Enhancement Three: Databases

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This artifact was originally developed in CS 340: Client/Server Development. It is a Python script, paired with a Jupyter Notebook file. This artifact was developed to pull data from a MongoDB database and display the data in a table on a web page. The table is meant to be filtered by a specific parameter through a series of radio buttons.

This artifact was chosen as a way to build upon, and showcase skills developed in working with MEAN stack webpages, working with databases. While the original file was able to be viewed on a webpage, it lacked the ability to be launched as a fully functional webpage that can be accessed by other users. Changing the Python script and Jupyter Notebook to Javascript that can be used in a MEAN stack web framework will showcase skills in converting code, as well as the ability to work with databases on live webpage development.

While I had hoped to make the webpage for this artifact fully developed and ready to launch, I am currently in the course that teaches how to do so. Therefore, I will not be able to complete the webpage. However, I will be able to complete the link to the MongoDB database and allow for a local launch of the webpage that can dynamically display data from the database on the webpage. The update to my outcome-coverage plan is that I will complete a working prototype webpage that is linked to a MongoDB database and dynamically displays the data from the database on a webpage using a MEAN stack webpage framework. This enhancement designed, developed, and delivered professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts. It also demonstrated 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.

In creating this enhancement, I had to create an entirely new file for this artifact. The original artifact consisted of two files, “animal\_shelter.py” and “ProjectTwoDashboard”.ipynb. The enhancement required a new file structure and new set of files to create a web-based application that is linked to a database. To create this enhancement, I changed the coding language and moved the project from Jupyter Notebook to Visual Studio Code. The process of enhancing this artifact started off fairly difficult; however, it became easier as I progressed through the process. Though, there was a bit of difficulty toward the end as well. In the beginning, it was a bit difficult to get the file structure set up properly to go through the right steps to set up a static prototype to perform the tasks that I wanted. Once I got the file structure set up properly, I was able to get the scripts and html code set up to get a working static prototype. Once I started working on making the application data driven, I ran into another issue with getting the table to filter based on radio button input. This proved to be difficult, as it had to be done in a completely different way than the original artifact. It required a script that allowed the table to be linked to the radio buttons, which I had to research quite a bit to understand how to get it to work. Once I got the filtering working with the table, I began working on setting up the database and connecting it to the application. While this part of the enhancement was challenging, it was fairly straightforward, and I ran into little trouble getting it to work as intended.