5-2 Milestone Four – Enhancement Three: Databases

Joel Meza

Professor Joseph Conlan

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Southern New Hampshire University

For this artifact I chose a Database project that I had done originally myself with a csv file of a book collection. I had used Microsoft Excel which hold my book collection and begin to import that into a MongoDB (NoSQL Database Management System). This artifact did not have much code implemented where I thought of my enhancement proposal to consider for the final project. Since, looking at the final project rubric I saw that I can include a project of my own aslong I can use MongoDB that can give access to an IDE (Integrated Development Environment) which I used VS Code with HTML and JavaScript ES6 for my proposal enhancement. I decided to implement a csv file into MongoDB and include it as a json() object file in JavaScript to manipulate it and send it to HTML. When I first originally created this project, I had no experience with from MongoDB that works with other programming languages as I had used MongoDB previously in my CS 340 project which I used some libraries (NumPy, Pandas) and frameworks (Flask and Dash in Plotly) in Jupyter Notebook IDE and Python language to create a known selection drop down feature from a dashboard found in an application. With the help of CRUD operations module, there I was able to get data from MongoDB to insert, find, update, and delete each object found in the database.

However, in this artifact I improved my skills of webserver to client scripting with my new enhancement on using HTML and JavaScript languages from a different IDE where I had imported all my book collection data into MongoDB. Thus, I had to make sure all data was inside MongoDB before moving onto the VS Code IDE. Once I had all data successfully imported, then I went on to making a dashboard similar like the CS 340 project but with the help of Node.js and Express.js. When I had created this project from the beginning, my application webpage only had a text “Hello World”, whereas now all other webpages are functional and do link together properly. My enhancements were done to this project to demonstrate the ability of loading data into VS code and storing back data into the MongoDB. For future reference, if I complete this project then I would consider authentication to safely secure my user access to the MongoDB. Although, I was taught how to apply security authentication of a username and password, but in my program application, whereas I couldn’t accommodate the requirements because don’t know why it would not link to my VS code from the MongoDB.

Therefore, I feel that I accommodated most of the proposed enhancements that I mentioned earlier I this course by using Database and being able to store and request data from it. One thing I do remember that I improved in skills and gain new experience when enhancing this project was learning how to link MongoDB into VS Code (Visual Studios Code) and how HTML can create my dashboard feature by the book collection data given to JavaScript and manipulate its data in CRUD operation. I believe that if I am given more time with this project, I would continue to build a robust application with bootstrap included and React.js. One of the few challenges that I came across was building a CRUD operation which did not know how to draw it into conclusion as I had done in the CS 340 course project. So, I did a pseudocode and flowchart to guide each phase to manipulate this data with the MongoDB client. Another challenge I came across to was adding some authentication to the MongoDB where I just used the client number given from MongoDB to import all data into my application. Eventually, I had used this method because it was difficult to engage security authentication and be able to connect with MongoDB.