For Milestone Two, I improved my first Animal Shelter Dashboard project from CS-340 to better conform to database security, algorithm efficiency, and program design principles. I fixed performance problems, made structured code changes, made sure the database was connected, and used Dash (rather than Jupyter Dash) to successfully execute the dashboard in a standalone Python environment. These adjustments were made to better satisfy the course outcomes I chose for Milestone One and to represent my development as a software developer and system enhancer.

I initially produced the item as an assignment for my CS-340: Advanced Programming Concepts course. By showing pets and enabling users to filter search results by breed, age, and other criteria, the Animal Shelter Dashboard was created to assist an animal shelter in managing its animal data. To retrieve records, it establishes a connection with a MongoDB database. Although the project was first developed during that course, I improved its structure, speed, security, and dependability for Milestone Two.

Yes, I achieved the results I had hoped for. I stated in Module One that my goals were to increase system security, boost performance, and improve program structure. By repairing malfunctioning or ineffective parts and making sure the dashboard securely connects to the database and functions properly, I have accomplished just that. I haven't made any adjustments to my outcome-coverage plans because this improvement still aligns exactly with my stated goals.

Honestly, I learned so much from this improvement. I first had trouble with my earlier version's unclear instructions, faulty code, and connectivity issues to the MongoDB database. Additionally, I came to the realization that several of the components I employed (such as JupyterDash) weren't optimal for the project's operation. I thus made the conversion to Dash, reorganized the files, and ensured that everything functioned as a standalone, real-world web application.

There were frustrating moments, such as attempting to determine why callbacks weren't triggering correctly or why my data wasn't appearing. However, I discovered how to carefully examine error logs, test each step individually, and have faith in the debugging procedure. I even discovered issues like wrong file locations or missing libraries that I did not know existed. Finally, it was such a wonderful feeling to see the dashboard function flawlessly and appear tidy. I'm proud of how much I've improved during this improvement, and I feel less awkward working on both front-end and back-end projects today.