PET VET

- FIND, BOOK, CARE... ALL IN ONE PLACE -

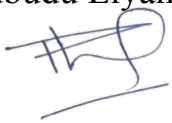
PROJECT PROPOSAL

Group No : 16

IS2201 Group Project

Proposed Project Supervisor (Academic Staff of UCSC):

Name of the supervisor: Mr. Pubudu Liyanage

Signature of the supervisor: 

Date: 27-06-2025

Proposed Project Co-Supervisor (Assigned by Course Coordinator):

Name of the co-supervisor: Ms. Sithara Fernando

Signature of the co-supervisor: 

Date: 27-06-2025

The client of the Project:

Name of the client: Mr. Pubudu Liyanage

Address of the client:

Contact person at client:

The contact number of the contact person:

e-mail address of the contact person:

TABLE OF CONTENTS

01. Introduction to Project

1.1 Project Overview

The Pet Care and Veterinary Management System is a comprehensive web-based platform designed to connect pet owners, clinics, vets, sitters, trainers, and shop sellers through a centralized system. It provides tools for appointment scheduling, medical records, pharmacy operations, shop sales, breeding and pet adoption listings, Lost & Found reporting, and location-based discovery. The system supports users with multiple roles (e.g., a user can act as both a trainer and a seller) through dynamic, module-based access.

Each registered veterinary clinic will have its own digital workspace within the system to manage bookings, staff, inventory, medical records, and sales, allowing them to operate independently as a clinic management platform.

1.2 Background Information

In the modern era of technology, pet owners desire convenient, safe, and full access to pet and veterinary care services. The majority of the clinics still make bookings and medical records manually, which leads to inefficiencies and limited access to the pet owners. In addition, service providers such as trainers and sitters lack a unified platform to reach clients.

1.3 Personal Motivation

Our team is passionate about creating an all-in-one pet care solution that benefits both clients and veterinary staff. Inspired by real challenges faced by local clinics and pet owners, as well as pet lovers, we aim to develop a system that reduces administrative burden, improves service quality, and ensures pet health and well-being.

02. Project Goal

2.1 Primary Goal

To develop a fully functional, secure, and user-friendly web application that supports pet health management, service booking, product purchasing, and clinic operations, accessible by multiple user roles with appropriate permissions.

2.2 Secondary Goals

- Enhance client satisfaction with automatic reminders and immediate pet health records access

- Enable clinics to minimize manual effort with automated reporting, scheduling, and inventory controls.

- Offer value-added services such as Lost & Found listings and location-based finding of clinics and service providers.

03. Scope of the Project

3.1 In-Scope Activities

- Module-based access and dashboards for administrator, manager, veterinarian, receptionist, client (pet owner), seller, sitter, groomer, trainer, breeder, and financial manager. A single user can activate multiple roles under one account (e.g., trainer + seller)
- Feature-Based Access (Permission-Based)
- Each veterinary clinic will have its isolated panel for managing appointments, pharmacy stock, medical history, sales of shop items, staff management, and providing a comprehensive clinic management system.

- Appointment Booking System supporting online, phone for vet and grooming appointments with online payments.

- Medical Record Management: Vets can create and update pet health records including vaccinations and treatments; pet owners can view their own records according to the multiple pet profiles.

- Centralized Pet Shop: Admin-managed product listings (e.g., food, toys); users can place orders and download invoices.

- Breeding, Sitter, Grooming, Trainer, and Boarding Program Support
    - Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.

- Lost & Found Section: A dedicated feature for users to report and search for missing pets. Users can post listings with details and images to help reunite pets with their owners.

- Pet Adopting and Selling

- Educational Resources: Static pages or downloadable content on pet care, health, and responsible ownership.

3.2 Out-of-Scope Activities

- Mobile Vet Clinic and Home Visit Management

  While home visits by a veterinarian are useful, vet travel route management, visit confirmations, and map-based coordination are not part of this stage.

- Real-Time Chat or Video Consultations

  Live messaging or video conferencing between pet owners and veterinarians (telemedicine) features will not be implemented.

- Automated Notifications and Alerts

  Appointment reminders and confirmations via SMS or email will not be included in the present release. Handheld communications will be achieved manually or through simple status updates on the system.

- Community Space (Pet Social Hub):

  A dedicated space where pet owners, sitters, vets, etc, can share stories, tips, photos, and experiences. This social hub helps build a supportive pet community, encourages interaction, and strengthens user engagement on the platform.

  .

3.3 Project Boundaries

The system is deployed as a centralized, multi-clinic platform, where one or more independent veterinary clinics can register and manage their operations in isolated digital workspaces. The system does not, however, synchronize real-time data with outside clinic databases outside the platform. It handles only outpatient treatment, core veterinary services, and pet-related functionalities within the platform's own environment..

04. Objectives of the Project

- Develop a secure multi-role login system for administrators, clinic managers, veterinarians, receptionists, clients, sellers, sitters, groomers, and trainers.
- Create an easy-to-use appointment booking system via online or over the phone.
- Allow vets to manage pet medical records and issue prescriptions securely.
- Enable clients to manage multiple pet profiles and view their health history and invoices.
- Helps independent vet clinics to manage all their services and functionalities.
- Build a pharmacy module to manage medicine stock, prescriptions, and expiry tracking.
- Add a pet shop feature where clients can browse and order products online.
- Provide booking and management features for other pet services, including sitters, trainers, and grooming services.
- Include a Lost & Found module to help owners post and find missing pets.

05. Project Feasibility

5.1 Technical Feasibility

Technical feasibility confirms that the required technologies and resources are suitable and sufficient to complete our project successfully. For this system, we will be using well-supported and basic web technologies as mentioned below.

HTML, CSS, and JavaScript will be used to design the user interfaces.

PHP handle the server-side , database interactions, and dynamic content.

MySQL serve as the main database to store user details, pet records, appointments, shop orders, and other related data.

In addition, for specific functionalities, a basic payment gateway will be integrated to enable secure online payments for shop purchases and selected services.The Google Maps API will be used to display clinic locations and help clients find nearby sitters, trainers, and other service providers.

5.2 Schedule Feasibility

We assesses whether the project can be completed within the planned timeframe using the available team effort.

The project is designed to be completed within a 10-month period, with well-defined phases for requirements gathering, system design, development, testing, and final deployment.

Weekday commitment	1 hour per day (Monday to Friday)
Weekend commitment	4 hours per day (Saturday and Sunday)
Weekly total per member	(5 days × 1 hour) + (2 days × 4 hours) = 13 hours
Estimated project duration	8 months (approximately 32 weeks)
Total per member	32 weeks × 13 hours = 416 hours
Total for the team (4 members)	416 hours × 4 = 1664 hours

5.3 Resource Feasibility

Resource feasibility of the Pet Care and Service Management System is viable and good. The project team members possess the necessary technical skills in HTML, CSS, PHP, JavaScript, and MySQL, which are the key technologies used in this system. They have gained these skills through coursework and other academic projects done previously, so the development work can be carried out efficiently.

For some of the features, such as online payment and location services, the project will leverage robust external services such as a basic payment gateway which offer free usage tiers suitable for student projects.

Additionally, the project will be guided and advised by a experienced supervisor and co-supervisor, who will help keep the project on track and deliver its technical and functional goals.

Through proper leverage of these human, technical, and support assets at their disposal, the team has a high possibility of delivering the project successfully and handing over a stable, user-friendly solution.

5.4 Legal and Ethical Feasibility

Legal and ethical feasibility of the Pet Care and Service Management System is well catered to in the existing legal structure of the country. The project will meticulously comply with all applicable laws and regulations that apply to electronic services and online transactions, including data protection and privacy laws.

All data collected hereunder concerning people and animals through the system will be handled with complete confidentiality. Safe storage of data and restricted access based on user roles will be made possible by implementing appropriate measures. Transparent notice of collection, use, and safeguarding of users' information will be presented to users with their explicit consent wherever required.

Ethical principles such as transparency, accountability, and users' privacy will be the basis on which the system will be designed and operated. Responsible pet ownership and veterinary practice professionalism, sitter and trainer business professionalism, as well as other ancillary businesses, will also be promoted by the system.

Adherence to all relevant legal requirements and high ethical standards will enable the system to secure trust from all the users and long-term credibility and sustainability.

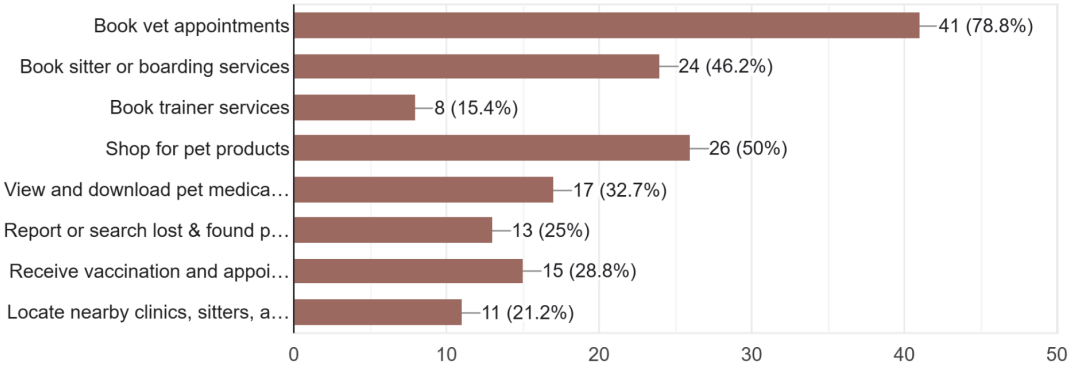
5.5 Social Feasibility

Social feasibility of Pet Care and Service Management System is very positive. The system aims to address real issues of pet owners, veterinary clinics, sitters, trainers, and other allied service providers by offering a handy, one-stop online application for pet care-related tasks management.

In order to verify the solution against user requirements and expectations, a specially crafted Google Form was created and distributed to obtain positive criticism from potential users and stakeholders. Through this form, the team gathers data on preferred features, booking habits, and anticipated services, which allows them to create a system that will enjoy wide acceptance and everyday use among the community.

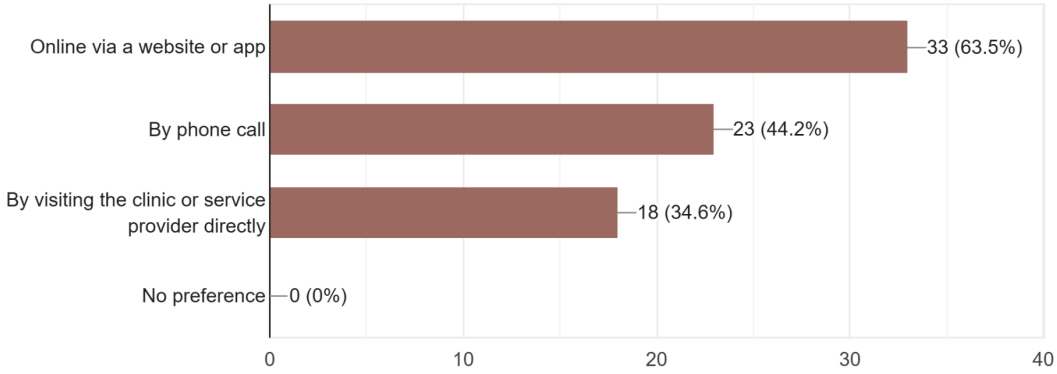
Which of the following services would you like to access through this system?

52 responses



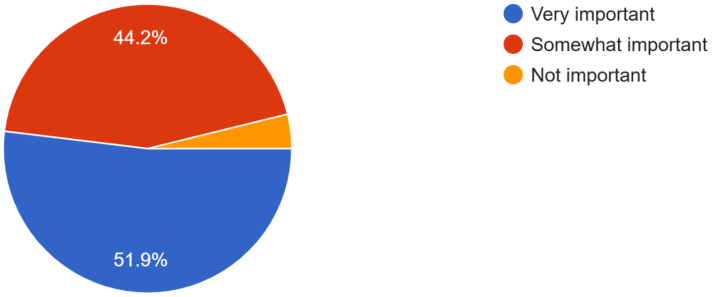
How do you usually prefer to book pet services?

52 responses



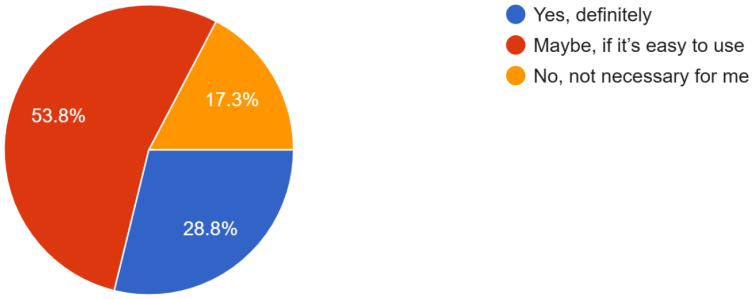
How important are appointment reminders and alerts for you?

52 responses



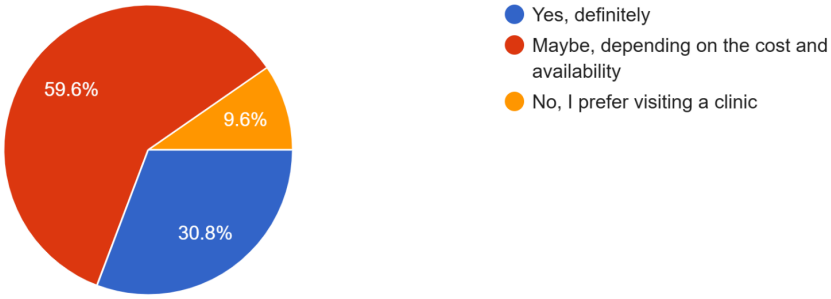
Would you use a lost & found feature to report or find lost pets

52 responses



Would you use a mobile veterinary clinic service that allows a vet to visit your home?

52 responses



By incorporating users' feedback from the start, the project is socially feasible and is sure to gain trust and active use by its target .

06. Deliverables of the Project

6.1 Functional Deliverables

This part outlines the key software components that will be delivered in the project. These features are designed to ensure the platform is efficient, user-friendly, and functional for clinics, service providers, and pet owners alike.

Multi-Role Web Application

A secure, centrally managed platform that allows users to take on multiple roles (e.g., a user can be both a trainer and a seller). Dashboards are dynamically generated based on selected roles.

Supported roles/modules:

- **Administrator:** Full system management—users, services, content, global analytics.
- **Veterinarian:** Manages appointments, creates/views medical records, and prescribes medications.
- **Clinic Manager:** Oversees the complete clinic workspace, including staff management, appointment scheduling, and pharmacy/pet shop inventory. Can generate reports, monitor staff performance, and track medicine usage for efficient clinic operations.
- **Receptionist:** Handles walk-ins, bookings, and clinic queue.
- **Trainer, Sitter, Groomer, Seller, Breeder:**

  Create service/breeding listings, manage calendars and availability, and accept bookings or inquiries. (note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)

- **Financial Manager:** Manages platform revenue from commissions, ad payments, and shop sales. Can view income reports, set commission rates, and handle payouts.
- **Client (Pet Owner):** Manages pet profiles, books services, shops products, and tracks pet health.

Appointment & Calendar Management

- Time-slot-based booking to avoid overlaps.
- Queue management for check-in/check-out status.
- Rescheduling and cancellations with reason logs and audit trails.
- Waitlist function for overbooked days.

Medical Records Management

- Link medical records to appointments.
- Diagnosis, symptoms, medication, and treatment details.
- Upload prescriptions or reports (PDF, images).
- Vet-only internal notes.
- Clients can view medical records for their pets.

Pharmacy & Shop System

- Track clinic-specific medication stock and expiry.
- Vets can view livestock when prescribing.

- The shop module allows clinics to sell products.
- System auto-applies commission on shop sales, tracked per transaction.

Pet Services Module

- **Trainer:** List training sessions with time, fee, and description.
- **Sitter/Boarder:** Manage calendar availability and accept bookings.
- **Grooming:** Book grooming time slots.
- **Sellers** can sell pets.
- **Breeder:** Post breed listings for mating/adoption and manage availability.
- **Lost & Found:** Users post/report missing pets with details and images.

Advertisement & Listing Management

- Sellers, trainers, sitters, and breeders can post advertisements.
- Listings include images, details, price, and location.
- Users can filter by service type, fee, and availability.
- A small ad fee is charged per listing.
- All ad payments are recorded and visible to the financial manager.

Financial Management Module

- Tracks system income from:
    - Ads
    - Shop commissions
    - Service bookings

- A financial manager can:
    - View revenue summaries
    - Set/change commission rates

For academic demonstration purposes, online payments will be simulated using a test payment gateway. All financial reports will be generated based on these simulated transactions to accurately reflect system functionality."

Client Multi-Pet Management

- Clients can manage multiple pet profiles.
- Each pet has an independent medical history, bookings, and notes.
- Easy switching between pets from the user dashboard.

6.2 Documentation Deliverables

A set of documents will be developed to support every phase of the system life cycle development and planning, deployment, maintenance, and user introduction. The deliverables ensure stakeholders, developers, test engineers, and users possess correct information about how the system operates, how it is supposed to be utilized, and how to maintain it in the long run.

- System Requirement Specification (SRS)

The SRS document defines the complete extent of the system by including both:

1. Functional requirements: What the system needs to do (e.g., schedule appointments, generate reports).
2. Non-functional requirements: How the system needs to act (e.g., response time, security, usability).

It serves as a reference point for the development team and makes sure all stakeholder expectations are well-defined.

- Use Case Descriptions

This involves extensive documentation of all system use cases that define how users will be using the system to achieve specific goals.

A use case includes:

1. Actors involved
2. Preconditions and postconditions
3. Step-by-step sequence of events
4. Exception flows and alternate paths

This allows functional flows to be understood and provides the foundation for design and test stages.

- System Architecture & Database Design

This document outlines the technical diagram of the system, which includes:

1. System architecture: High-level diagram that shows components like frontend, backend, and database layers and how they interact.

2. ER Diagrams and database schema: Diagrammatic notation that shows how data entities (e.g., users, pets, appointments) are interrelated.

3. Technology stack: Programming languages, frameworks, and tools being used in the list.

This helps developers during implementation and future teams in the event of expansion or debugging.

- User Manual

A structured guide providing step-by-step instructions for different user roles (admin, vet, receptionist, client, etc.) to:

1. Operate the system
2. Perform essential actions (e.g., booking an appointment, creating medical records)
3. Understand icons, buttons, and dashboards
4. Resolve recurring problems

This allows effective onboarding of new users and reduces direct technical assistance.

6.3 Other Supporting Materials

In addition to the functional system and documentation, the following materials will be ready and submitted to support the presentation, handover, and scalability of the system in the future. The deliverables are aimed at supporting the comprehension, demonstration, and effective management of the system by various stakeholders.

- Gantt Chart / Timeline

A detailed project schedule will be created with the assistance of a Gantt chart, which will include:

1. Phased segmentation of the project (i.e., Planning, Designing, Development, Testing, Deployment)
2. Major tasks and their dependencies
3. Estimated duration of each phase
4. Assigned team members and milestones

This timeline provides a clear vision of the project flow, which facilitates tracking progress and meeting deadlines.

- Presentation Slides

A presentation slide deck will be professionally designed for:

1. Project proposal presentations
2. Mid-project status updates
3. Final demonstration and defense

These slides will summarize key sections such as the problem statement, objectives, system architecture, features, implementation flow, and screenshots. It enables the team to showcase the project vision and deliverables in an understandable and engaging way.

07. Project Constraints and Assumptions

In developing the system, there are certain limitations and assumptions to be considered. These are affecting system scope, feasibility, and performance. Their clear identification reduces the risk and allows the alignment of the project with realistic expectations.

7.1 Project Constraints

These are the recognized constraints and boundaries that the system must operate within.

- Technology Constraints

The system must be implemented without the use of third-party libraries or frameworks due to academic or project restrictions. This limits the development velocity and may add to the development time.

- Time Constraints

The project will be submitted within the academic timeline, with the entire functional modules, testing, and documentation.

Advanced features (such as vet recommendations by AI or deep-level analytics) are excluded because of the time factor.

- User Role Constraints

Each user role will be restricted to certain functionalities. For example, clients will not be permitted to edit appointment records, and vets will not be permitted to manage user accounts.

Just Admins can see system-wide reports and settings to maintain role security.

- Data Management Constraints

Data such as appointment history and medical records need to be manually entered; pet databases or clinics outside are not in real-time synchronization.

Uploaded documents are size and type-limited (e.g., JPGs and PDFs less than 5MB).

7.2 Project Assumptions

These are assumptions that are taken to be true during project development and planning. If any assumption proves to be false, it could influence project delivery:

- **Technical Assumptions**

All developers have access to required technologies (e.g., HTML, CSS, JavaScript, PHP, MySQL) and development tools.

- **User Behavior Assumptions**

Users (vets, clients, receptionists) have basic digital literacy and can utilize web applications without in-depth training.

Staff and users will enter correct and complete data (e.g., appointment notes, medical history).

- **Data Assumptions**

Each pet has a unique profile and is correctly linked to its respective client.

Each clinic, trainer, and sitter registered keeps their availability honestly in the system.

- **Availability Assumptions**

Development life cycle timetable, project team members will be available.

08. Requirements

8.1 Functional Requirements

General System Requirements

- Secure multi-role login (Admin, Vet, Trainer, Client, etc.)
- Module-based role system: A user account may activate multiple modules (e.g., is_seller, is_trainer, is_breeder), and the system displays features accordingly in the dashboard.
- Support for multi-role users: A single user account may enable multiple role-based modules (e.g., a seller can also act as a trainer and sitter).
- Dynamic dashboards based on role
- Audit logging for significant actions (e.g., edits, cancellations)

User Management

- Register and login for all user types
- Profile creation and editing for all roles
- Admin can manage users (add/delete/edit/disable accounts)
- Upload profile pictures or documents

Booking & Appointment Management

- Book appointments (online, phone, walk-in)
- The receptionist can register walk-ins and check availability
- View calendar by day/week/month
- Queue management: check-in/out and arrival tracking
- Rescheduling and cancellations.
- Bookings contain pet information, emergency flag, vet preference

Pet Profile Management

- Multiple pets added/edited by clients
- Upload vaccination/adoption documents
- Monitor vaccination status
- Mark lost/found pets
- View and manage past veterinary visits and history

Vet Tools & Medical Records

- Veterinarians create and maintain medical records related to appointments
- Add case notes, diagnosis, prescriptions, and files
- File uploads: scan reports, X-rays.
- Prescribe medicines from livestock
- See and filter previous visit history

Pharmacy Management

- Veterinarians prescribe from stock stored at the clinic
- Medicine logs: add, edit, remove, tracking of expiration dates
- Reminders for low stock and stock updates
- Auto-creation of invoices from prescriptions

Pet Shop & Product Management

- The administrator adds, removes, and edits shop products
- Clients browse, purchase, and track orders
- Pay with a credit/debit card or cash.
- See and download invoices

Location & Services Discovery

- Google Maps API used to discover nearby vets, sitters, parks, etc.
- Clients filter services by proximity and category

Pet Care Services

- Trainers: list training services, trainer appointments
- Sitters: create sitter profiles, set availability, accept/decline bookings
- Clients book grooming/training/sitting appointments
- Sellers can sell pets.
- Lost & Found module for pets (image, contact, location)

Billing & Payments

- Automatically generated bills against user accounts
- Accept payments via credit/debit card or cash.
- Process refunds and cancellations
- Admin and Financial Manager can view income and revenue breakdown
- System charges:
    - Advertisement fees for seller/trainer/sitter/breeder listings
    - Commission percentage on shop product sales
    - Commission percentage on paid service bookings (optional)
- Track and log all payments made via users' accounts
- Export financial reports (admin and finance manager only)

Reporting & Statistics

- Administrator: top usage, revenue, and user metrics
- Clinic Manager: schedules, medicine records, staff performance metrics
- Veterinarian: schedule and prescription
- Receptionist: calendar, availability
- Client: pet visit history, purchases, bookings, invoices

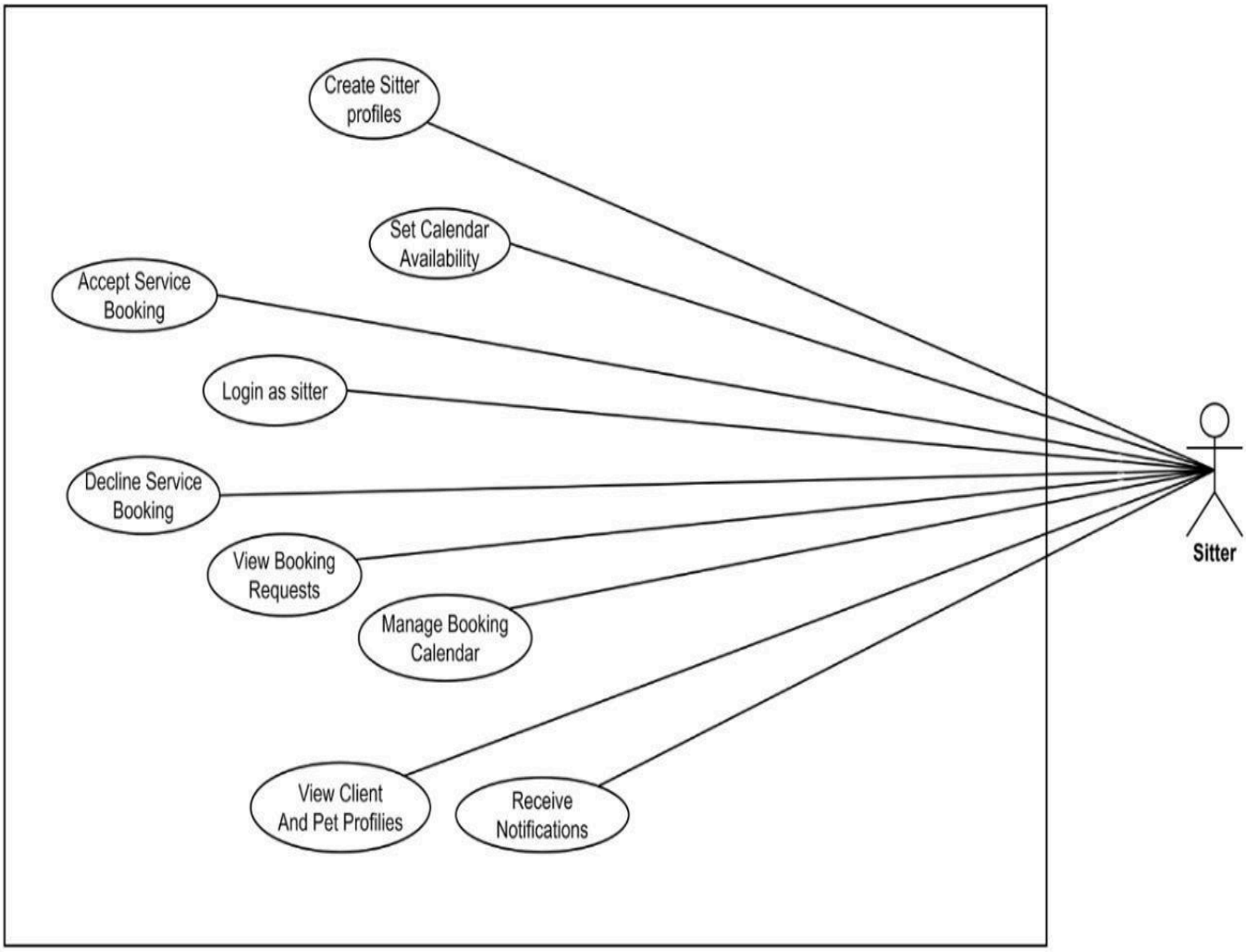
8.1.1 Use Case Diagram

You can view/download the usecase digram here

8.1.2 System Actors

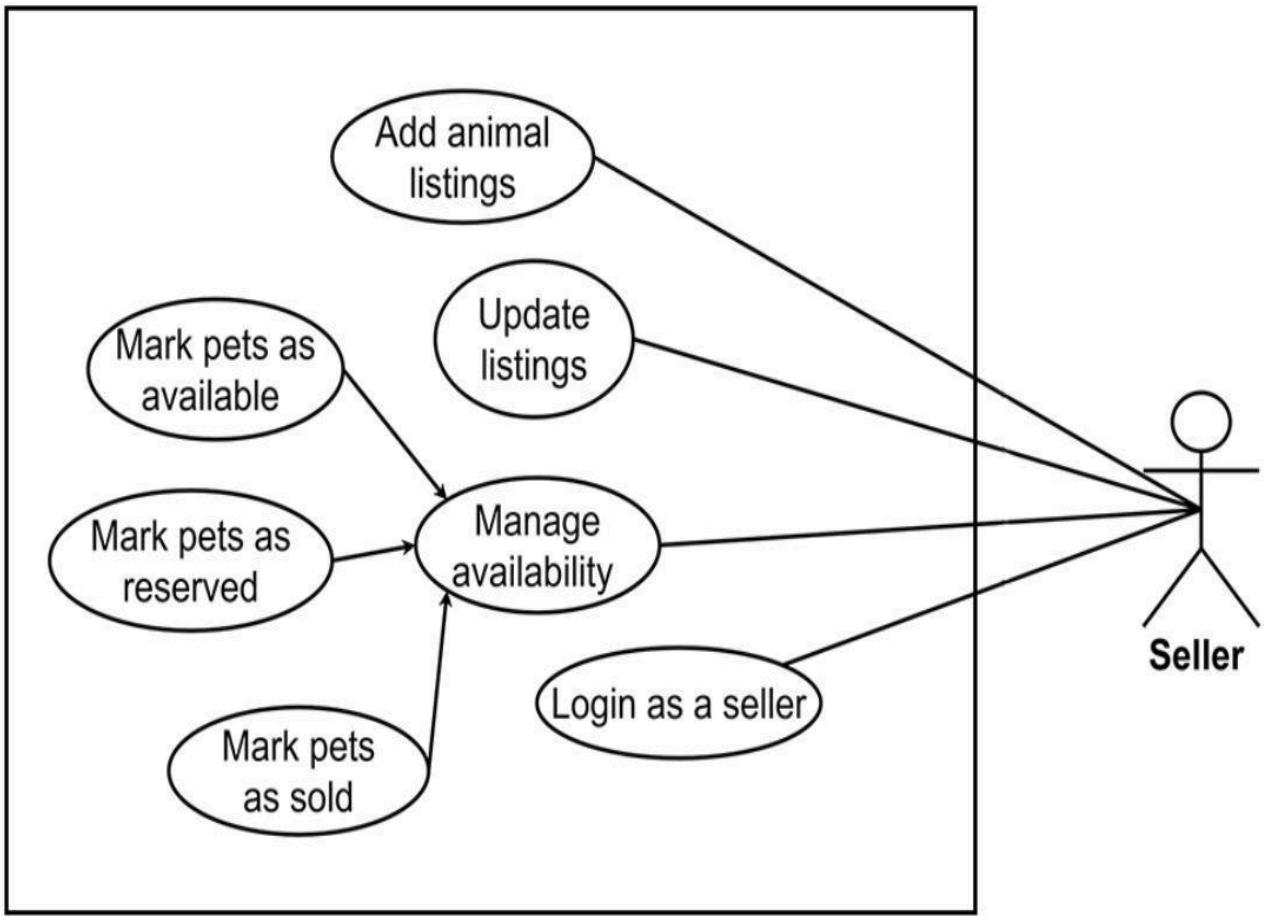
8.1.2.1 Sitter

(Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)



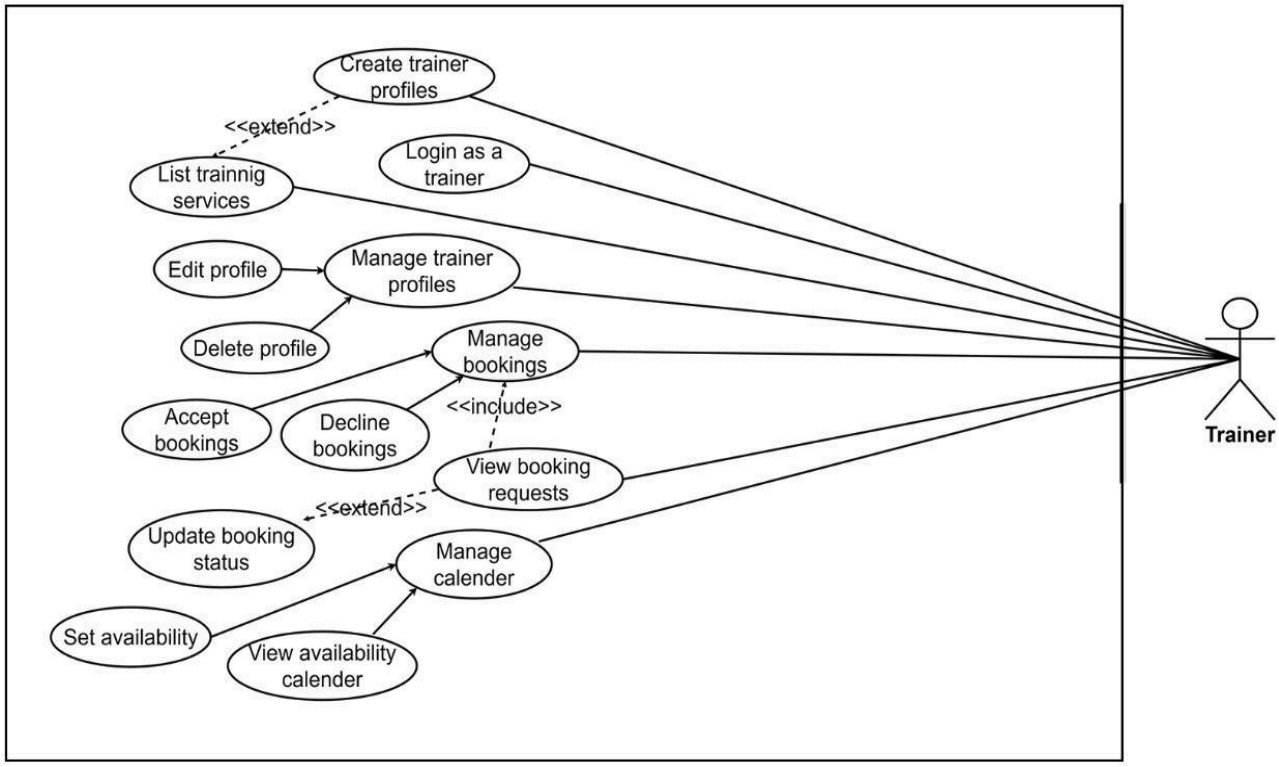
8.1.2.2 Seller

(Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)

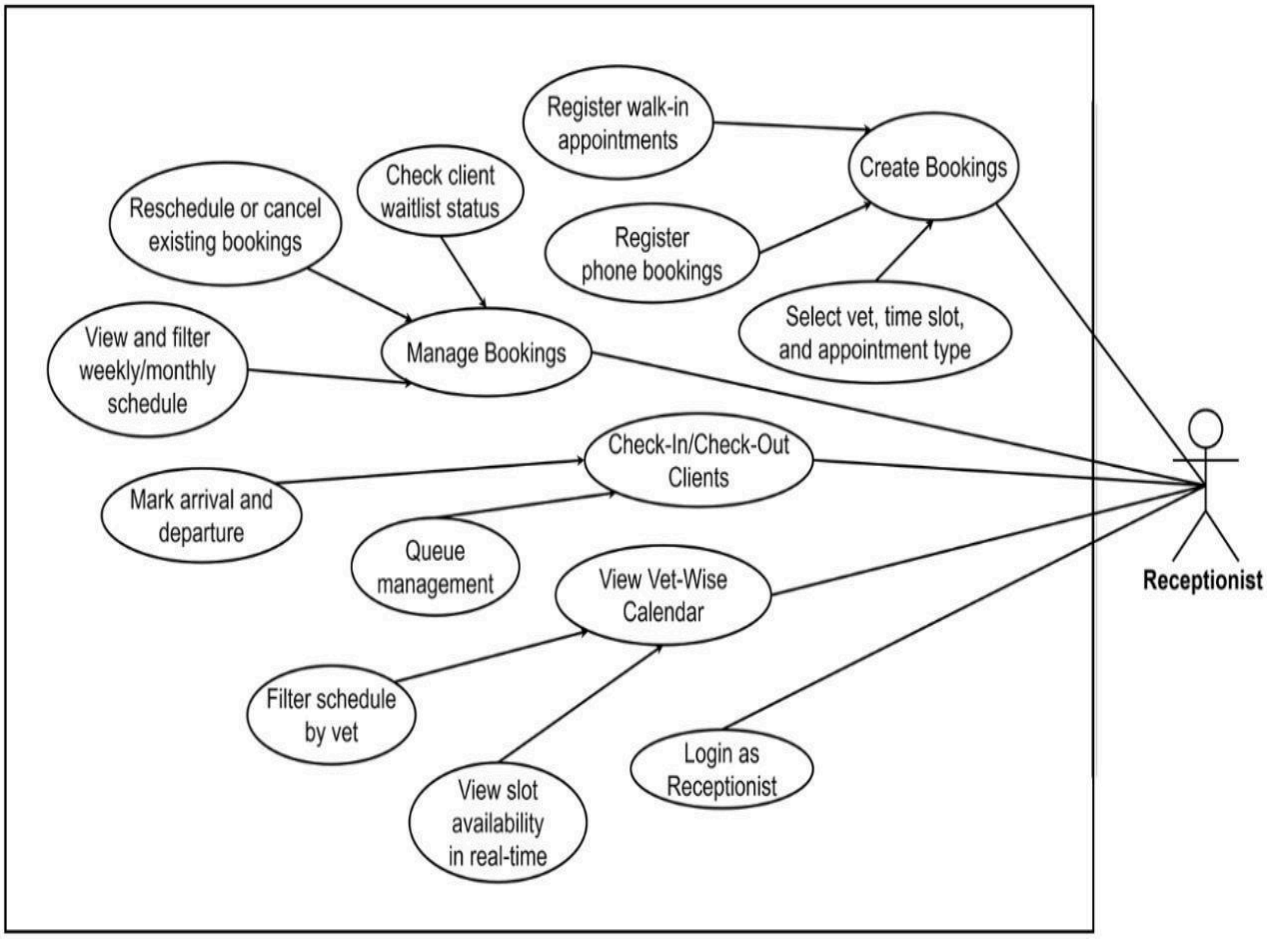


8.1.2.3 Trainer

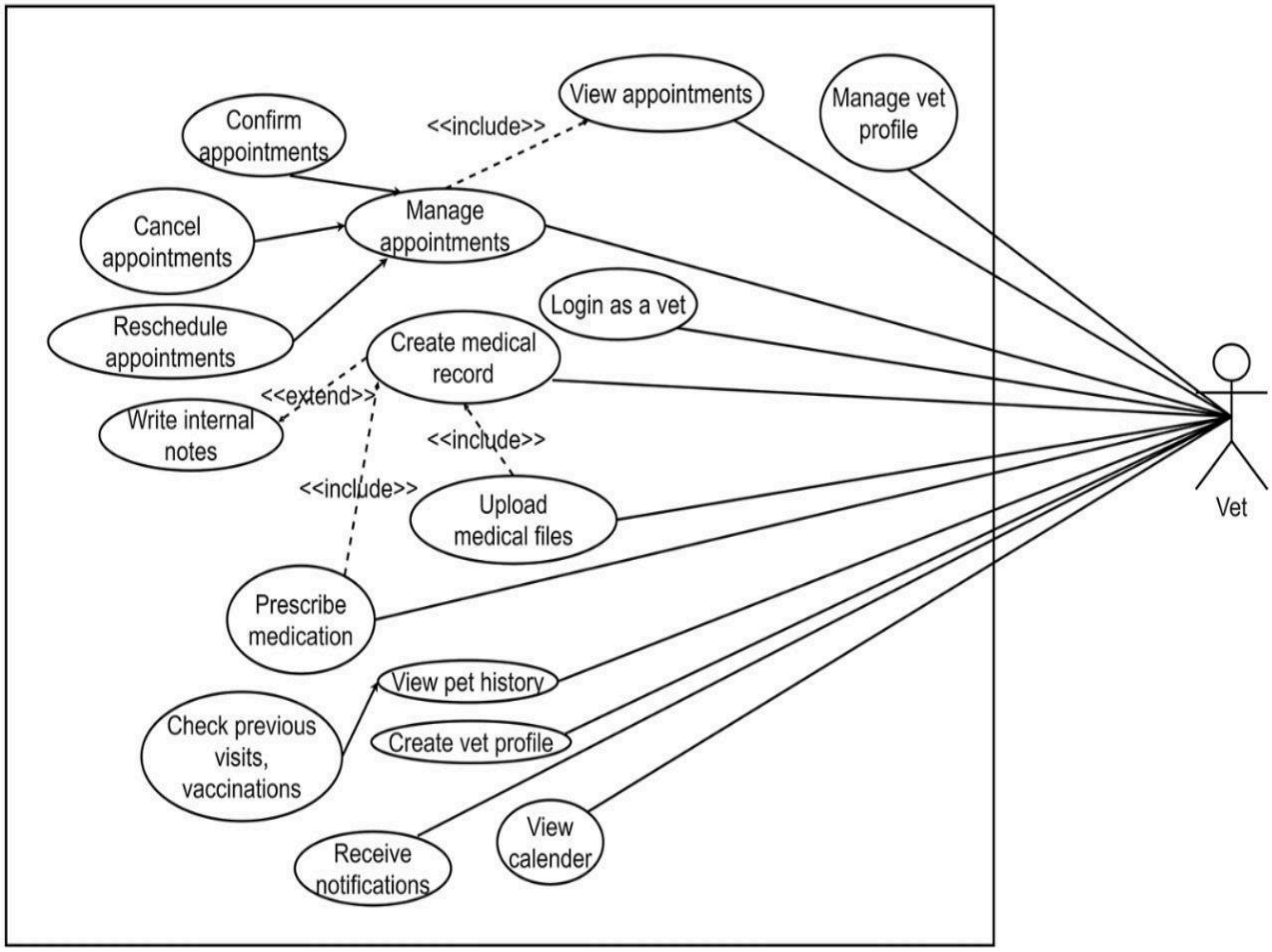
(Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)



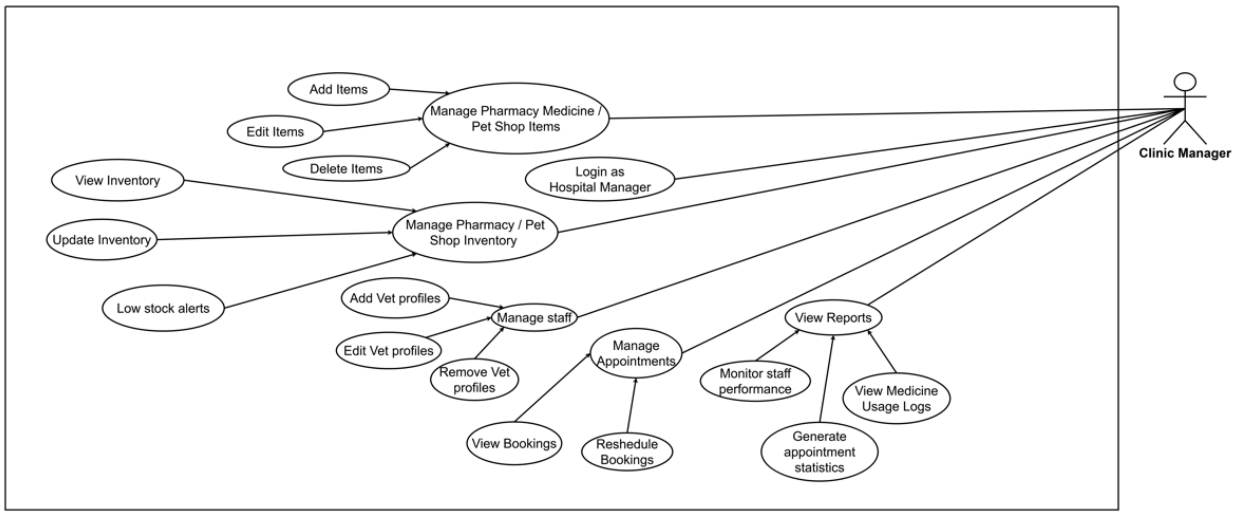
8.1.2.4 Receptionist



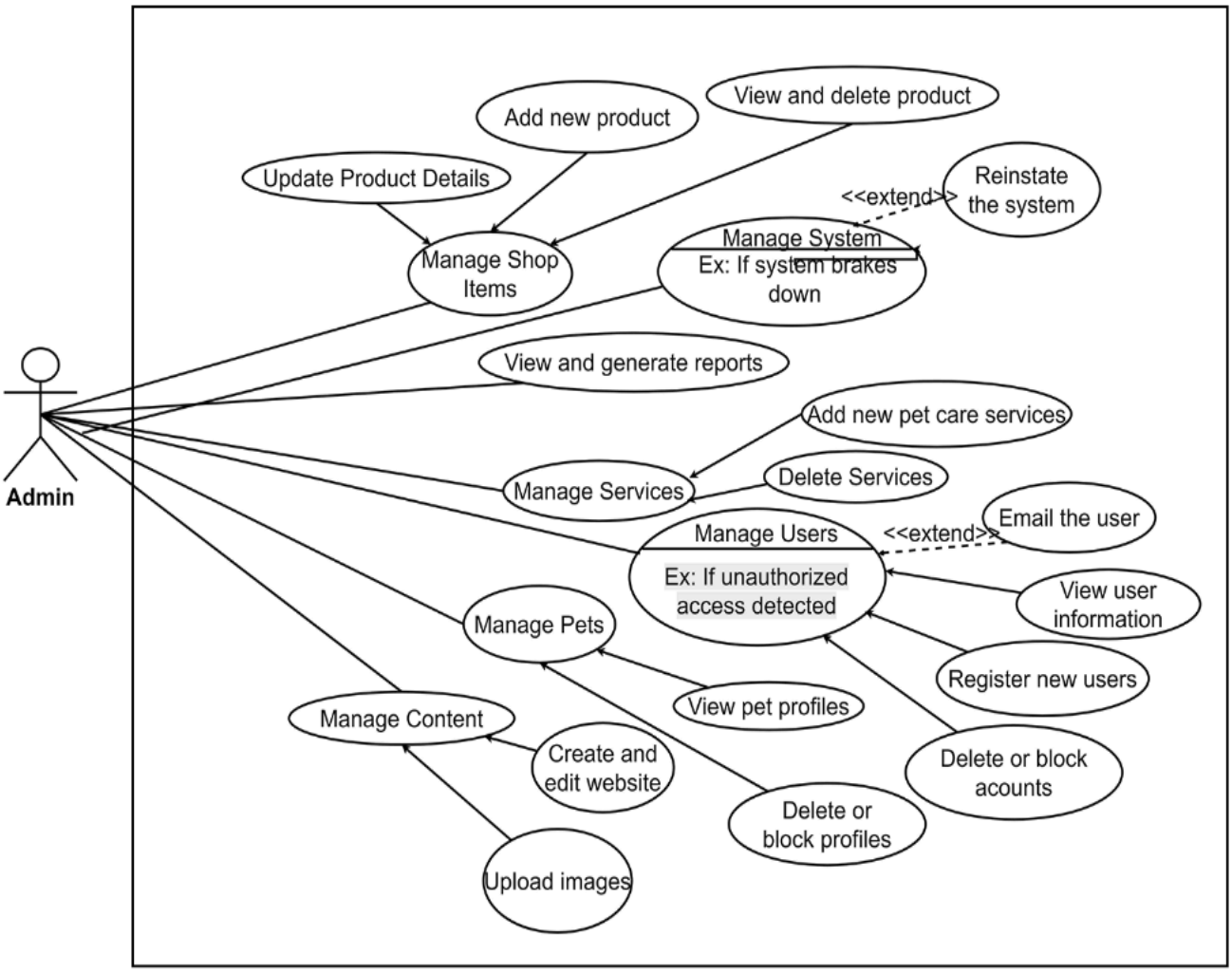
8.1.2.5 Vet


View appointments
Manage vet profile
Confirm appointments
<<include>>
Manage appointments
Cancel appointments
Login as a vet
Reschedule appointments
Create medical record
<<extend>>
Write internal notes
<<include>>
<<include>>
Upload medical files
Vet
Prescribe medication
View pet history
Check previous visits, vaccinations
Create vet profile
View calender
Receive notifications

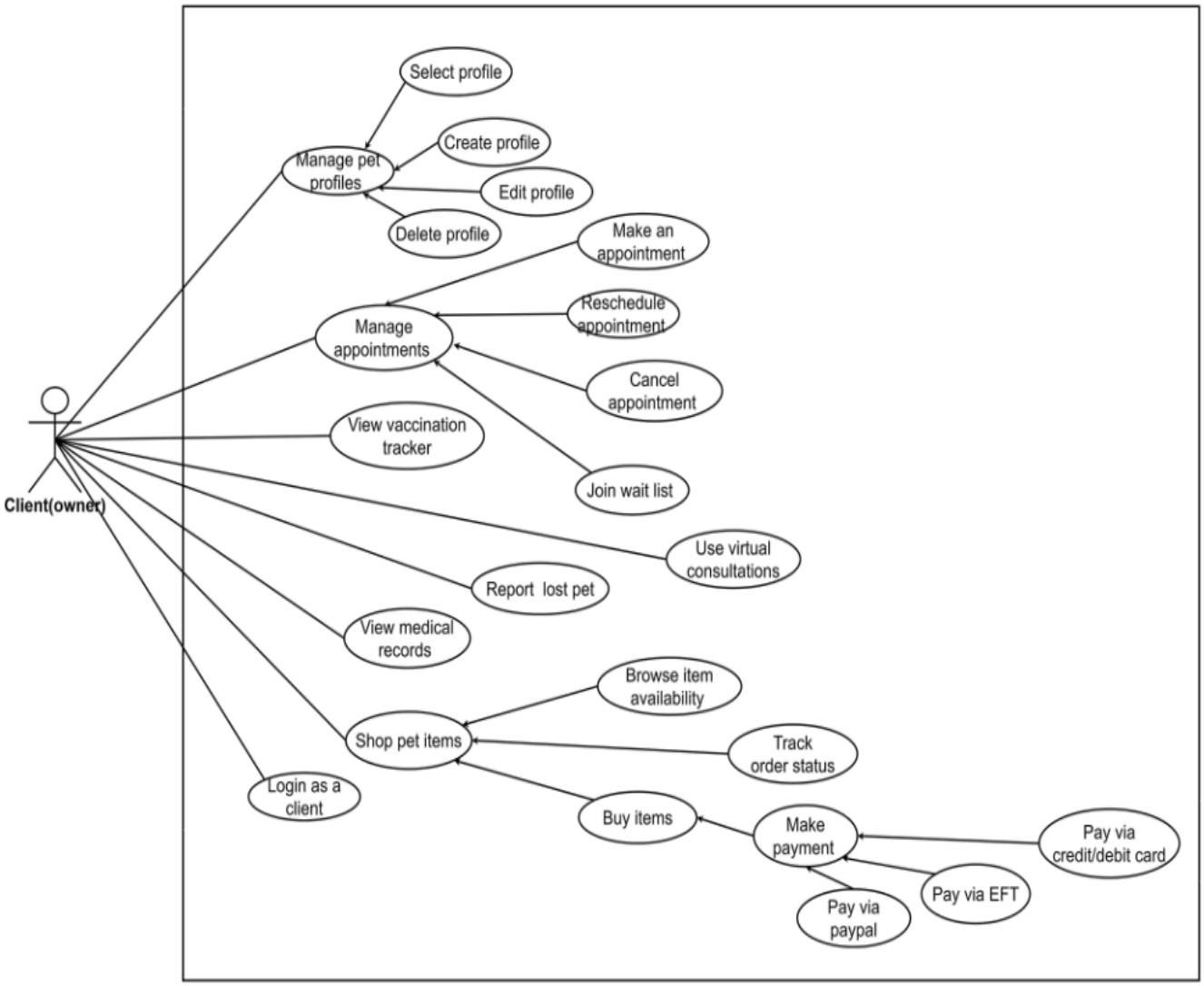
8.1.2.6 Clinic Manager



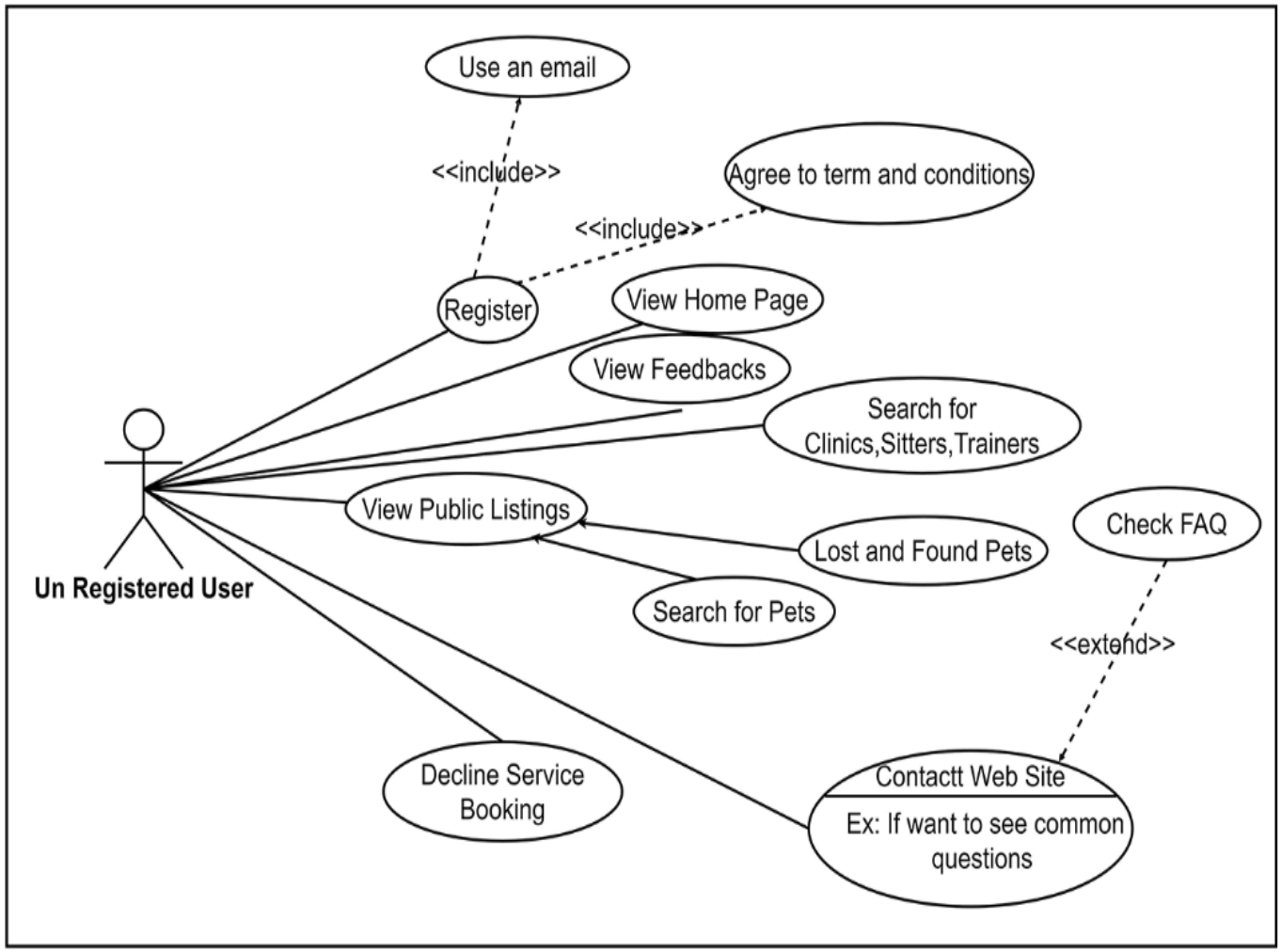
8.1.2.7 Admin


Admin
Add new product
View and delete product
Update Product Details
Reinstate the system
<<extend>>
Manage Shop Items
Manage System
Ex: If system brakes down
View and generate reports
Add new pet care services
Manage Services
Delete Services
Email the user
Manage Users
<<extend>>
Ex: If unauthorized access detected
View user information
Manage Pets
Register new users
View pet profiles
Manage Content
Create and edit website
Delete or block acounts
Delete or block profiles
Upload images

8.1.2.8 Client (Owner)

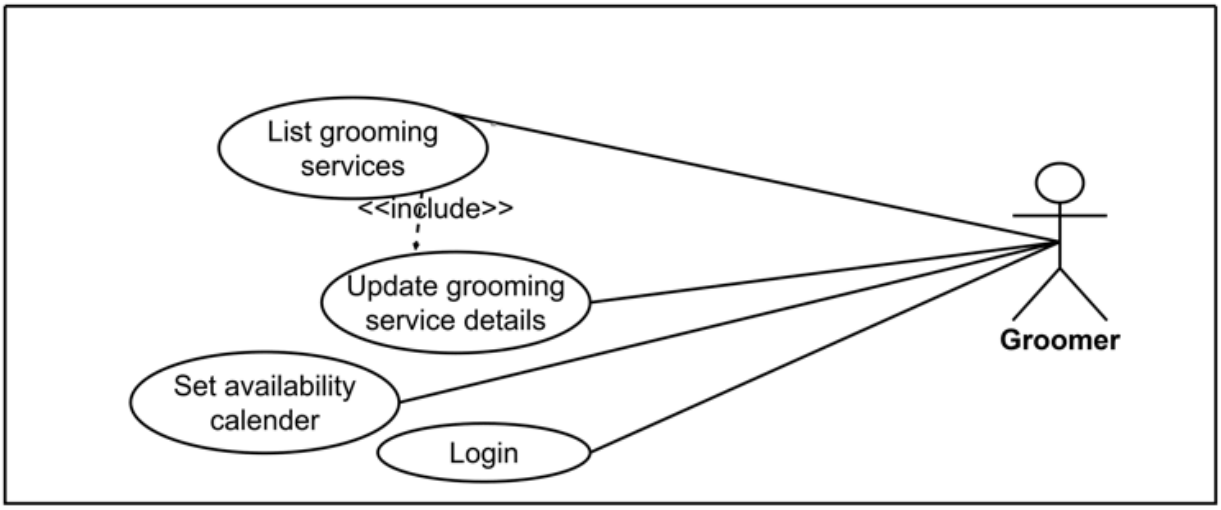


8.1.2.9 Unregistered user



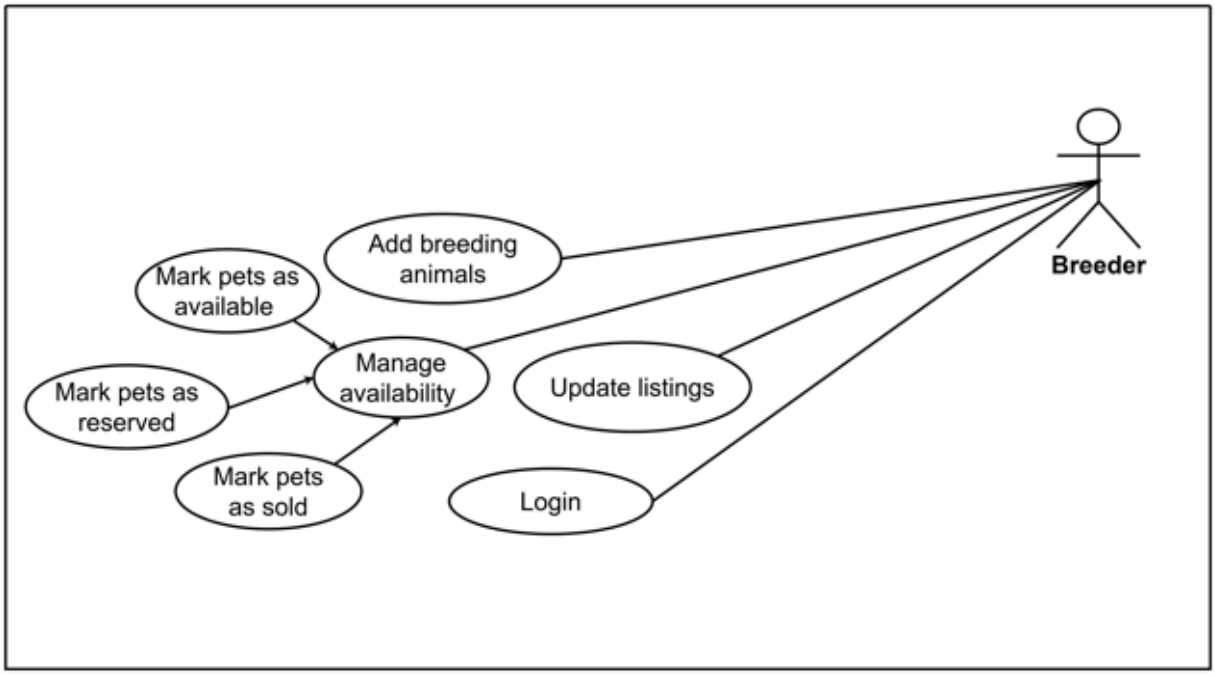
8.1.2.10 Groomer

(Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)

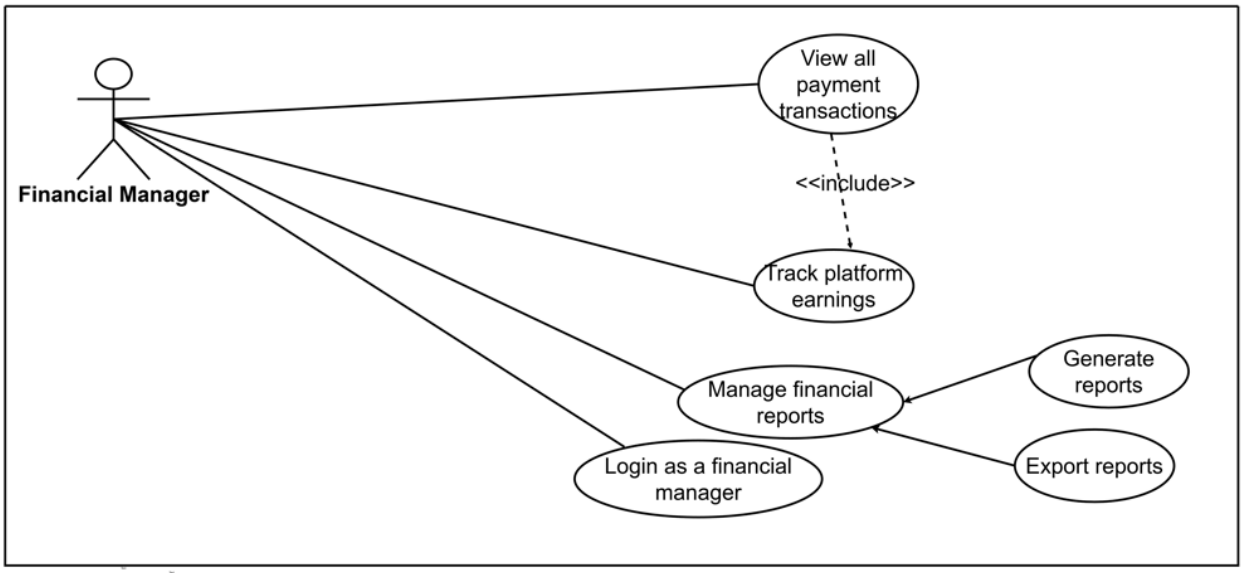


8.1.2.11 Breeder

(Note: A single user may act as both sitter, trainer, seller, or groomer using the same account, based on enabled features.)



8.1.2.12 Financial Manager



8.1.3 Use Case Descriptions

View Reports (Clinic Manager):

Number	001
Name	View Reports
Summary	Clinic Manager accesses and reviews various clinic performance reports.
Priority	Low
Pre-conditions	Clinic Manager is logged into the system
Post-conditions	Reports are viewed and can be exported or printed
Primary Actor	Clinic Manager
Trigger	Clinic Manager needs to check overall performance

Main Scenario	Step	Action
	1	Clinic Manager navigates to the Reports section
	2	The system displays report categories (appointments, staff, usage, etc.)
	3	Manager selects a specific report category
	4	System generates and displays the selected report
	5	System generates and displays the selected report
	6	System generates and displays the selected report
Extensions	**Step**	**Branching Action**
	3a	If no data exists for the selected category, the system shows a “No data available” message
Open issues	1	Should reports be exportable in Excel and PDF both

Manage Appointments (Clinic Manager):

Number	002	
Name	Manage Appointments	
Summary	Clinic Manager monitors and manages all appointment schedules	
Priority	High	
Pre-conditions	Clinic Manager is authenticated and authorized	
Post-conditions	Appointments are managed for optimal resource use	
Primary Actor	Clinic Manager	
Trigger	Appointment conflicts or daily schedule review	
Main Scenario	**Step**	**Action**
	1	Clinic Manager opens the Appointments Dashboard
	2	The system shows all appointments grouped by date and vet
	3	Manager filters by date, vet, or type
	4	Manager reviews details of specific appointments
	5	Manager edits, reschedules, or cancels appointments if needed
	6	The system updates appointments accordingly
Extensions	**Step**	**Branching Action**
	5a	If appointment is already in progress, system prevents editing
Open issues	1	Should notifications be sent when appointments are modified?

Manage Staff (Clinic Manager):

Number	003	
Name	Manage Staff	
Summary	Clinic Manager oversees staff profiles, performance, and assignments	
Priority	Medium	
Pre-conditions	Clinic Manager is authenticated	
Post-conditions	Staff records are updated	
Primary Actor	Clinic Manager	
Trigger	Staff join, leave, or require profile changes	
Main Scenario	**Step**	**Action**
	1	Manager accesses the staff management module.
	2	System displays current staff list.
	3	Manager adds, edits, or removes staff profiles.
	4	Assigns roles or updates vet profiles.
	5	System saves and reflects changes.
Extensions	**Step**	**Branching Action**
	3a	If user lacks permission, system denies access and logs attempt
Open issues	1	Should system track changes in a staff activity log?

Create Bookings (Receptionist):

Number	004	
Name	Create Bookings	
Summary	Receptionist creates bookings for clients based on service needs	
Priority	High	
Pre-conditions	Client is registered or provides walk-in information	
Post-conditions	Booking is successfully created	
Primary Actor	Receptionist	
Trigger	Client calls, walks in, or requests booking	
Main Scenario	**Step**	**Action**
	1	Receptionist accesses the booking interface
	2	Enters client and pet details
	3	Selects date, service, vet, and time slot
	4	System checks availability
	5	Booking is confirmed and stored
	6	Confirmation is shown to receptionist
Extensions	**Step**	**Branching Action**
	4a	If no slots are available, system suggests next available date
Open issues	1	Can clients be added manually at this point?

Queue Management (Receptionist):

Number	005	
Name	Queue Management	
Summary	Receptionist manages walk-in clients and appointment queues	
Priority	Low	
Pre-conditions	Receptionist is logged in	
Post-conditions	Queue is managed and updated	
Primary Actor	Receptionist	
Trigger	Walk-in client arrives or vet becomes available	
Main Scenario	**Step**	**Action**
	1	Receptionist opens the queue system interface
	2	Adds walk-in clients to queue with appointment type
	3	System sorts clients by priority/time
	4	Vet notifies availability
	5	Receptionist assigns next client to vet
	6	Queue is updated
Extensions	**Step**	**Branching Action**
	3a	If too many clients are queued, system displays an alert
Open issues	1	Should queue show estimated wait time to clients?

Manage user Accounts (Admin):

Number	006	
Name	Manage user accounts	
Summary	Admin manages user accounts to ensure smooth operation and user experience.	
Priority	High	
Precondition	Admin has logged into the system dashboard.	
Postcondition	Admin manages user accounts and maintains effectively.	
Primary Actor(s)	Administrator	
Trigger	Administrator needs to make changes on user profile.	
Main scenario	**Step**	**Action**
	1	Admin accesses the user management section of the admin panel.
	2	The system presents a list of all registered users.
	3	Admin can search for specific users using user id or name.
	4	The system quickly locates user accounts.
	5	Admin selects a user from the list
	6	The system shows the user profile.
	7	Admin can activate or deactivate/delete user accounts.
	8	The system updates the changes
Extensions	**Step**	**Branching action**
	3a	System will display a message if entered User ID or Name is not in the database.
Open issues	1.	Which way should the system notify the user?

Manage shop items (Admin):

Number	007	
Name	Manage shop items	
Summary	Admin manages shop items to ensure up-to-date inventory and smooth shopping experience for customers.	
Priority	Medium	
Precondition	Admin has logged into the system dashboard.	
Postcondition	Admin updates the shop inventory effectively.	
Primary Actor(s)	Administrator	
Trigger	Administrator needs to add, update, or remove shop items.	
Main scenario	**Step**	**Action**
	1	Admin accesses the shop management section of the admin panel.
	2	The system displays a list of all existing shop items.
	3	Admin can search for specific items by item ID or name.
	4	The system quickly locates the shop items.
	5	Admin selects an item to view or edit details.
	6	The system shows the item details (name, price, stock quantity, description).
	7	Admin can add a new item, update details of existing items, or remove items from the shop.
	8	The system updates the inventory and reflects changes in the shop view for customers.
Extensions	**Step**	**Branching action**
		If the entered item ID or name is not found, the system displays a message indicating “No item found with given ID or name.”
Open issues		Should the system provide notifications or confirmations when

Manage Servies (Admin):

Number	008	
Name	Manage services	
Summary	Manage the services offered by site to ensure they are user friendly for both pet owners and services.	
Priority	Medium	
Precondition	Admin has logged into the system dashboard.	
Postcondition	Admin has added, updated, or deleted the services.	
Primary Actor(s)	Administrator	
Trigger	Administrator needs to make a slight change in service.	
Main scenario	**Step**	**Action**
	1	Admin accesses the service management section of the admin panel.
	2	The system presents a list of all available services.
	3	Admin adds new services based on user feedback.
	4	Admin edits current services by modifying details like description and pricing.
	5	The system will update changes.
	6	Admin goes to set service availability section.
	7	Admin changes availability of services based on location and seasonal variation.
	8	System updates the changes.
	9	If admin wants to delete a service because of some reasons, admin goes to service account.
	10	Admin deletes the service.
	11	System will update changes.
Extensions	**Step**	**Branching action**
	3a	If the new service is not added to the site, the system will display a message.
Open issues	1.	Should services need to be categorized?

View booking requests (Sitter):

Number	**009**	
Name	View booking requests	
Summary	Pet sitter views booking requests to manage their availability and respond to clients promptly.	
Priority	High	
Precondition	Sitter has logged into the system dashboard.	
Postcondition	Sitter reviews, accepts, or declines booking requests effectively.	
Primary Actor(s)	Pet Sitter	
Trigger	Sitter needs to check new or existing booking requests.	
Main Scenario	**Step**	**Action**
	1	Sitter accesses the booking requests section on their dashboard.
	2	The system displays a list of all received booking requests.
	3	Sitter can filter requests by date, pet owner, or booking status (pending, confirmed, completed).
	4	The system applies filters and shows matching requests.
	5	Sitter selects a request to view detailed information.
	6	The system shows request details including pet owner information, pet details, requested dates, and special instructions.
	7	Sitter can accept or decline pending booking requests.
	8	The system updates the booking status and notifies the pet owner of the sitter's decision.
Extensions	**Step**	**Branching Action**
	2 a	If there are no booking requests, the system displays a message: "No booking requests available at this time."
	3a	If filter criteria yield no results, the system displays: "No booking requests match your filter."
	5a	If sitter selects a request that was already cancelled by the pet owner, the system shows a warning: "This booking has been cancelled by the owner."

	7a	If sitter tries to accept a booking that overlaps with another confirmed booking, the system warns: "You have a conflicting booking. Please check your schedule."
	7b	If sitter declines a booking request, the system prompts for an optional reason and then sends it to the pet owner.
	8a	If there is a system error while updating the booking status, the system displays an error message and asks the sitter to try again

Accept Service Booking (Pet Sitter):

Number	**010**	
Name	Accept service booking	
Summary	Pet sitter accepts a service booking request to confirm their availability and provide the service as requested by the pet owner.	
Priority	Medium	
Precondition	Sitter has logged into the system dashboard and has received at least one pending booking request.	
Postcondition	The booking status is updated to "Accepted" and the pet owner is notified.	
Primary Actor(s)	Pet Sitter	
Trigger	Sitter decides to accept a pending booking request.	
Main Scenario	**Step**	**Action**
	1	Sitter accesses the booking requests section on their dashboard.

	2	The system displays a list of pending booking requests.
	3	Sitter selects a specific booking request to view details.
	4	The system shows request details including pet information, service type, schedule, and any special instructions.
	5	Sitter reviews their own schedule for availability.
	6	Sitter clicks the “Accept Booking” button.
	7	The system updates the booking status to “Accepted” and blocks out the sitter’s availability for the requested dates.
	8	The system notifies the pet owner that their booking has been accepted.
Extensions	**Step**	**Branching Action**
	2 a	If there are no pending booking requests, the system displays: “You have no pending booking requests at this time.”

	3a	If sitter selects a booking that has already expired or been cancelled by the owner, the system shows a warning: “This booking is no longer available.”
	5a	If the sitter has a scheduling conflict with the requested dates, the system displays a warning: “You have another confirmed booking at this time.” The sitter can choose to decline instead.
	6a	If the sitter clicks “Accept Booking” but the system detects a last-minute conflict (e.g., another sitter accepted the same booking), the system prevents double booking and shows: “This booking has already been accepted by another sitter.”

Manage Pet Profiles (Owner):

Number	011
Name	Manage Pet Profiles
Summary	Client manages pet profiles including creation, editing, deletion, and selection of multiple pet records.
Priority	Medium

Pre-condition	Client is logged into the system.	
Post-condition	Pet profiles are updated (added/edited/deleted/selected) in the system.	
Primary Actor(s)	Client(owner)	
Trigger	Client wants to manage information about their pet(s).	
Main Scenario	**Step**	**Action**
	1	Client navigates to the “Pet Profiles” section.
	2	System displays list of existing pet profiles.
	3	Client chooses to create, edit, delete, or select a profile.
	4	If creating, client inputs pet details (name, breed, age etc.).
	5	If editing, client modifies details.
	6	If deleting, client confirms deletion.
	7	If selecting, profile is marked active.
	8	System saves changes.
Extensions	**Step**	**Branching Action**
	4a	System prompts for missing fields.
	6a	System confirms deletion.
Open issues	1	Should there be a limit on the number of profiles per user?

Manage Appoinments (Owner):

Number	012	
Name	Manage Appointments	
Summary	Client book, reschedule, cancel, and view pet-related appointments.	
Priority	High	
Pre-condition	Client is logged in and has at least one pet profile.	
Post-condition	Appointment schedule is updated.	
Primary Actor(s)	Client(owner)	
Trigger	Client wants to schedule or manage an appointment.	
Main Scenario	**Step**	**Action**
	1	Client opens appointments section.
	2	System displays available service providers.
	3	Client selects a provider and service.
	4	Client picks a date and time slot.

	5	System confirms booking.
	6	Client can also reschedule or cancel an existing appointment.
	7	System updates calendar.
Extensions	**Step**	**Branching Action**
	4a	If no slots available, system shows alternative slots or waitlist option.
Open issues	1	Should double bookings for same time be prevented across pets?

Shop Pet Items (Owner):

Number	013
Name	Shop Pet Items

Summary	Client Browse pet shop, check product availability, buy items, and make payments.	
Priority	Medium	
Pre-condition	Client is logged in.	
Post-condition	Product order is placed.	
Primary Actor(s)	Client (Owner)	
Trigger	Client needs to buy pet products.	
Main Scenario	**Step**	**Action**
	1	Client opens pet shop.
	2	System displays product categories.
	3	Client browses items.
	4	Client adds item to cart.
	5	Client proceeds to payment. (with sub-options: Pay via credit/debit card, EFT, PayPal)
	6	Payment is processed and confirmed.
Extensions	**Step**	**Branching Action**
	6a	If Payment failed, system asks to retry or choose another method.
Open issues	1	Should there be inventory alerts when items are low/out of stock?

Add Animal Listings (Seller):

Number	014	
Name	Add Animal Listings	
Summary	Seller adds new animals for sale or adoption.	
Priority	High	
Pre-condition	Seller has logged into the system.	
Post-condition	A new animal listing is added to the marketplace.	
Primary Actor(s)	Seller	
Trigger	Seller wants to publish a new pet listing.	
Main Scenario	**Step**	**Action**

	1	Seller selects "Add Listing" from the dashboard.
	2	System opens a form to enter animal details.
	3	Seller enters data (breed, age, photos, price, etc.).
	4	Seller submits the listing.
	5	System validates inputs and stores the listing.
Extensions	**Step**	**Branching Action**
	3a	System notifies seller if any required field is missing.
Open issues	1	Should listings require admin approval before going public?

Manage Availability (Seller):

Number	015	
Name	Manage Availability	
Summary	Seller sets or updates the availability status of listed pets.	
Priority	Low	
Pre-condition	Seller has at least one listing.	
Post-condition	Status of pet listings (available, reserved, sold) is updated.	
Primary Actor(s)	Seller	
Trigger	Seller wants to reflect pet status changes in the system.	
Main Scenario	**Step**	**Action**
	1	Seller navigates to "Manage Availability".
	2	System shows current listings and statuses.

	3	Seller selects a pet and chooses a new status (Available, Reserved, Sold).
	4	System updates and reflects changes in the listings.
Open issues	1	Should customers be notified when a pet is marked as sold or reserved?
	2	Should the system restrict marking a sold pet back to available?

Create Medical Record(Vet):

Number	016
Name	Create medical record
Summary	The vet creates a medical record for a pet after an appointment, including symptoms, diagnosis, prescribed medication, and supporting files.
Priority	High
Pre-conditions	The appointment must be active or recently completed. The vet must be logged into the system.
Post-conditions	The medical record is saved and linked to the pet's history.
Primary Actor	Vet
Trigger	Completion of an appointment

Main Scenario	Step	Action
	1	Vet selects the completed appointment
	2	Vet enters symptoms, diagnosis, and treatment details
	3	Vet attaches lab reports or prescription
	4	Vet submits the medical record
Extensions	**Step**	**Branching Action**
	1a	If the appointment is cancelled or a no-show, editing is prevented
Open issues	1	Should vets be able to edit or update submitted medical records later?

View Pet History (Vet):

Number	017
Name	View pet history
Summary	The vet reviews a pet's full medical history including previous appointments, diagnoses, and files.
Priority	Low

Pre-conditions	Vet is logged in. Pet has at least one historical record.	
Post-conditions	Vet gains medical context to aid in diagnosis.	
Primary Actor	Vet	
Trigger	Pet consultation or diagnosis session	
Main Scenario	**Step**	**Action**
	1	Vet searches for or selects the pet profile
	2	System displays the pet's medical records
	3	Vet browses past visits, notes, vaccinations, and attached files
Extensions	**Step**	**Branching Action**
	2a	If no medical history exists, a "no records found" message is shown
	2b	If access is denied due to permissions, an error is shown
Open issues	1	Should vets be able to export or print pet history?

Manage Appointments (Vet):

Number	018	
Name	Manage Appointments	
Summary	The vet manages assigned appointments by marking them as completed, rescheduling, or cancelling.	
Priority	High	
Pre-conditions	Vet is logged in. Appointment is assigned to the vet.	
Post-conditions	Appointment status is updated	
Primary Actor	Vet	
Trigger	Daily appointment review or real-time updates	
Main Scenario	**Step**	**Action**
	1	Vet logs into the system
	2	Vet opens the current day's appointment list
	3	Vet marks appointment as completed, reschedules, or cancels

	4	System updates appointment status
Extensions	**Step**	**Branching Action**
	3a	If the appointment is already completed/cancelled, editing is blocked
	4a	If a network error occurs, changes are not saved and a retry option is shown
Open issues	1	Should clients receive notifications when appointments are changed by vets?

List Training Services (Trainer):

Number	019
Name	List Training Services
Summary	Trainer adds or updates training services with details such as type, duration, and price.
Priority	Low
Pre-conditions	Trainer is logged into the system.
Post-conditions	Services are published and available for booking.
Primary Actor	Trainer

Trigger	Trainer wants to add or modify a service	
Main Scenario	**Step**	**Action**
	1	Trainer navigates to the training services page
	2	Trainer enters title, description, duration, and price
	3	Trainer saves the service listing
Extensions	**Step**	**Branching Action**
	2a	Missing required fields trigger validation errors
	3a	Invalid data (e.g., negative price) prevents saving
Open issues	1	Should trainers be able to temporarily disable services without deleting them?

Update Calendar (Trainer):

Number	020
Name	Update Calendar
Summary	Trainer manages availability by setting or modifying calendar slots.
Priority	Low

Pre-conditions	Trainer is logged in.	
Post-conditions	Updated time slots are saved and visible for booking.	
Primary Actor	Trainer	
Trigger	Availability changes or schedule planning	
Main Scenario	**Step**	**Action**
	1	Trainer navigates to the calendar section
	2	Trainer selects available dates and time slots
	3	Trainer saves changes
	4	System updates the client booking interface with available slots
Extensions	**Step**	**Branching Action**
	2a	If selected times overlap with existing bookings, an error is shown
	3a	Saving fails due to server or validation issues
Open issues	1	Should trainers be allowed to create recurring availability patterns?

Register

Number	021	
Name	Register	
Summary	Register as user	
Priority	High	
Pre-condition	User must visit to the web site	
Post condition	System sends an email to confirm about successful registration	
Primary actor	Un registered user	
Trigger	Un registered decided to register	
Main scenario	**Step**	**Action**
	1	Visit the web site
	2	Un registered user clicks on sign up button
	3	System displays the registration form and ask to enter the details
	4	Un registered user enters the username, password, full name, with mention characters and retype password
	5	Un registered user clicks on the sign-up button to submit the registration form
	6	System stores the un registered user details
	7	System confirm about successful registration.

Extensions	**Step**	**Branching action**
	4a	System notifies un registered user that entered email is not valid
	4b	System notifies un registered user the entered username already exists

	4c	System notifies that the entered password is weak
		System notifies un registered user that the re-entered password is not matched with previous password
	5a	System notifies un registered user that information provided is incomplete
Open issues	1.	Should the system send a message to the un registered user if registering was not completed.
	2.	Should the system keep whole right and wrong details what new users entered.

Login

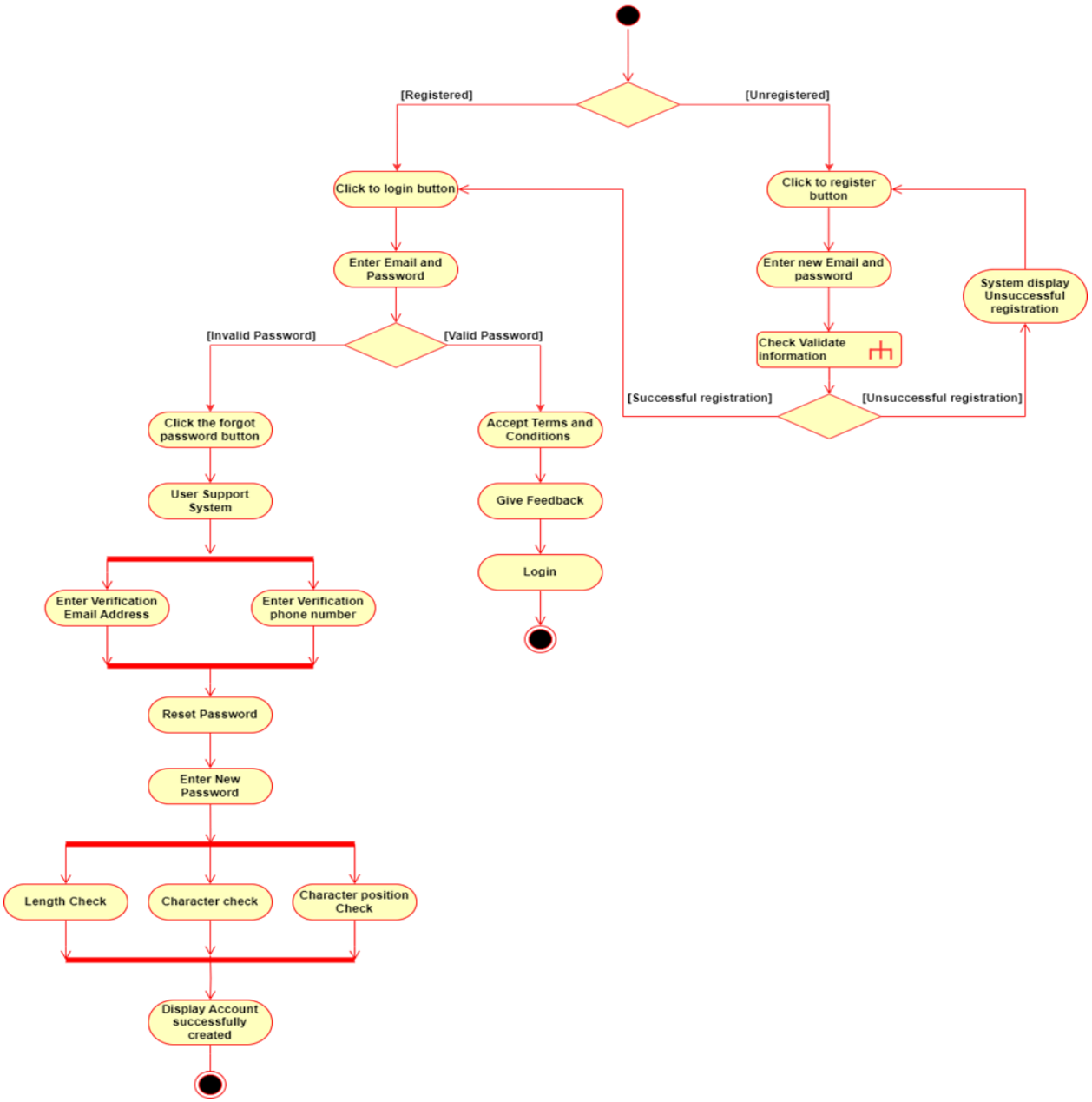
Number	022	
Name	User Login	
Summary	Allows any registered user to log in to the system to access their dashboard and functionalities.	
Priority	High	
Pre-conditions	User must have a registered account.	
Post-conditions	User gains access to the system with appropriate permissions.	
Primary Actor	User	
Trigger	User wants to access their account and system features.	
Main Scenario	**Step**	**Action**
	1	User navigates to the login page
	2	User enters username and password
	3	User clicks the "Login" button
	4	System validates credentials
	5	System grants access and redirects to the user's dashboard

Extensions	**Step**	**Branching Action**
	2a	System prompts to fill in empty fields if any input is missing
	4a	System displays "Invalid username or password" if credentials are incorrect
	4b	System locks the account after multiple failed login attempts
	4c	System displays captcha if suspicious activity is detected

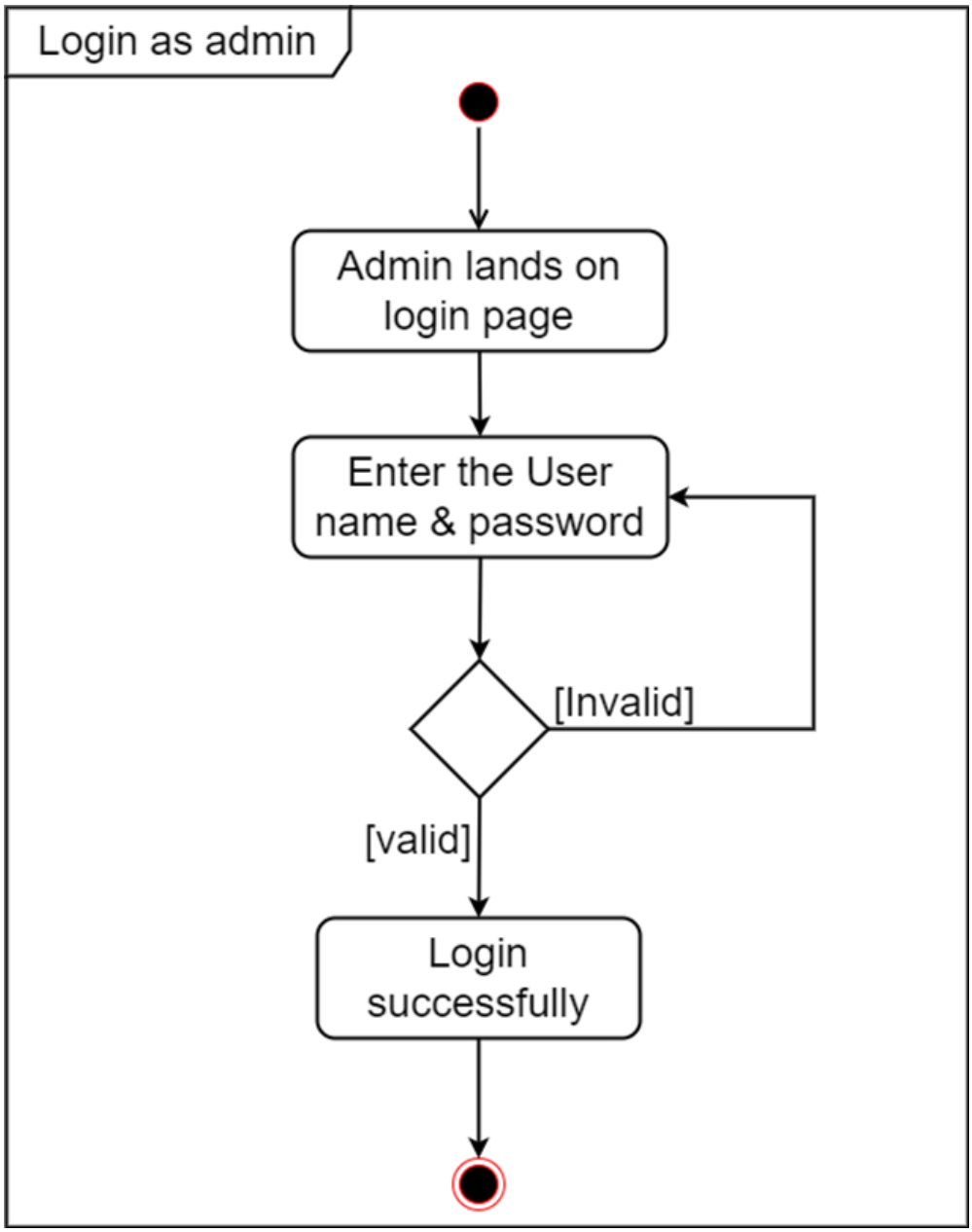
8.1.4 Optional Diagrams

Activity Diagram

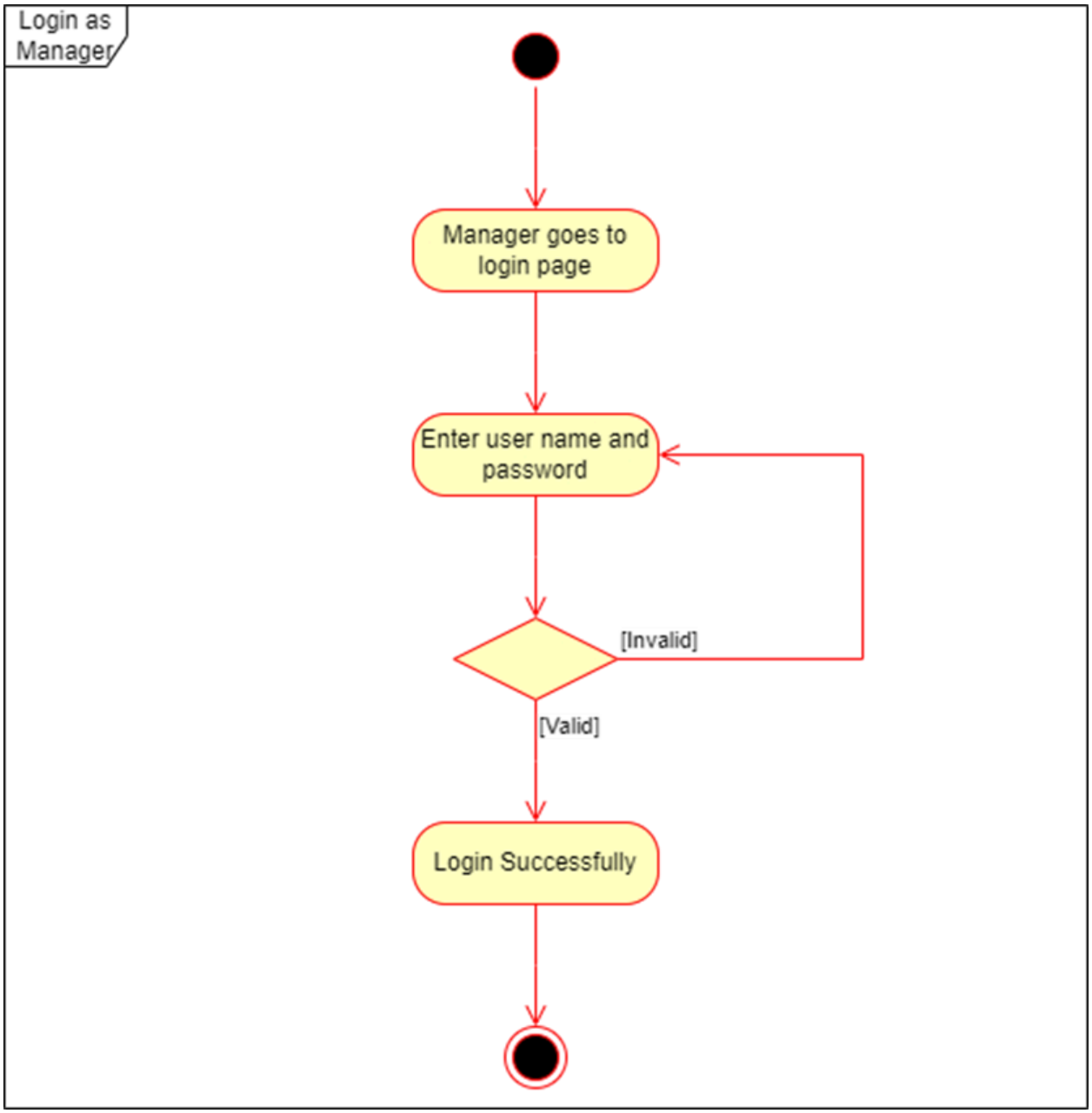
Register



Login As Admin



Login As Manager



8.2 Quality Attribute Requirements

8.2.1 Performance

- The system shall respond to any operation (e.g., booking, login, profile update) in 3 seconds of regular loading.
- The frontend shall load the homepage in 2 seconds on average broadband connections.
- Backend scripts (e.g., calendar validity checks, availability filters) shall run less than 1 second per query.

8.2.2 Usability

- System shall have mobile responsiveness for all typical screens.
- UI shall be user-friendly with tooltips, labels, and error messages for failed actions.
- Navigation will be consistent for every user role.
- Registration and booking of a service are possible for first-time users within 5 minutes.

8.2.3 Security

- The system will use role-based access control (e.g., clients can't view vet tools).
- Passwords will be stored securely using hashing (e.g., bcrypt or PHP password_hash).
- User input will be checked to prevent SQL injection and XSS attacks.
- Only logged-in users will be able to view dashboards and personal information.
- All data transfer (especially login and payment) will be over HTTPS.

8.2.4 Reliability

- The system must be available 99% of the time (except for maintenance windows).
- Critical information (e.g., bookings, medical records) must be auto-backed up daily.
- On failure, the system must recover within 30 minutes using backups

8.2.5 Maintainability

- Codebase shall have modular structure (except frontend, backend, DB).
- All PHP and JS code shall be commented and have consistent style guides.
- System shall have admin panel functionality for user, service, and content management.
- Logs shall be stored for all significant actions (login, edit, delete).

09. Technologies to be Used

9.1 Frontend Technologies

- **HTML** – for structuring web content
- **CSS** – for styling, layout, and responsiveness
- **JavaScript** – for dynamic UI behavior and interactivity

9.2 Backend Technologies

- **PHP** – Handles server-side logic and processing
- **PHP Mail or PHPMailer** – For sending email notifications to users

9.3 Database Systems

- **MySQL** – Used to store users, bookings, medical records, inventory, and other core data
- **phpMyAdmin** – Provides an easy interface for managing the database during development

9.4 Other Tools/Frameworks

- **Google Maps API** – For location-based features like finding nearby clinics and reporting lost pets
- **Git & GitHub** – For version control and team collaboration
- **XAMPP** – Local development environment to run Apache, PHP, and MySQL
- **VS Code** – Main code editor for development
- **Google Docs** – Used for project documentation and team writing
- **Draw.io, MS Excel** – For creating diagrams like use case, activity diagrams, gantt chart
- **ngrok** – Used to expose the local development server for real-time external testing and sharing

10. Project Timeline

10.1 Work Breakdown Structure (WBS)

1. Project Planning & Setup
- 1.1 Finalize scope and objectives
- 1.2 Assign team roles and responsibilities
- 1.3 Select tech stack
- 1.4 Create Gantt chart and WBS
- 1.5 Setup version control
- 1.6 Configure dev environment

2. UI/UX Design
- 2.1 Wireframes
- 2.2 User flow diagrams
- 2.3 Mockups
- 2.4 Mobile plan
- 2.5 UI approval

3. Frontend Development
- 3.1 Homepage & navigation
- 3.2 Dashboards
- 3.3 Vet booking UI
- 3.4 Pet profiles UI
- 3.5 Google Maps integration
- 3.6 Pet shop UI
- 3.7 Mobile vet UI
- 3.8 Email notification UI
- 3.9 Trainer booking UI
- 3.10 Sitter booking UI
- 3.11 Seller listings UI
- 3.12 Consent page
- 3.13 Notification status page

4. Backend Development
- 4.1 Authentication
- 4.2 Role management
- 4.3 Appointment system
- 4.4 Medical records
- 4.5 Pharmacy & inventory
- 4.6 Lost & found
- 4.7 Audit trail
- 4.8 Staff account mgmt
- 4.9 Clinic reports
- 4.10 Billing system
- 4.11 PDF export
- 4.12 Clinic profile mgmt
- 4.13 Trainer backend
- 4.14 Sitter backend
- 4.15 Seller management
- 4.16 Consent storage
- 4.17 Access control

5. Payment Gateway Integration
- 5.1 Gateway setup
- 5.2 Invoice generation
- 5.3 Refund handling

6. Testing
- 6.1 Unit testing
- 6.2 Frontend testing
- 6.3 Integration testing
- 6.4 UAT
- 6.5 Parallel testing
- 6.6 Mobile testing
- 6.7 Bug fixing

7. Deployment & Maintenance
- 7.1 Hosting setup
- 7.2 Domain & SSL
- 7.3 DB connection test
- 7.4 Logging & validation
- 7.5 Backup & security
- 7.6 Maintenance plan

10.2 Gantt Chart

Task		JUNE				JULY				AUGUST				SEPT & OCT	NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH			
		1	2	3	4	5	6	7	8	9	10	11	12	13-20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. ProjectPlanning & Setup														EXAM PERIOD																			
2.UI/UX Design	2.1 Wireframes for Main Screens																																	
	2.2 User Flow Diagrams																																	
	2.3 High-Fidelity Mockups																																	
	2.4 Mobile Responsiveness Design Plan																																	
	2.5 Final UI Approval																																	
3. Frontend Development (HTML/CSS/JS)	3.1 Homepage & Navigation																																	
	3.2 Dashboards by Role																																	
	3.3 Booking Interfaces																																	
	3.4 Pet Profile Management																																	
	3.5 Google Maps API Integration																																	
	3.6 Pet Shop Frontend																																	
	3.7 Mobile Vet UI																																	
	3.8 Email Notification Setup																																	
4. Backend System Development (PHP)	4.1 User Authentication (Login/Signup)																																	
	4.2 Profile & Role Management																																	
	4.3 Appointment System																																	
	4.4 Medical Records Module																																	
	4.5 Pharmacy & Inventory																																	
	4.6 Lost & Found System																																	
	4.7 Booking Logs & Audit Trail																																	
5. Payment Gateway Integration	5.1 Setup Payment Gateway																																	
	5.2 Invoice Generation																																	
	5.3 Refund/Cancellation Handling																																	
6. Testing	6.1 Unit Testing (PHP Functions)																																	
	6.2 Frontend Testing																																	
	6.3 Integration Testing																																	
	6.4 User Acceptance Testing (UAT)																																	
	6.5 Parallel Module Testing																																	
	6.6 Mobile Responsiveness Testing																																	
	6.7 Bug Fixes & Improvements																																	
7. Deployment & Maintenance	7.1 Web Hosting Environment Setup																																	
	7.2 Domain & SSL Configuration																																	
	7.3 Database Connection & Testing																																	
	7.4 Logging, Error Handling & Validation																																	
	7.5 Backup & Security Setup																																	
	7.6 Ongoing Maintenance Plan																																	

11. Declaration

11.1 Team Member Declarations

We as members of the project titled <u>Petvet</u>, certify that we will carry out this project according to the guidelines provided by the coordinators and supervisors of the course as well as we will not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any university. To the best of our knowledge and brief, the project work will not contain any material previously published or written by another person or ourselves, except where due reference is made in the text of appropriate places

Index Number	**Name of the student**	**Signature**
23020725	Perera M.S	
23020504	H.D.D.H Liyanage	
23021012	W.H.A. Sithummal	
23020032	A.G.N.K. Abeywardhana