CS499 module 3 Milestone

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This artifact is a Java project completed early in my Computer Science degree around June 2023. It is a simple Java program for an Animal Shelter that allows a user to input new animals, either a dog or a monkey, into the database. The animals in the database can then be reserved through the shelter program. The reason I chose this artifact is that it provides a good concept and code base for improving. Since it was early in my classwork, it has core functionality that is very basic but has lots of potential for improvement. Having multiple files that interact with one another, a program that can be improved to include CRUD (Create, Read, Update, Delete) operations, and can be improved by implementing a database to store animal data instead of the current in-memory version that loses all changes once the program is exited.

In this module, I have ported a good portion for the core structure to Python, including the driver class (now called main), dog class, monkey class and RescueAnimal class. The menu is up, is interactive, and is ready to be built upon by implementing the various functions described in the SDD. The course outcomes I planned to implement this module were completed. The only thing not covered in this module was the SQL injection security features. The reason being is that this won't make sense to implement until I have the actual database built. So, once the database is up and running, I can sanitize the inputs to ensure the program cannot be attacked with the most common form of SQL injection attacks.

There was not anything new that I learned so far, since the first port was relatively straightforward. I did run into some problems when using Python, since it has been quite a few months since I used this language. I had to spend some time researching to remember how to structure the files and the syntax, since most of my work lately has been in Xcode and C++. I was reminded why I love Python so much, once I shook the dust off it was a straightforward process to begin implementing the logic and structure for the program. This is a great exercise so far and I am greatly enjoying the planning and implementation of the improvements upon the old CS145 project. It's a reminder of how far I have come and how much I have learned these past couple years!