**Journal: Reflection**

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When thinking about how to write programs that are maintainable, readable, and adaptable, I have learned that keeping things simple and organized from the beginning makes a big difference. This was done while working on the CRUD Python module in Project One, which was later used to connect the dashboard to the database in Project Two. The main advantage to building the module this way was that all of the database actions were in one place, so I didn’t have repeated code in multiple parts of the project. This helped connect and update the dashboard. It also means that I could reuse the CRUD module in future projects if needed.

As a computer science student, I approach solving complex problems by looking closely at the requirements and then breaking them down into smaller, more manageable steps. Grazioso Salvare needed a dashboard that could connect their staff to the Austin Animal Center Data Spreadsheet, allowing their staff to search, filter, and visualize the results. My first step was to understand how the data was organized when pulled into the database. I could then work on connecting it to a CRUD module so it could be queried properly. Afte that was complete, I built the dashboard: a view of the data set, then adding in filters, and an interactive map and bar graph after that. This project helped implant the importance of planning and testing as you go. In the future I will approach other projects in a similar way, starting small, testing frequently, and adding piece by piece.

The work done on this project exemplified how even a single dashboard can make a big difference for a company such as Grazioso Salvare. By turning large amounts of data into an easy-to-use dashboard, I was helping make their work more efficient. Instead of having to filter through spreadsheets, they can now filter through the data and generate visualizations to help them make better decisions about which animals are the best suited for rescue training.