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#### Milestone Four: Narrative

This artifact is a dashboard application I built during my CS-340 Database course. It uses Python and Dash (a tool for making web apps) along with MongoDB, which is a type of database that stores data in flexible formats. The dashboard lets users view and manage information about animals and clients in a shelter. Users can see records, add new entries, update details, or delete items they no longer need. The original version was made during the course to show how frontend tools can connect to a database. It was a hands-on project that helped me learn how to build real applications that make use of databases.

I chose this artifact because it shows that I can create and improve a working application that deals with real data. It shows off my ability to write code that connects a web interface to a database, and how I can make that experience better for users. One of the main improvements I made was adding a feature that lets users apply more than one filter at the same time. For example, they can search for animals that have either been euthanized or available for adoption. This made the dashboard more useful. I also added more comments to the code so it's easier to understand how each part works, especially the parts that handle data operations like adding or deleting records. These updates made the dashboard easier to use and easier to maintain.

Yes, I believe I met the goals I planned in Module One. The new filter feature shows that I can make meaningful changes that improve how the app works and how users interact with it. I also showed that I can write clear, readable code and explain it well through comments and layout. These improvements show my ability to use what I've learned about database systems,

especially when it comes to storing, searching, and updating information. Because I met all the outcomes I planned, I don't think I need to change my outcome plan at this time. I feel confident that this artifact shows growth in both technical skill and clear communication.

While improving this project, I learned how to make the dashboard easier to use and more flexible. I changed the filters from single choice radio buttons to checklists so users could select more than one option at a time. This made it easier for them to look at more specific or combined data, like viewing both Adoption and Transfer outcomes together. I also updated the pie chart so it could handle larger amounts of data. When there were too many animal breeds to show clearly, I added a feature that grouped the less common ones under an "Other" category. This helped the chart stay easy to read without losing important information. One challenge was making sure the filters and chart worked well together without causing errors. I also took time to add clear comments in the code to explain how everything works. This experience helped me get better at writing clean code and designing features that improve the user experience.