? Do you have any updates to your outcome-coverage plans?

By making this improvement, I have achieved optimal progress toward attaining the course outcomes set in Module One. Specifically, this improvement is relevant to the following program outcomes:

Demonstrating the ability to design and deliver computing solutions for real-world problem-solving with proper database management practices.

Applying new techniques and tools to enhance the effectiveness and security of database programs. Aiding my security awareness by introducing authentication practices to secure user data.

1. Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?

During the improvement process, I gained valuable insights into database management, authentication systems, and performance optimization. I learned how to structure data for efficient querying and enhanced my understanding of database security and user access control through MongoDB.

The biggest challenge was integrating new authentication mechanisms with the existing application. Debugging user access rights required meticulous attention to detail, as incorrect configurations could deny access or create vulnerabilities. Overcoming these challenges improved my troubleshooting skills and deepened my knowledge of database security.