

Team CAMZ

COMP490L

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Muhammad

Our Project Description:

Our plan for our Senior Year project is to develop an desktop application that allows for users to manage and organize information on their pets.

We plan for our project to be able to:

- Allow users to enter their pet(s)'s information into their own database
- Keep track of feeding times and schedules, send feeding reminders
- Monitor food needs (allergies, diets, etc) for specific pets
- Send users shopping recommendations based on preferred brands.
- A interface to help users understand and manage their pet's medication



Assignment Timeline:

Assignment One - **Form Teams**, September 10th

Assignment Two - **Milestone One**: Project Brainstorming, September 16th

Assignment Three - **Application Design**, October 1st

Assignment Four - **Project Requirement Document (PRD)**, October 17th

Assignment Five - **Architecture Design**, October 17th

Assignment Six - **Ethical, Legal, and Security**; October 21st

Assignment One

Assignment One Form Teams:

For our first assignment we first got into group:

Emily Alvarez, Adam Zuniga, Adrian Carreno, Hassanudeen Muhammad

During this team, we worked together and brainstormed several project ideas including:

- 2D Sprite Based Video Game (Mario Brothers, Galaga, Tetris)
- AI Based Management Helper Application
- Plant Care / Crop Manager
- Pet Care Application

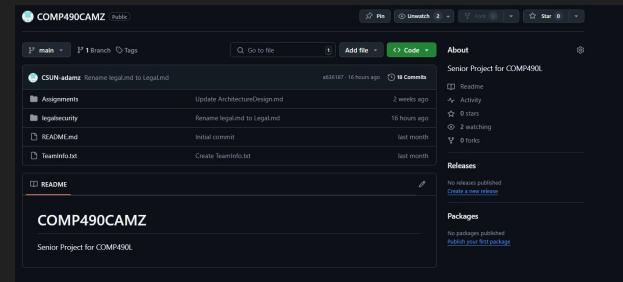
Assignment Two

Assignment Two: Milestone One - Project Brainstorming and Selection

For our first Milestone we completed our first steps towards becoming a proper team. We had our first meeting and agreed on our team name, Team CAMZ!

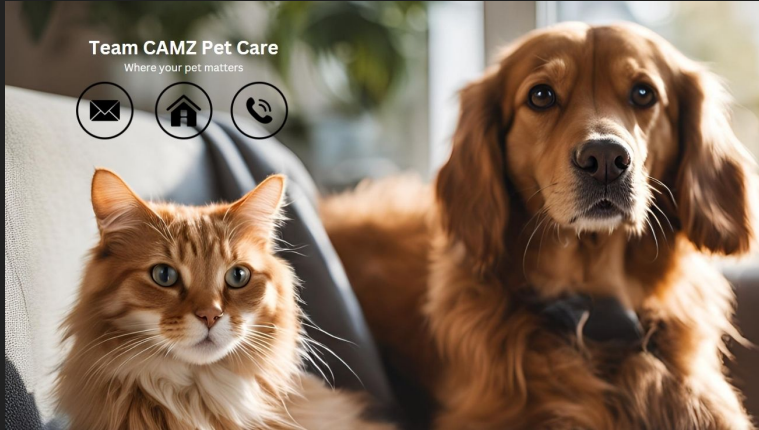
We also agreed and finalized our idea, the Pet Care application! In this part we agreed on and finalized general features.

We also set up our GitHub repository and began working and sharing ideas.



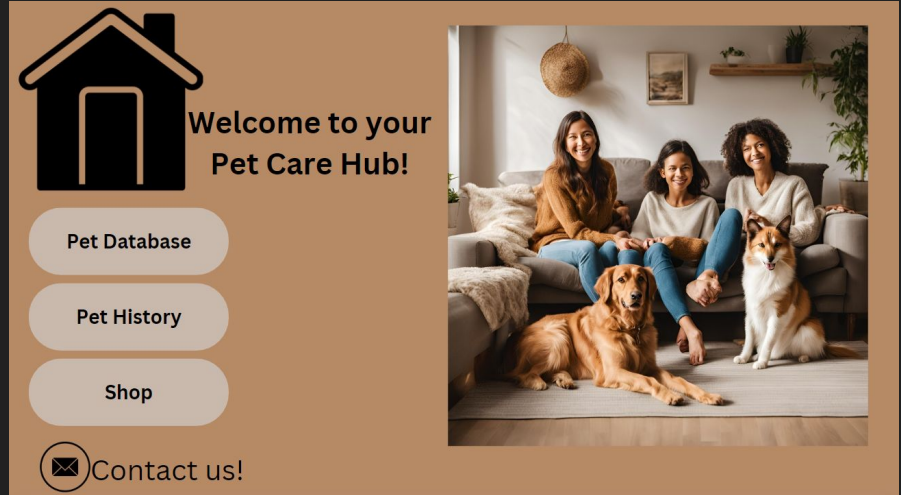
Assignment Three

Assignment Three Application Designs: In this assignment we began working on the UI for our project and began thinking about accessibility with our application.



Start up / Loading Screen

Home Screen



Enter your Pet's Information

Name

Pet Species

Breed

Age

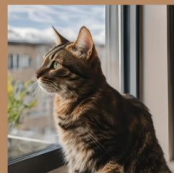
Special Notes

Upload Photo 

Pet Profile Creation Screen

Sample premade pet database

(Sample Page)



Sniffles
Cat
Tabby Cat
Age: 5

Special Notes::
Allergic to Citric Acid

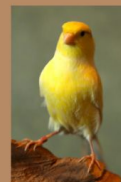
[View History](#)



Temmy
Dog
Poodle
Age: 7

Special Notes::
Vet Appointment on 5/23

[View History](#)




Loco
Bird
Canary
Age: 1



Special Notes::
Only eats special diet

[View History](#)



 Sniffles' History

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Took 50mg of Allergy Medication		Took 50mg of Allergy Medication		Took 50mg of Allergy Medication		Took 50mg of Allergy Medication





Pet Calendar with advanced view

Sniffles-Monday, May 24


-Took Prescribed
50mg of Allergy
Medicine

Special Notes: Did not finish
cat food.



Shopping Center

Shopping Center

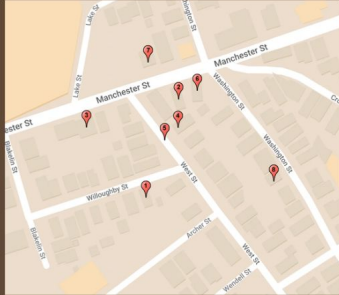
Your location 

Preferred Brands

Nearby Stores

☒ Enable Email Alerts

Nearby Stores



Store A - 2 miles

Store B - 10 miles

Store C - 17 miles

Store D - 20 miles

Pet Store locator

Food Tracker with food inventory -
Idea from a classmate

Food Tracker



Sniffle's
Food

Food Brand: Kibbles

Current Feeding Schedule

Edit

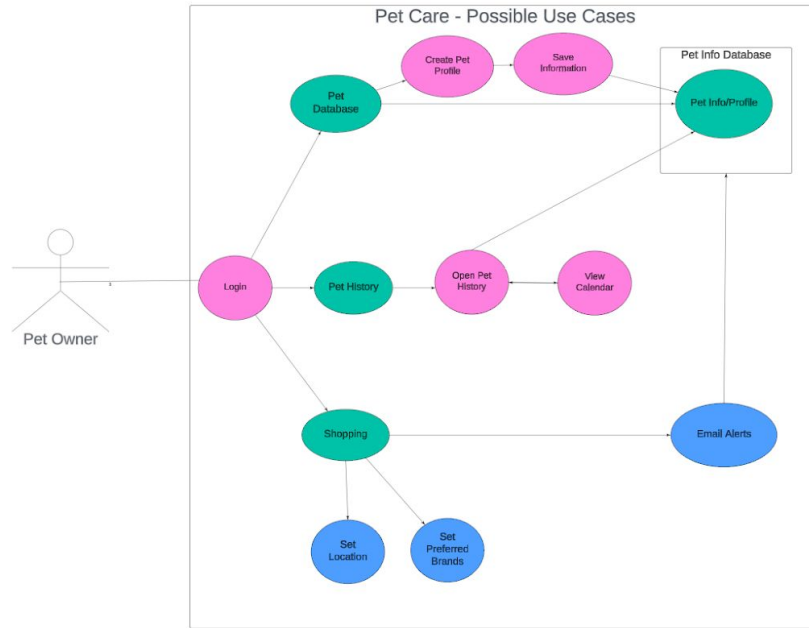
Sniffles

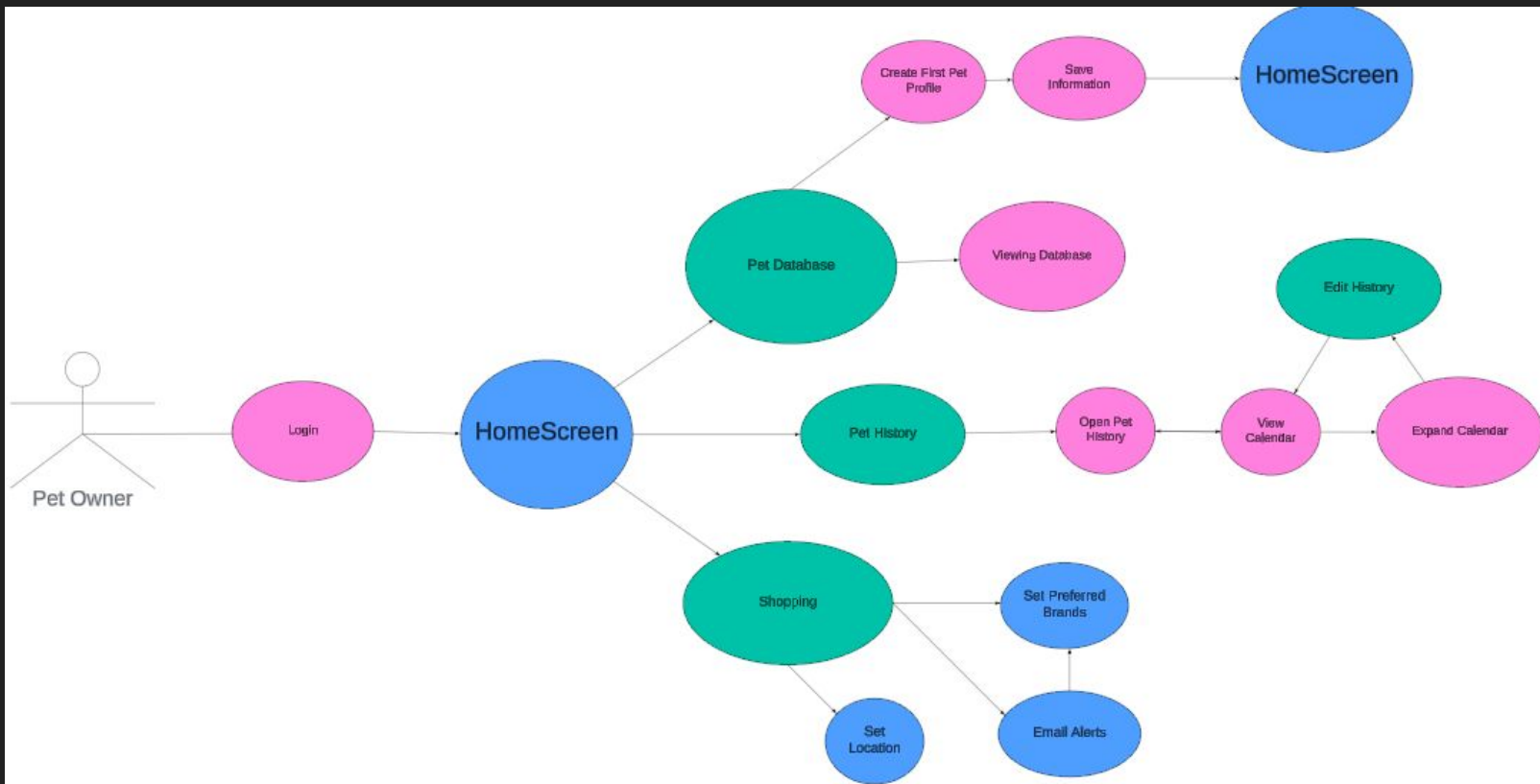


Remaining Food in Storage

40%

As part of this Assignment, we also worked on Use Cases and the process flow!





Assignment Four - Updated with PoC

Assignment Four: Project Requirements (PRD) - For this assignment we focused on three main aspects of our projects:

- Required Features: Pet Profiles, Pet Calendar, Pet Shopping, Pet Alerts

- Desired Features: Mobile Integration, Dedicated Pet Shopping Center, Pet Breeding Manager

- Aspirational Features: Automatic Feeder Integration, PetzCare Social Media Integration

PRD - COMP 490/L

Team CAMZ PetzCare

1. Project Introduction

1.1 Project Name:

PetzCare - PetzCare is a desktop application that allows pet owners to manage, create, view, and edit pet profiles and help manage their pet's lives.

1.2 Purposes and Uses:

With our application we plan to implement features that allow for users to organize aspects of their pet's life. With a simple, easy to use UI users can manage their pets' health. This will come in the form of a pet history calendar, food reminders, and other alerts.

1.3 Target Audience:

- Families with their family pet(s), hence a need for a simple UI.
 - Pet Breeders need to manage specific pet feeding and medication needs.
 - Veterinarians with need to communicate with pet owning clients
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2. Our Features

2.1 Required Features

There are a number of features that our application will need to be able to perform in order to ensure happy pet owners!

1. Pet Profile Registration

Users will be able to register their pets into our database and create a pet database with all of their pets. Pet Profiles will be including

- Pet Name
- Pet Picture
- Pet Breed
- Pet Age

Upon creating their pet profile(s) users will be able to view and change them at their own discretion.

2. Pet Calendar:

Another important aspect of our will be the owner's management features through our calendar. With the calendar users can input a variety of important information our their pet's daily lives including:

- Pet Feeding History
- Pet Medical History (i.e daily medicine intake)
- Pet Grooming, Veterinary, or other kind of appointments

3. Pet Shopping:

This feature will allow users to select preferred pet brands and be able to use their location to find nearby pet stores and be able to locate the preferred product!

4. Pet Alerts:

Alongside our Pet Shopping feature we plan to be able to send food inventory alerts that can remind users that they need to purchase more food for their pets. This would need a pet food inventory tracker.

2.2 Desired Features

If time and features are being properly and successfully implemented in these two semesters are a number of features that our team is looking forward to being able to put work into implemented for a more in depth user experience.

1. PetzCare Mobile Integration:

We are hopefully looking to work on mobile integration for our app including the following features:

- Mobile Notifications for possible forgotten pet alerts
- Mobile phone application with pet database integration

2. PetzCare Shopping Center:

We are hoping for users to not only be able to search for retail stores for the desired pet products but also be able to access online retailers and purchase desired products directly from our application.

3. PetzCare Pet Breeder:

While families are the predominant animal owners with their pets, we also hope to be able to integrate features that would help for people who work with animal breeding. (i.e. fish breeding with water temperature and lighting and dog breeders)

2.3 Aspirational Features

While we would hope to be able to develop these features into our project there are both financial and time limitations that may limit the progress that we could make on these potential features.

1. Automatic Feeder Integration:

Our plan for this feature would be for our application to be able to synchronize with automatic food dispensers and be able to track how much food was dispensed and how much food is remaining. A main challenge with this is finding and purchasing a food dispenser that would work for this project and production issues that may arise from this.

1. Social Media Connection:

We would also love for our clients to be able to share and update social media profiles directly in our application (X, FaceBook, InstaGram etc) and possibly to save videos directly in the application.

- Videos and Pictures could be saved and linked directly to specific pet profiles
 - Could possibly have affiliated social media accounts that could act as customer support / outreach.
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3. System Design

1. Frontend:

Our Frontend Development will be handled with both HTML and CSS to ensure that our project has a smooth user experience.]

2. Backend:

Our backend development will be done while working with Firebase and its integrated databases

3. Database:

For the management of our Databases to create/handle/store pet information for the pet profiles we plan on working with either MSSQL or MYSQL. Our team is currently weighing the pros and cons of each database manager with our familiarity in their environments.

3.2 Database:

Upon starting work on our project our team has turned to working with Firebase to handle both Database management and the hosting of our application. This change was made to provide an ease of access and let us work in environments that our team is more familiar with.

4.API Management:

There are a number of useful APIs that can aid in the functionality of our application and development towards our features

- GoogleMaps API - For the Shopping Center store locator
 - GoogleCalendars API - For the calendar alerts
 - Other External PetAPIs - There are a number of other pet related APIs that could be used to develop family oriented and appreciated features.
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4. Usability, Security, and Scalability

Our team understands our target audience of our application, that being mostly families with pets. With that fact in mind, we need to consider how to best design our app to make sure users aren't lost or feel like features aren't properly connected.

- We will need to ensure connectivity with profiles and the calendar
- Ensure synchronization between edits made on the calendar vs on specific pet profiles
- Ensure ease of access for inventory and alert tracking

While our application isn't asking for holding personal information about users, many people still view their pets as part of their family and we will need to make sure that their data is secure.

Finally, Scalability is also going to be an aspect of this project that we will learn and develop along the way. With our aspirational features, we may need to consider data and user scalability in a new way:

- If we allow for users to not only save and send pictures but videos as well with social media (an aspirational feature) the scale of our project will be heightened dramatically
 - Of course, we will also be working with scalability simply on the number of projected users and the number of pets they have. Currently our team is projected that we will be working with an average of two pets per user (or household) but will need to be prepared for outliers in that projection
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5. Meet our Team and our Tools

1. Team Members:

- Adam Zuniga
- Adrian Carreno
- Emily Alvarez
- Hassanudeen Muhammad

2. Pre-Development Tools:

Our team has worked on diagrammed and preparing our project to ensure that we can proceed into development smoothly, for our diagraming we have worked with:

- LucidChart - Work with UML Diagramming
- Draw.io - Work with the architecture design
- Canva - Work with our application / UI design
- Google Docs - For our documenting
- Github - Organization of assignments and resources

3. Development Tools:

As we proceed into development we will be mainly working with the following tools and environments:

- VSCode - For general production
- MS SQL / MYSQL - For database management

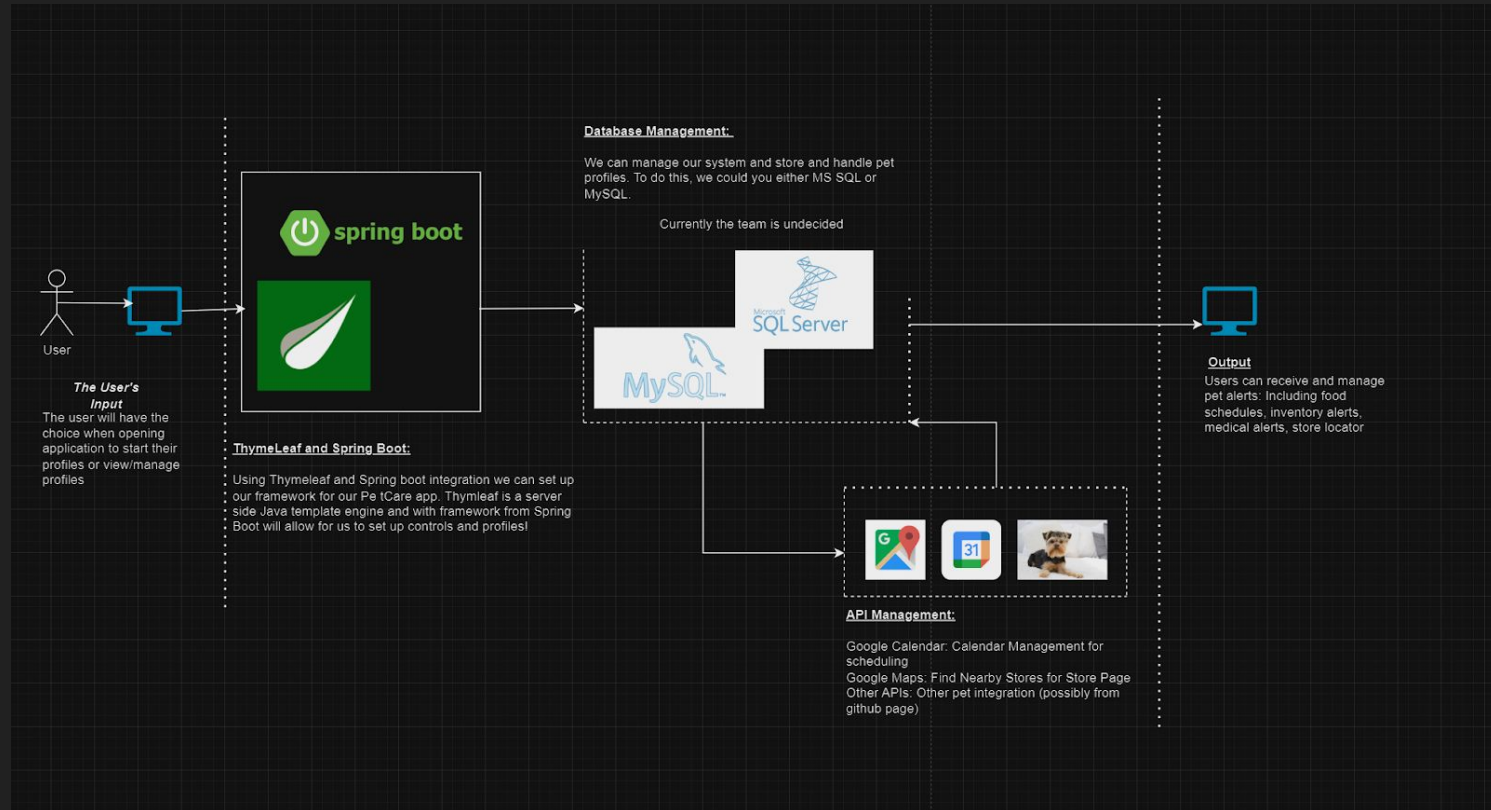
- OnlineGBD - Online debugger and Compiler
 - Other Online/Cooperative IDEs
 - Github - To share and manage resources
 - Draw.io / LucidChart - For further visual representation of future elements of the project
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5. Conclusion

Our team is looking forward to having a successful two semesters and completing a project that we can be proud of!

Assignment Five

Assignment Five:
Architecture Design - This assignment had us focus on what the framework of the actual project will be.



Assignment Six

Assignment Six: Ethical, Legal, and Security Issues

For this assignment we focused and learned about potential liabilities that may arise from working on this project.

The main points that we discovered were

- **Ethical Concerns** - Our app provides for pets and in particular serving pet owner's families.
- **Legal Concerns** - With medical records of pets, we need to ensure privacy of the clients, pets, and the veterinarians providing for them.
- **Security** - Security issues with securing our pet database and pet profiles.

Ethical Issues

While our Pet Care application our team has several ethical and privacy issues that we need to take into consideration. While the main point of our data that our application will need to operate will be in the form of their pet's information pets are still valued members of families. Alongside basic pet information, users will have the opportunity to set up and record medical records of their pet which means possible records of the veterinarian who provides for the pet which will need to be protected. Naturally, our app will also need to be responsible for the protection of basic user information and just their pet's details. These protections will come through with the form of following industry practices of security and ensuring security can be built throughout the entire process of software development. Fortunately for our team due to the nature of application we aren't as vulnerable to user discrimination and exploitation. Generally pets are never considered to be aspects of a person's lifestyle that is generally exploitable but still important and valued nonetheless

Legal Issues

Our team also has taken into consideration many legal issues that need to be addressed in order to operate a successful application. First and foremost our team needs to ensure the proper licensing agreements with APIs, libraries, and frameworks. Additionally, due to the fact that we are allowing users to upload photos of their pets alongside medical records we need to consider security a priority due to potential legal liability that may befall our team. Furthermore, if our team finds development to be running smoothly and goals are being met promptly we may implement further social media integration that needs to be handled properly. For this, we need to ensure we are integrating certain social media apps properly and that data isn't susceptible to outside hackers who would try to steal that information.

Security Issues:

With our pet care, we are considering security pet profiles to be a major point of security. Pet profile databases contain information regarding pet names, ages, breeds, etc and are going to become the center point of our application. In regards to our databases, our team will need to be promptly aware of potential SQL injections that could possibly infect and destroy or even sell the user's data. Throughout development of our pet care application this will become a primary focus throughout the entirety of development. Security as an issue is best solved when the whole team can work and prioritize as development continues instead of at the end of the development. Once again, if our social media features are able to come into fruition, social media protections, both for our team and the user, will need to be managed and secured as well.