**Category One: Software Engineering/Design**

I am going to reverse engineer a mobile application that was created for inventory tracking in CS 360 Mobile Architecture. I created this mobile application and designed it to drive the most user engagement. It was written in Java using Android Studio to serve as an application for a user we recognized a demand from.

Our plan for enhancement is to redesign the flow of how a user moves from screen to screen. Currently, when a user logs into our mobile application they are taken directly to the home page where they can begin performing tasks. My plan for enhancement would be to make it land on a categories page before they can go into an inventory selection. Once inside the inventory selection they’ll be able to add, edit, and remove an item.

Diagram

Description automatically generated

We will illustrate our mastery of understanding user engagement and knowledge of mobile architecture. My goal is to increase our user experience with my mobile application through design and function. We will create a function using Java language to create a fully functional mobile application aligning with our proposed enhancements.

[Link to Inventory Application Files](https://github.com/ernest-prog/CS360/blob/main/Final%20Project%20(1).zip)

**II. Category Two: Algorithms and Data Structures**

The name of my artifact is Austin Animal Center application created in CS 340. It is a data structure build to store data input by Austin Animal Center users. Its main purpose was to keep track of animals staying in their shelter by breed type, color, animal type, etc. Some enhancements that need to be done are better input methods or adding to input types. It also needs an error message displayed if a user inputs an animal that already exists in their database. The skills illustrated will be to display knowledge of structing data so that it aligns with user demands[. Link to Code](https://github.com/ernest-prog/CS-340-GS/blob/main/CRUD.PY)

**III. Category Three: Databases**

For this module, I am going to use Austin Animal Center Grazioso Salvare’s application that we wrote in Python. It was an application the animal shelter could use to keep track of their animals in their shelter. An enhancement I would want to make is to the current program is to ensure it’s operational and doesn’t consume to much data. [Link to pseudocode](https://github.com/ernest-prog/CS-340-GS/blob/main/CRUD.PY). The skills illustrated in this exercise would be the understanding of working with databases and creating a better functioning application for Austin Animal Center.

**IV. ePortfolio Overall**

During the code review phase, we will illustrate our understanding of how the code functions and how to improve on application requirements.

The narratives for our mobile application for inventory track are simple as it was a fully complete and functional application created in Android Studio. It showed my skills in developing a UX design that was engaging to the user but also mastery of JAVA to write functional code so that the application was operational.

The narrative for our Austin Animal Center application displays my understanding of Python and data structures. In this exercise we were tasked with creating a function application that would allow AAC users to input and search through data sets.

The planned skills to be illustrated through this self-assessment will align with practices of reverse software engineering helping me identify areas that we could enhance or scale our mobile applications. In our enhancements we will re-write functional code in a different language to make it operate on a different platform or faster.