My Pet Buddy

Software Requirements Specification

23.10.2023

Fay Alnefaie
Jana Ghazi
BushraAlsulami
Ghala Alqarni

Lead Software Engineers

Prepared for
Foundation of Software Engineering Course

Table of Contents

Table of Figures

Table of Tables:

1. Introduction

1.1 Purpose

The purpose of this software requirements specification document is to clearly define the functional and non-functional requirements of the My Pet Buddy software, which will be an application.
This document should serve as a comprehensive guide for the development team, ensuring a shared understanding of this software.

1.2 Scope

The Software is named "My Pet Buddy."
It aims to achieve these objectives: simplifying the pet adoption process for pet lovers, providing opportunities for pet enthusiasts to volunteer as pet-sitters or dog-walkers for the center's customers. Our primary goal is to ensure ease and convenience for pet owners when scheduling a wide range of pet-related services.

To achieve these objectives our system has the following software products:

Adoption Management System: A software product designed to facilitate the adoption process by connecting homeless pets with caring individuals who want to provide them with a loving home, ensuring safe and responsible adoptions. This system includes features such as pet profiles, matching algorithms, adoption applications, and administrative tools for managing the adoption process efficiently.

Volunteer Management: A software product that eases the volunteer work process by offering a questionnaire to those interested in volunteering for pet-related services or helping with events and fundraisers making it easy for them to get involved.

Scheduling and Reservation System: A software product specifically made for managing scheduling services related to grooming and veterinary care. Note that this system does not include pet pickup services, and customers are responsible for dropping off their pets at the center.

Customer Service Support Software: A software product that answers inquiries and deals with complaints using features such as a ticketing system for managing inquiries and complaints.

2. General Description

2.1 Product Perspective

The My Pet Buddy software, as a standalone mobile application, aims to provide a comprehensive solution for pet owners and those interested in pet adoption. It offers a range of features, including easy scheduling of grooming and veterinary services, along with secure storage for pet medical records and essential information. Moreover, the software provides opportunities for volunteers to engage in activities like dog-walking and pet sitting.

2.2 Product Functions

The system will perform the following key functions:

1. *Facilitating pet adoptions by matching homeless pets with adopters and ensuring safe adoptions.*
2. *Managing pet-related volunteer work efficiently.*
3. *Allowing users to schedule grooming and veterinary appointments for their pets.*
4. *Providing effective customer service support*

2.3 User Characteristics

The Pet Care Center System users fall into two groups:

1. *Users: Users can either be pet owners or Volunteers. Users can adopt pets, schedule any pet services or help volunteering in events or pet volunteering, and contact customer services.*
2. *Admins: people who work at this pet center, so that they can answer customer's inquiries.*

The system should be user-friendly for all levels of technical abilities.

2.4 General Constraints

While developing the Pet Care Center System, the following general constraints should be considered:

1. *Compliance: The system should adhere to applicable laws and ethical guidelines related to pet adoptions, volunteer work, and the handling of personal and sensitive information.*
2. *Security and Privacy: The system should incorporate measures to protect the personal*

information of users and maintain the confidentiality, integrity, and availability of data.

3. *Color Scheme: The user interface, graphics, and visual elements should reflect the center's brand identity and keep consistency with its established colors.*

4. *Maintenance and Support: The software should include provisions for ongoing maintenance and updates. It should be designed to ease compatibility with future technologies*

3. Specific Requirements

2.5 External Interface

3.1.1 User Interfaces:

Home Page

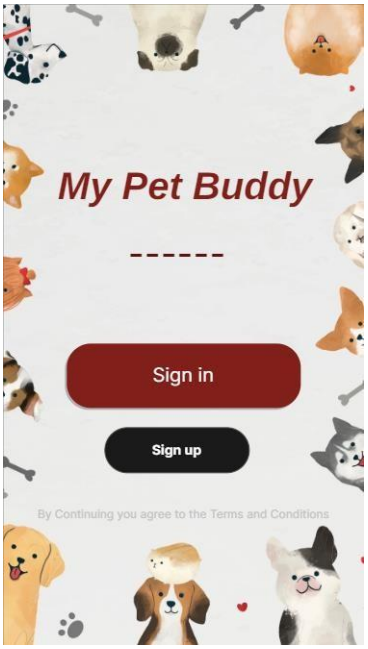

Figure 1 Home Page

Sign in

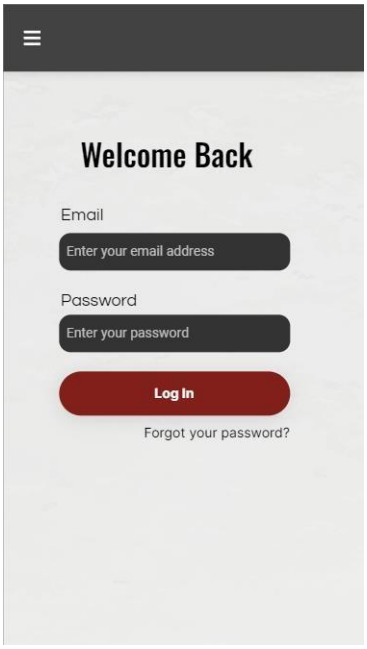

Figure 2 Sign in

Home

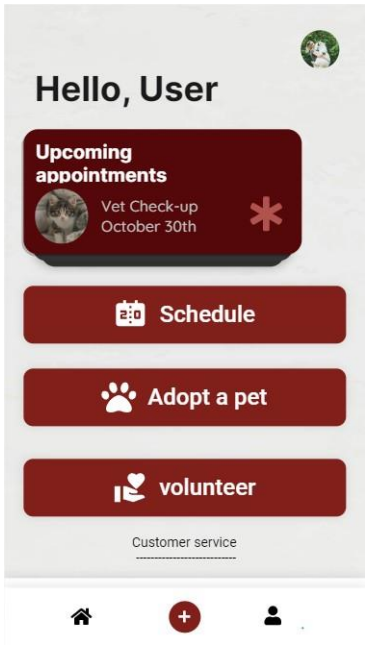

Figure 3 Home

Profile

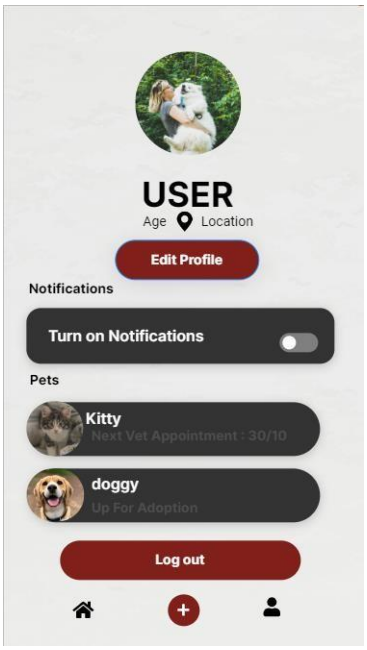

Figure 4 Profile

Register a Pet

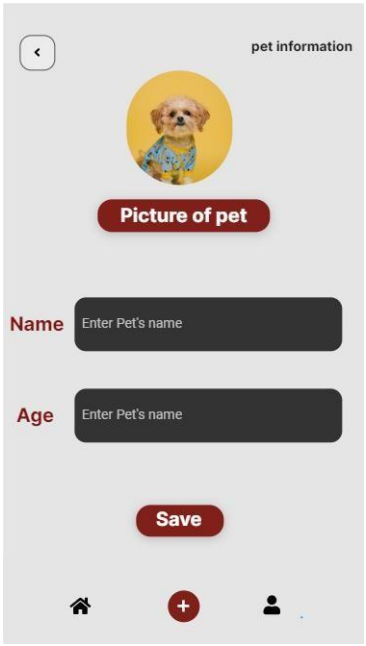

Figure 5 Register a Pet

Adopt a Pet

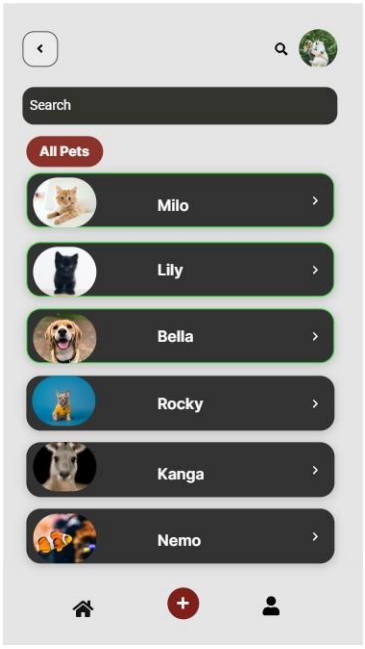

Figure 6 Adopt a pet.

Scheduling

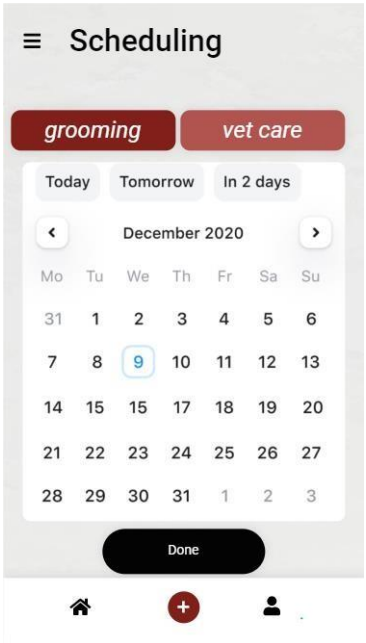

Figure 7 Scheduling

Confirm Scheduling

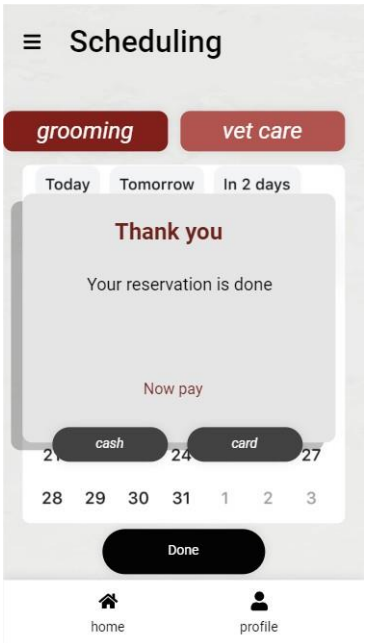

Figure 8 Confirm Scheduling

3.1.2 **Hardware Interfaces:** *This application works on IOS.*

3.1.3 Software Interfaces:

Operating System: The system will only work on IOS devices.

Programming Language: The language that will be used to code this is Swift.

Connections: The system will use GPS technology for location-based services and Decision Logic to verify bank information and balance, ensuring accurate financial transactions.

Data Base: a MySQL Data Base will be used to store the user's data.

3.1.4 **Communications Interfaces:** *The system will use Wi-Fi.*

2.6 Functional Requirements

3.2.1 Authenticate Account:

- *Introduction: The Authentication process is a common action used to access various online servicesand platforms. It involves proving your identity to gain authorized entry.*

- *Rationale: the rationale for implementing a sign-in and sign-out system is to enhance security, personalize user experiences, meet legal requirements, and establish user trust and accountability within the platform. These processes are fundamental to the effective functioning of online services and applications.*

- *Inputs: email or phone number and password*

- *Description: Users can sign in or register with email or phone numbers and sign out securely.*

The following conditions must be met for successful sign-in:

1. *Email or phone validation is required.*
2. *Users need to provide a valid email address or phone number.*
3. *Password verification is necessary during the registration process.*
4. *For sign-in, the platform validates the entered email and matches the password with the securely stored version.*
5. *Access is granted only if the email exists, and the password is correct.*
6. *If the conditions are met, the user will be allowed to enter and complete his requirements.*

- *Outputs: account confirmation.*

3.2.2 Pay:

- Introduction: *The payment system is designed to facilitate transactions for users. It offers*

two primary payment methods, cash, and card, providing flexibility and security in the payment process.

- Rationale: *This payment system is designed to give users the choice between cash and card payments for convenience. It ensures transparency with cash receipts and adds an extra layer of security for card payments by verifying them with the bank, building trust with users.*

- Inputs*: Invoice Number and Card info if the user chooses to pay with cards.*

- Description:
  The pay system is designed to provide a seamless and secure payment experience for users. It gives users the choice to pay with cash or card, accommodating different preferences. When users select cash, the system generates a receipt, ensuring transparency in the transaction. On the other hand, when users choose to pay with a card, the system collects and verifies card information to ensure the validity of the transaction, ultimately confirming the successful payment.

- Output: *The primary output of the payment system is dependent on the user's choice:*
  1. *If the user selects cash, the system generates and displays a receipt.*
  2. *If the user chooses to pay with a card, the system confirms the successful payment after verifying the card information with the bank.*

3.2.3 Scheduling:

- Introduction: *The scheduling requirements aim to enable users to select between grooming or vet care services, view available appointments, receive confirmation and receipt. messages, and receive a reminder message before the appointment.*

- Rationale*: The scheduling functionality exists to provide users with a convenient way to schedule appointments for grooming or vet care services. It ensures that users can access available appointment slots and receive necessary notifications for their appointments.*

- Inputs*: User selection between grooming or vet care services.*

- Description:
  1. *The system shall ask the user to choose between services, whether it is grooming or vet care.*
  2. *Upon user selection, the system shall display all available appointments for the selected service.*
  3. *After the user selects an appointment, the system shall display a confirmation and receipt message.*
  4. *The system shall send a message to the user 48 hours before the scheduled appointment.*

- Output:
  1. *Confirmation and receipt message after selecting an appointment.*
  2. *Reminder message sent to the user 48 hours before the appointment.*

3.2.4 Serving customers:

- Introduction: *The most frequent interaction on our platform involves serving customers. The system must support this functionality.*

- Rationale: *The quality of our responsive customer service is fundamental to user satisfaction and the overarching success of our platform.*

- Inputs: *Submit a complaint or provide feedback.*

- Description:

1. *The system is responsible for serving customers, which includes contact with customer service and participation in feedback surveys.*
2. *The system must provide users with available contact options for inquiries and issue resolution.*
3. *Users should be able to contact a customer service agent.*
4. *In the case of filing a complaint, the system must generate a support ticket for tracking and resolution.*
5. *The system should send a response to the user after contact.*
6. *The system must display a feedback survey for user participation to collect suggestions.*
7. *User suggestions should be collected through the survey.*
8. *For feedback provided, the system should generate a ticket for reference.*
9. *A thank you message should be displayed to the user.*
10. *If users successfully contact, the system will promptly and effectively address their inquiries, issues, or feedback.*

- *Output: Generates Ticket for complaint.*

3.2.5 Manage Pets:

- Introduction: *Our platform offers two primary functionalities: pet adoption and registration for using the center's services. The system must support these key features.*

- Rationale: *Enabling users to adopt pets and register their pets for center services are vital aspects of our platform. These functionalities contribute to user satisfaction and the overall success of our platform.*

- Inputs*: Adopting a pet: Input pet details, including accompanying images and for Registering a pet: Provide necessary information for pet registration.*

- Description:
    1. *Adopting a pet:*
       The system will allow users to input pet details to place up for adoption.
       Users will be presented with a selection of adoptable pets.

2. *Registering a pet:*
   The system will allow users to provide necessary information for registering their pets to use the center's services.
   Users will have the option to add multiple pets under their account.

- Output:
  1. *Adopting a pet: displays a selection of adoptable pets, allowing them to browse.*
  2. *Registering a pet: displays a successful pet registration message.*

3.2.6 volunteer:

- Introduction: *The volunteer requirements aim to provide users with options for volunteering in events or pet-related activities. The system should allow users to select their preferred volunteering option, display relevant information, retrieve volunteer profile information, and display thank you messages.*

- Rationale: *The volunteer functionality exists to engage users in volunteer activities, whether in events or pet-related tasks. It provides users with options to contribute to causes they care about and promotes a sense of community involvement and gratitude.*

- Inputs: *User selection between events or pet volunteering, User's age.*

- Description*:*
  1. *The system shall display an option for users to choose between events or pet volunteering.*
  2. *If the user selects events, the system shall display future events and allow the user to choose the event they want to volunteer in.*
  3. *The system shall retrieve information from the volunteer's profile and display a thank you message.*
  4. *If the user selects pet volunteering, the system shall ask the user for their preferred time and display a thank you message.*
- Output*: Thank you message after selecting an event to volunteer in or after selecting to pet-sit.*

2.7 Non-Functional Requirements:

3.3.1- Performance:

- The system will load a page in a maximum of three seconds
- The system will retrieve the pet's information efficiently if an error occurs the system will handle it in one second

3.3.2- Reliability:

- The system should be reliable in handling exceptions
- The system should perform without any error or failures 96% of the time

3.3.3- Availability:

- The system should alert the user about the downtime 48 hours beforehand.
- The system should be available 24/7 with 30 minutes down time per week.

3.3.3.1 - Usability:

- The system should have a user-friendly interface that should be easy to learn

- The system should ensure that people with disabilities can easily use it and provide some kind of accessibility for them.

3.3.4- Security:

- The system should lock out an account if there were three consecutive failed login attempts.

- The system should backup Sensitive information.

- The system should ensure data protection through standard encryption algorithms.

2.8 Use Cases:

3.4.1 General Use Case Diagram

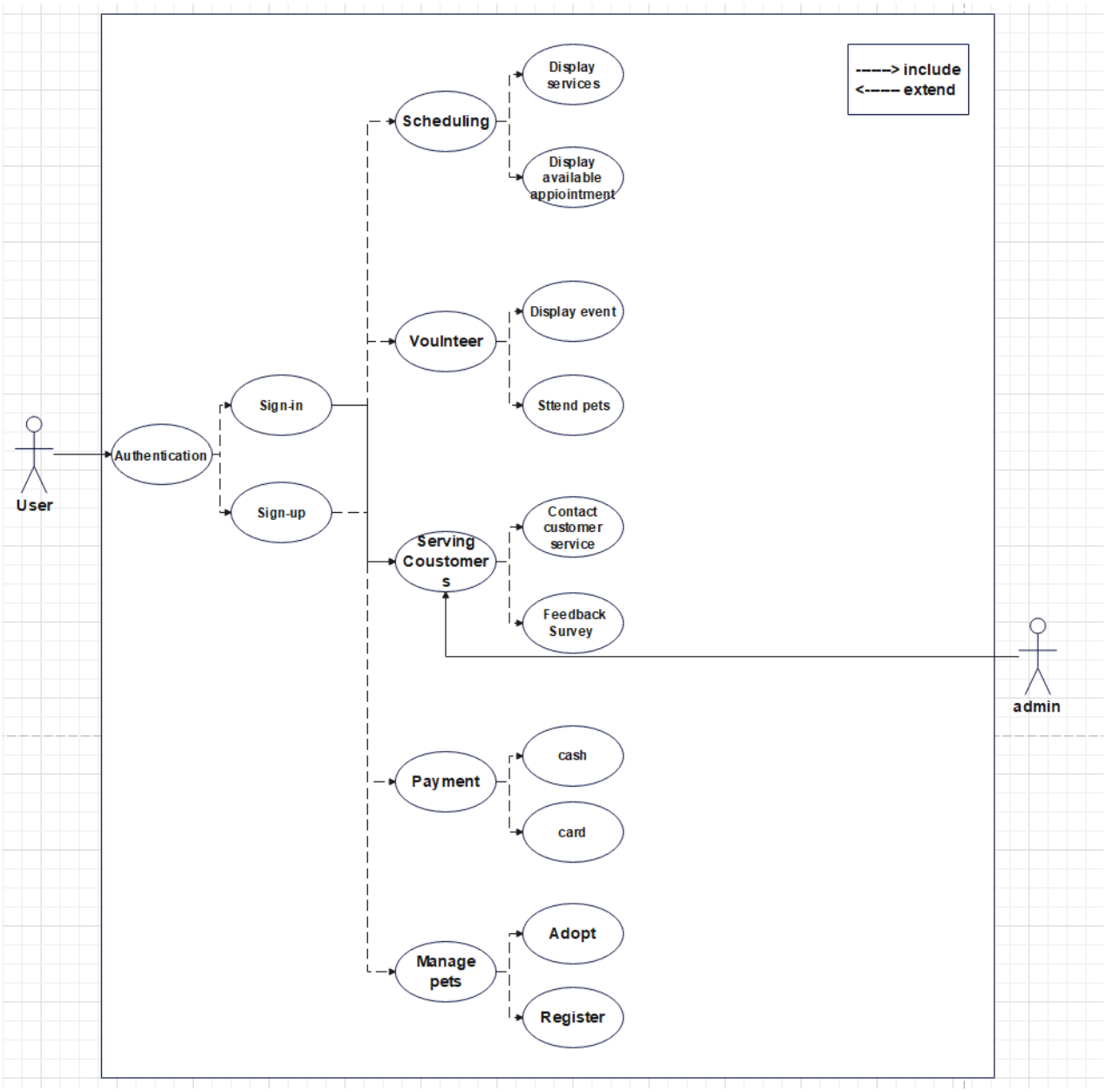

Figure 9 General Use Case Diagram

3.4.2 Use Case #1

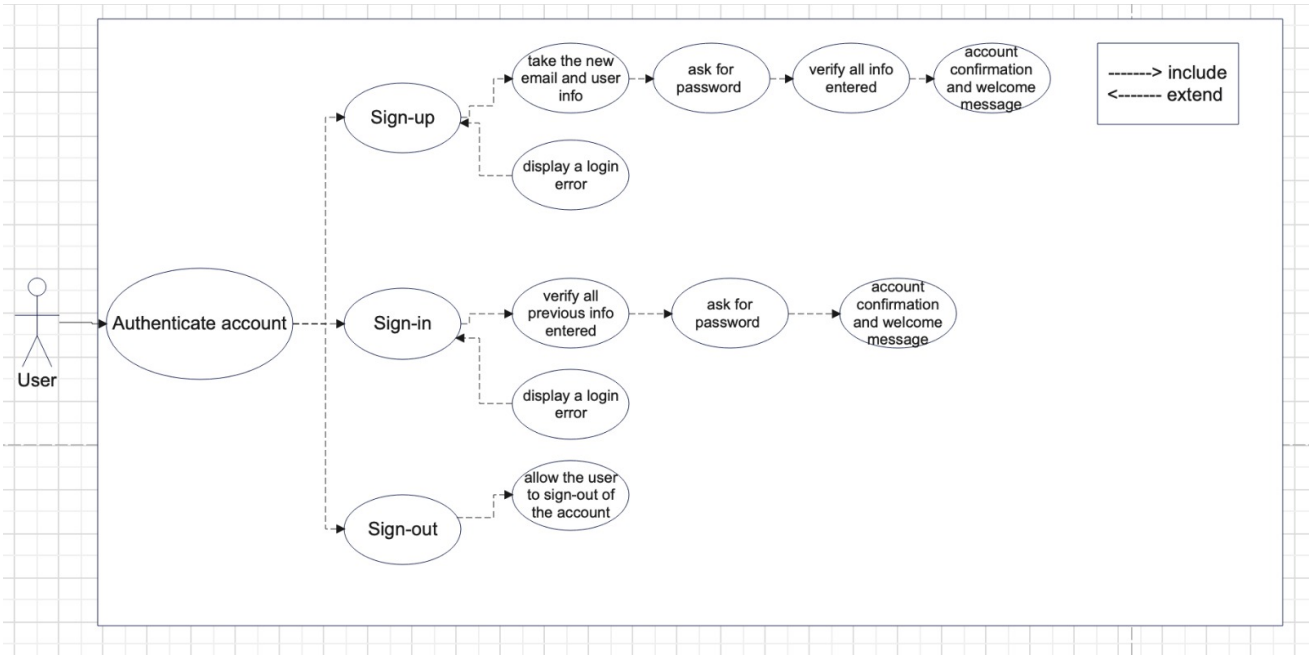

Figure 10 - Authenticate Account Use Case Diagram

Title	*Authenticate Account*
Actor	*User*
Scenario	*Sign Up: Begin by registering to establish your unique account within a system, where you'll provide your details for future access to services.* *Sign In: Once registered, use your credentials to sign in, confirming your identity and granting access to your account.* *Sign Out: user can sign out disconnecting from the account and ensuring data protection.*
Pre-Condition	*The user must sign in/up to benefit from the services*

Table 1 Use Case #1

3.4.3 Use Case #2

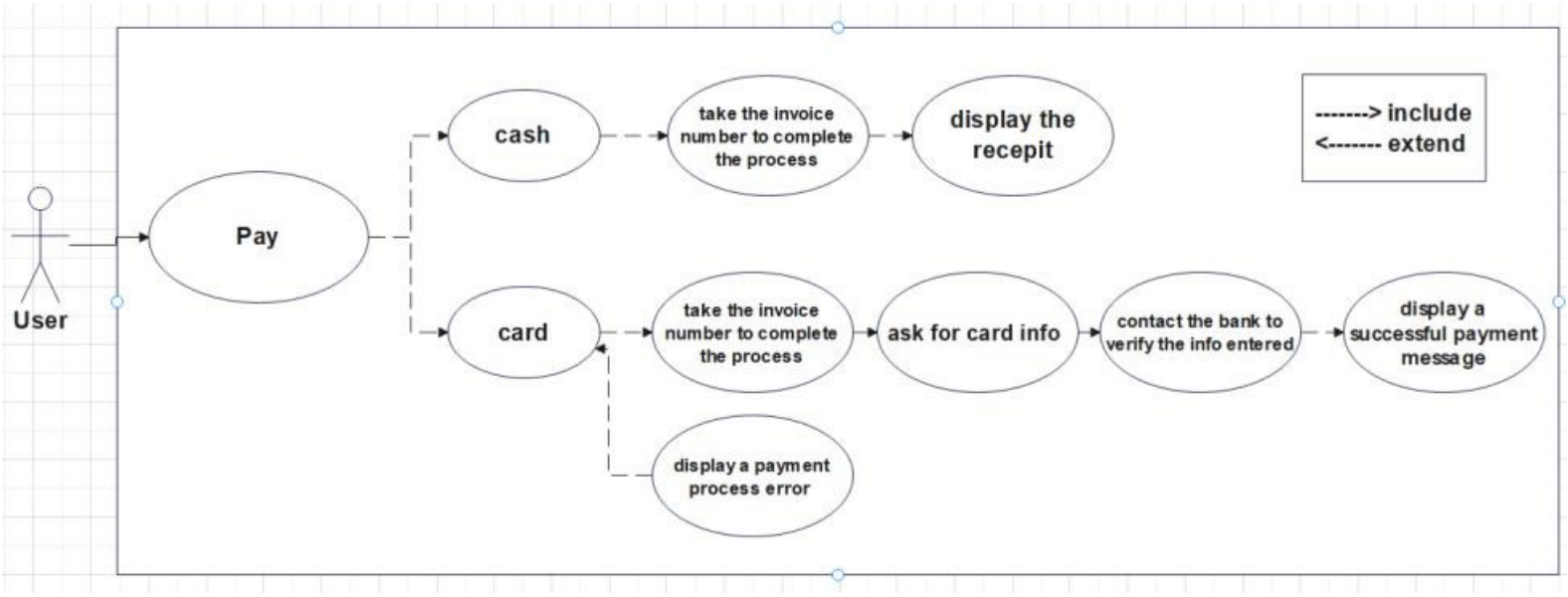

Figure 11 - Pay Use Case Diagram

Title	*Pay*
Actor	*User*
Scenario	*There are two methods of payment. The user will choose one of them, either cash or card. If he chooses cash system will display the receipt either by card the user will enter their card information, then it will contact the bank to verify the information, and finally it will display a successful payment message.*
Pre-Condition	*user must be signed in / user must have a reservation number.* *user must have an appointment scheduled*
Extension	*Credit card declined.* *incorrect card information*

Table 2 Use Case #2

3.4.4 Use Case #3

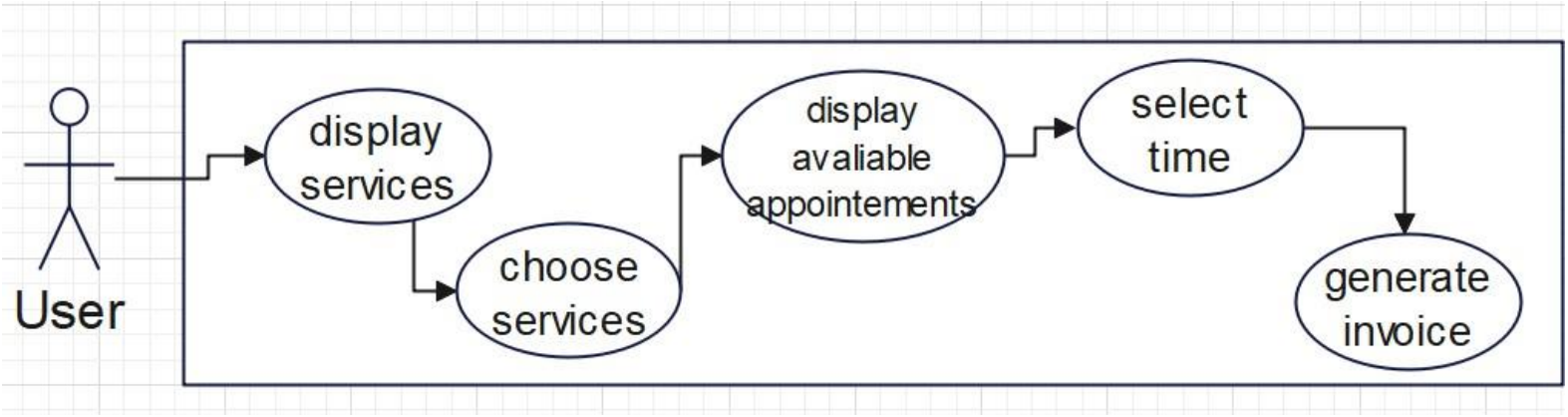

Figure 12 – Schedule Use Case Diagram

Title	*Schedule*
Actor	*User*
Scenario	Users will choose between services, whether it's grooming or vet care. Then the system will display all available appointments for the selected service, also display Confirmation and receipt message then the system will generate a reservation number for it. The System will send a message to the user, 48 before the appointment.
Pre-Condition	The user must choose one of the available appointments. The user must be signed in. The user must have their pet registered.

Table 3 Use Case #3

3.4.5 Use Case #4

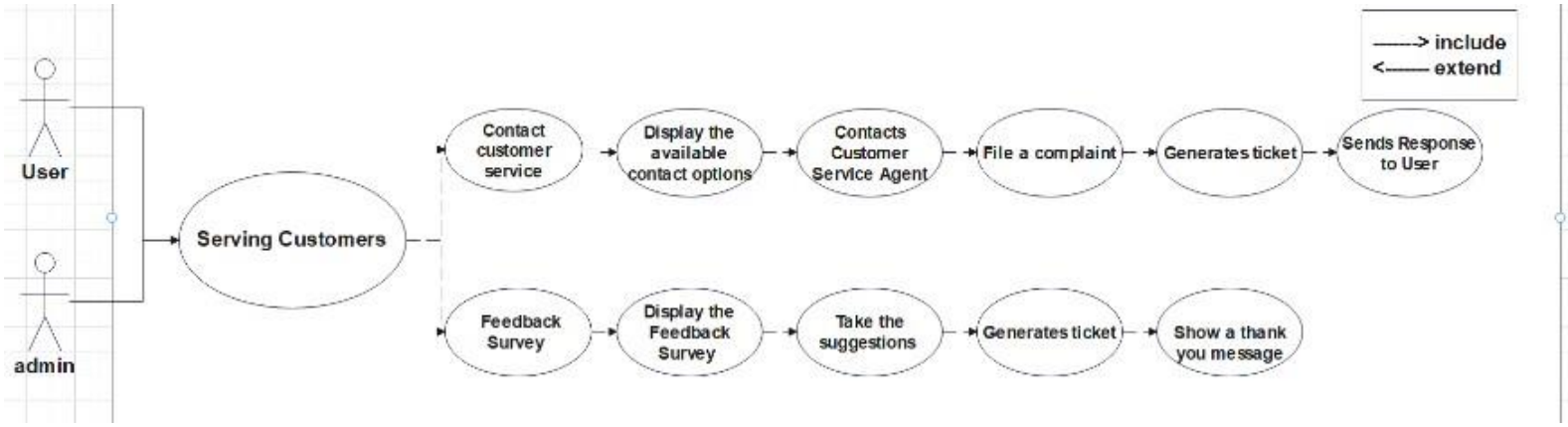

Figure 13 - Serving customers Use Case Diagram

Title	*Serving Customers*
Actor	*User, Admin*
Scenario	*The user contacts customer service agent, generate a ticket for the complaint if it exists*
Pre-Condition	*user must be signed in.*
Extension	*A problem we can't handle*

Table 4 Use Case #4

3.4.6 Use Case #5

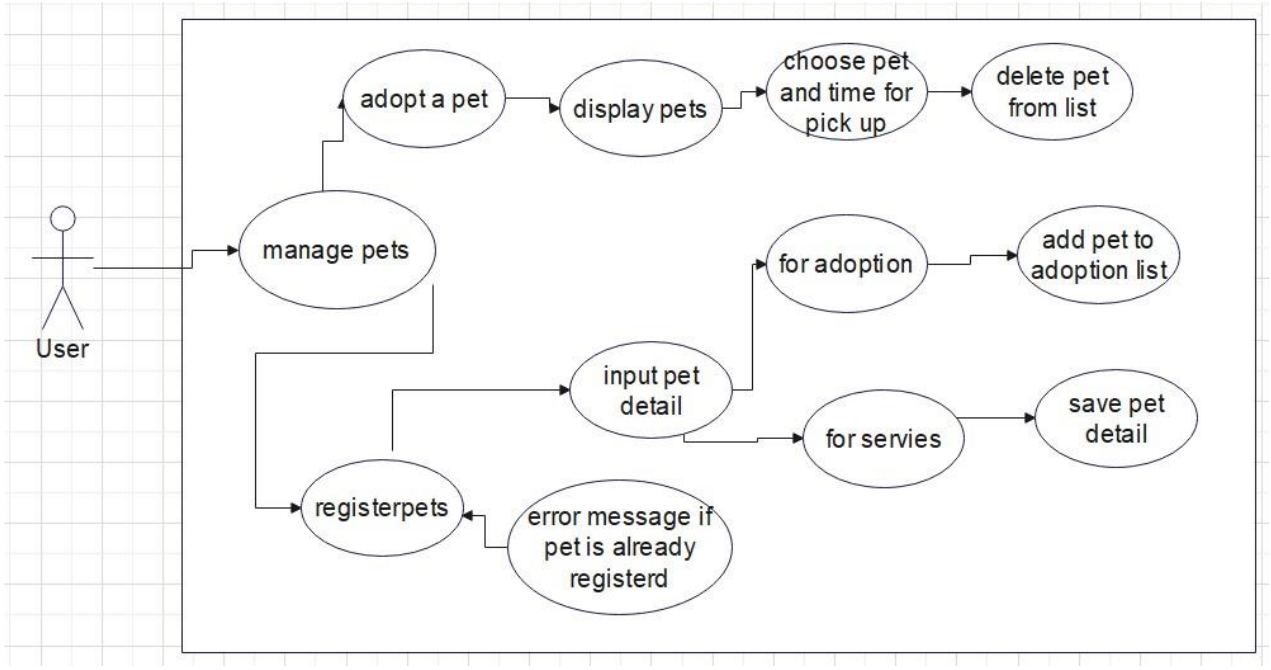

Figure 14 – Manage Pets Use Case Diagram

Title	*Manage Pets*
Actor	*User*
Scenario	The user will have a choice between adopting a pet or registering a pet. If they choose the first, all pets available for adoption will be displayed, then they can choose a pet and the preferred time for pick up. if they chose the second, they'll choose between registering them for adoption or services, if they choose adoption their pet will be saved to the adoption list, if they chose the latter, their pet info will be saved.
Pre-Condition	*user must be signed in.*

Table 5- Use Case #5

3.4.7 Use Case #6

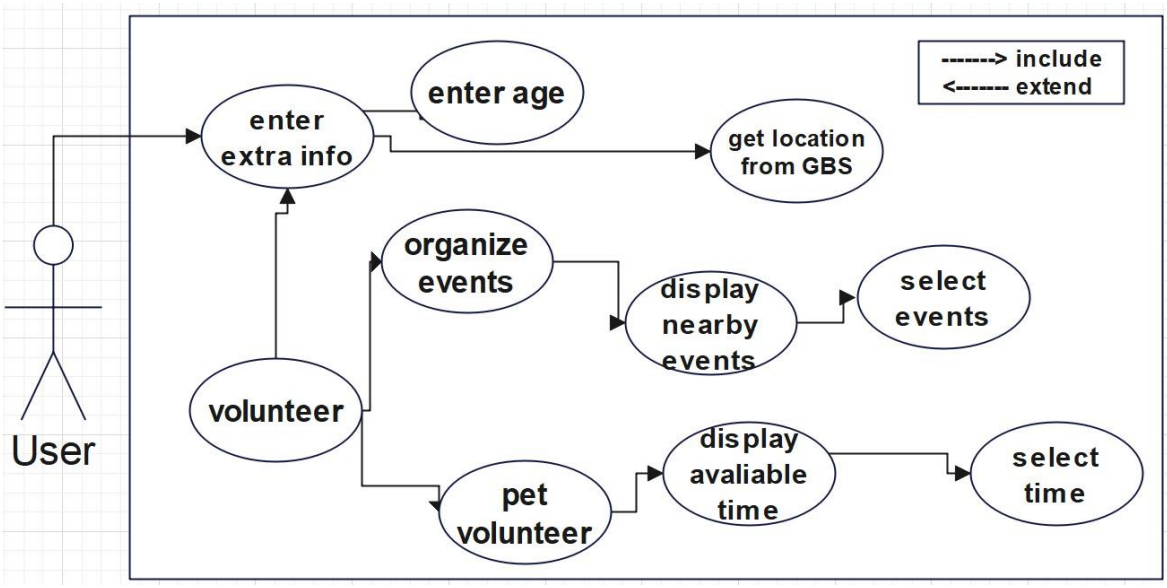

Figure 15 – Volunteer Use Case Diagram

Title	*Volunteer*
Actor	*User*
Scenario	*User will enter their age and location, if the user is older than 12 years old, they can then choose between volunteering in events or pet-sitting, then the user can enter their preferred time and the system will display all volunteering opportunity, then the user can choose one and a thank you message will be displayed*
Pre-Condition	*The user must choose one option.* *The user must be signed in.* *Must be over 12 years old.*

Table 6 – Use Case #6