5-2 Milestone Four: Enhancement Three: Databases

Tyler Cornell

Southern New Hampshire University

5-2 Milestone Four: Enhancement Three: Databases

## Category Three Narrative - Databases

The artifact for category three, databases, is a database created for customer orders that keeps track of customers, there information, and products ordered. The artifact originates from DAD 220 Introduction to Structured Databases. The original artifact was lost due to being created in a virtual environment. The enhancement plan includes the creation of a new database with a sample dataset. Treating this enhancement as a recreation or merge to the cloud is a good method of demonstrating the ability to read documentation to migrate a system to a new platform. I chose this artifact because since the original was lost, this gave me the opportunity to recreate the artifact in new platform to learn something new. This showcases my skills and abilities in development because I have no prior experience with MongoDB Atlas and it demonstrates my ability to learn on the job. The artifact was improved by utilizing a login feature that requires users to have a username and password to obtain access to their provided role with varying privileges such as read and write. The exploration of other database providers and tools is an important part of the enhancement plan for not only the artifact but my knowledge and abilities.

During the creation and modification of the artifact, there were many things learned that I previously had not known. This is because the process was new to me using software I am not experienced with. “MongoDB Atlas Pro includes fully managed database as a service, deep monitoring, query optimization, and customizable alerts, consultative support, fully managed backups, and a GUI for MongoDB” (MongoDB, n.d.). I was not aware of MongoDB Atlas allowing users to utilize MongoDB shell or the provided GUI to interact with the databases. I logged in initially using the shell and then later realized that the GUI can be utilized for most things that one would need to use in the database. It allows for a more intuitive experience, especially when manipulating and visualizing data, as well as returning to those visualizations at a later time. Other things I learned during the process includes database creation, adding and removing users and assigning their roles, adding network access for remote computers, MongoDB Shell installation and login, loading datasets, viewing collections, querying and visualizing data, and storing the data visualizations. The only challenge I faced was network access when doing some work at my workplace, but the intuitive GUI informed me of the problem and directed me to the network access page to add the network I was using at the time. The creation of this artifact has covered several of the computer science program outcomes. The first of those outcomes is demonstrating an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals. The other outcome being developing a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources. The artifact enhancement plan has satisfied the course objectives listed in the enhancement plan.

References

*MongoDB Atlas Pro Datasheet*. MongoDB. (n.d.). Retrieved March 29, 2023, from https://www.mongodb.com/collateral/mongodb-atlas-professional-datasheet#:~:text=MongoDB%20Atlas%20allows%20you%20to,downtime%2C%20it%20saved%20over%20%24150%2C000.