

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 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 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.

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 connect:

- 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.

Security will also become a major priority depending on the scale and development of medical records with pets and their veterinarians

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 diagramming 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
 - FireBase- For database management and Hosting
 - 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!