

Sri Lanka Institute of Information Technology

B.Sc. (Hons) in Information Technology



Project

MLB\_01.01\_06

## Online Pet Care System

- web site
- user cases
- Use Case Scenarios
- user stories
- SRC
- wireframes
- ER diagram
- Relational schema
- SQL Queries
- Personas

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## 1. Introduction

PetLife is an Online Pet Care system designed to serve the various needs of pet owners. This platform offers a wide range of services including,

- Veterinary Services
- Grooming Services
- Dog Walking Service
- Pet Hostel
- Pet toy store
- Pharmacy

PetLife serves as a one stop solution for all the needs of pet owners with a sense of reliability and expertness. Customers can easily book all the appointments at the comfort and ease of their fingertips. By using PetLife's store and pharmacy services pet owners can buy all the pet supplies and medicine their pets need and get them delivered to their doorsteps. All the payments can be made through the easy to use and secure payment portal integrated into the platform.

When booking dog walking sessions, pet owners can input their postal code to find the nearest contract-based dog walker nearest to their location. Both the user and the service provider get a confirmation email providing details including contact details and location details.

Nevertheless, with all other services users get a confirmation email regarding their request. Users can use the Contact Us page to post their questions and concerns and they will be promptly answered via email.

Finally, Users can read the About us page to gain a thorough understanding of the qualifications and motivations of the service providers.

## 2. Personas

- Customer – Booking a Dog walking session

Online Pet Care System – User account Details	
	Name: Kamal Wijesinghe
	Age: 68
	Motivation: Give his dog exercise
	Goals: Book a reliable dog walker to take his dog for walk
	Technical Ability: Poor technical ability

USER PERSONA

## KAMAL WIJESINGHE



Gender : Male  
Age : 68  
Pet : 8 year old dog named Brownie  
Education : Bachelor's degree  
Occupation : Retired Teacher  
Address : Kaduwela, Colombo

**BIOGRAPHY**  
Mr. Kamal Wijesinghe is a retired teacher who loves dogs. He has an 8 year old pet dog who he care about greatly. He always tries to give what is best to his loving dog.

**MOTIVATIONS**

- Ensuring Brownie has a comfortable life.
- Keep Brownie clean and well groomed.
- Get all the pet supplies that Brownie needs.
- Get the healthcare needs of Brownie fulfilled.

**GOALS**

- Ensure Brownie's comfort and health.
- Access to convenient pet care.
- Have a simplified pet healthcare management.
- Maintain independence in pet care.

**FRUSTRATIONS**

- It is challenging to walk brownie due to old age.
- Difficulty in navigating technology.
- Worried about Brownie's safety and well-being.
- Lack of reliable and affordable local services.

**PERSONALITY**

Introvert      Extrovert  
Thinking      Feeling  
Judging      Perceiving  
Sensing      Intuition

**TECHNOLOGY**

Software  
Social Media  
Mobile App

**BRANDS**

PetBacker      PetExpress      Rover  
Vetster      PETSMART

- Customer – Booking a Dog grooming session

Online Pet Care System – User account Details	
	Name: Shanuka Yasanga
	Age: 55
	Motivation: To have his dog clean
	Goals: Book a reliable service to groom his dog
	Technical Ability: Moderate technical ability

**USER PROFILE**

## SHANUKA YASANGA



Gender : male  
 Age : 55  
 Pet : 9 year old dog named rocky  
 Education : Bachelor's degree  
 Occupation : retired soldier  
 Address : 185/67 Homagama, Colombo

**BIOGRAPHY**  
 Mr.Shanuka is an unmarried retired navy soldier.He was disabled from an accident during duty and now he lives with his 9 year old dog.

**MOTIVATIONS**

- Giving Rocky a healthy life.
- Buying stuff for Rocky.
- Keep rocky beautiful and clean.

**GOALS**

- To bring home the necessary items.
- Getting the medical help for Rocky.
- Get grooming service for rocky.
- Maintaining Rocky's happiness and health.

**FRUSTRATIONS**

- Physical challenges in getting Rocky to the vet.
- Difficulty finding reliable pet products and services.
- Rising costs of pet care.

**PERSONALITY**

Introvert	Extrovert
Thinking	Feeling
Judging	Perceiving
Sensing	Intuition

**TECHNOLOGY**

Software	<div style="width: 100%;"> </div>
Social Media	<div style="width: 100%;"> </div>
Mobile App	<div style="width: 100%;"> </div>

**BRANDS**











- Customer – Booking a pet hostel service

Online Pet Care System – User account Details	
	Name: Curtely Ambrose
	Age: 48
	Motivation: To find a reliable place to keep his pet when travelling.
	Goals: Book a reliable pet hostel
	Technical Ability: Good technical ability

**USER PROFILE**

# CURTELY AMBROSE



Gender : Male  
 Age : 48  
 Education : Bachelor's degree  
 Occupation : business  
 Address : No 244, Alfred Road, Kollupitiya

**BIOGRAPHY**  
 I am curtely ambrose. I am from sri lanka. I a businessman now iam retired. Now i am take caring my 5 years old vicky.

**MOTIVATIONS**

- Ensure your pet's comfort and happiness.
- Give his pet the best experience during your trips.
- Feel confirm that your pet is in good hands.

**GOALS**

- Find a trusted and dependable boarding facility.
- Easily book and arrange pet boarding appointments.
- Maintain regular communications.
- Less stress for both pets and owners.

**FRUSTRATIONS**

- Difficulty to find and book a reliable boarding facility.
- Lack of real time updates.
- Lack of information and review.
- Inconsistent communication from the boarding facility.



- Customer – Purchasing medicine for pets

Online Pet Care System – User account Details	
	Name: Sara Jenise
	Age: 38
	Motivation: To buy quality medicine for her pets
	Goals: To find an online pharmacy that delivers medicine
	Technical Ability: Good technical ability

**USER PROFILE**

# SARA JENISE



Gender : Female  
 Age : 38  
 Pet : 5(Two Dog +Three Cat)  
 Education : Bachelor of Veterinary Science (BVSc)  
 Occupation : veterinarian  
 Address : 243 Grove St, London

**BIOGRAPHY**  
 Sara has been around animals her entire life. Growing up on a farm, she was surrounded by livestock. She wanted to be a veterinarian, so she hung out with animals. She owns a veterinary clinic in her small town.

**MOTIVATIONS**

- Love for Animals
- Desire to help others and thrill of problem-solving
- Commitment to lifelong learning
- Passion for community impact

**GOALS**

- To continue expanding her veterinary services
- Educating people about pet ownership
- Increasing animal rescue and care
- Increasing animal rehabilitation centers

**FRUSTRATIONS**

- Emotional strain
- Time constraints
- Overcrowded Shelters
- Financial limitation

**PERSONALITY**

Introvert ————— Extrovert

Thinking ————— Feeling

Judging ————— Perceiving

Sensing ————— Intuition

**TECHNOLOGY**

Software

Social Media

Mobile App

**BRANDS**



- Customer – Purchasing toys for pets

Online Pet Care System – User account Details	
	Name: Ima Dikson
	Age: 26
	Motivation: To provide her pets with pet safe toys
	Goals: To find an online store to buy high quality pet toys
	Technical Ability: Good technical ability

**USER PROFILE**

# IMA DIKSON



Gender : Female  
 Age : 26  
 Education : Bachelor's degree  
 Occupation : Graphic designer  
 Address : 123 Los Angeles, United States of America.

**BIOGRAPHY**

Ima has just adopted Oscar, her first dog, so she is very excited and a bit overwhelmed. As a graphic designer, she is in love with good design and hates the hassle associated with in-store shopping; hence, she seeks good design and usability in options related to toys, grooming, and dog walking, especially since she lives in an apartment.

**MOTIVATIONS**

- Ensure Oscar gets the greatest toy, care, and exercise to ensure her health and happiness.
- Find a simple way to handle all of pet care needs in one place.
- Select highly rated products and services for greater reliability.

**GOALS**

- Buy safe toys.
- Schedule grooming.
- Arrange dog walking.
- Health products.

**FRUSTRATIONS**

- Information overload
- Lack of trust
- Complex booking processes

**PERSONALITY**

Introvert — Extrovert

Thinking — Feeling

Judging — Perceiving

Sensing — Intuition

**TECHNOLOGY**

Software: [Progress bar]

Social Media: [Progress bar]

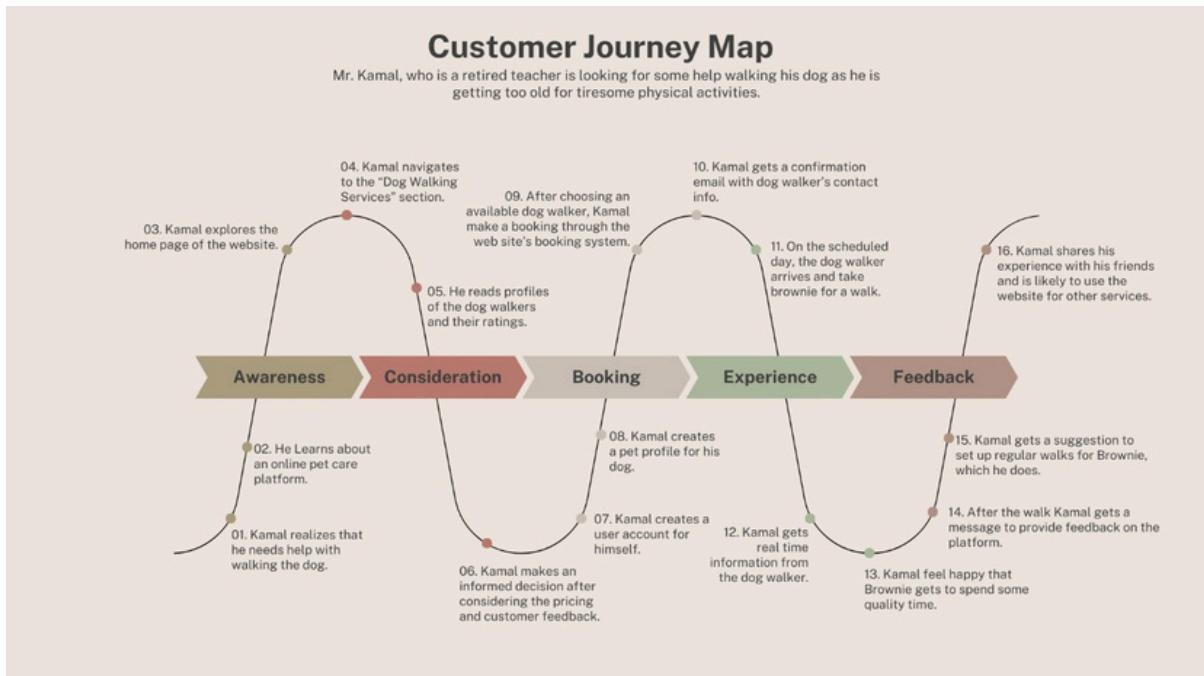
Mobile App: [Progress bar]

**BRANDS**

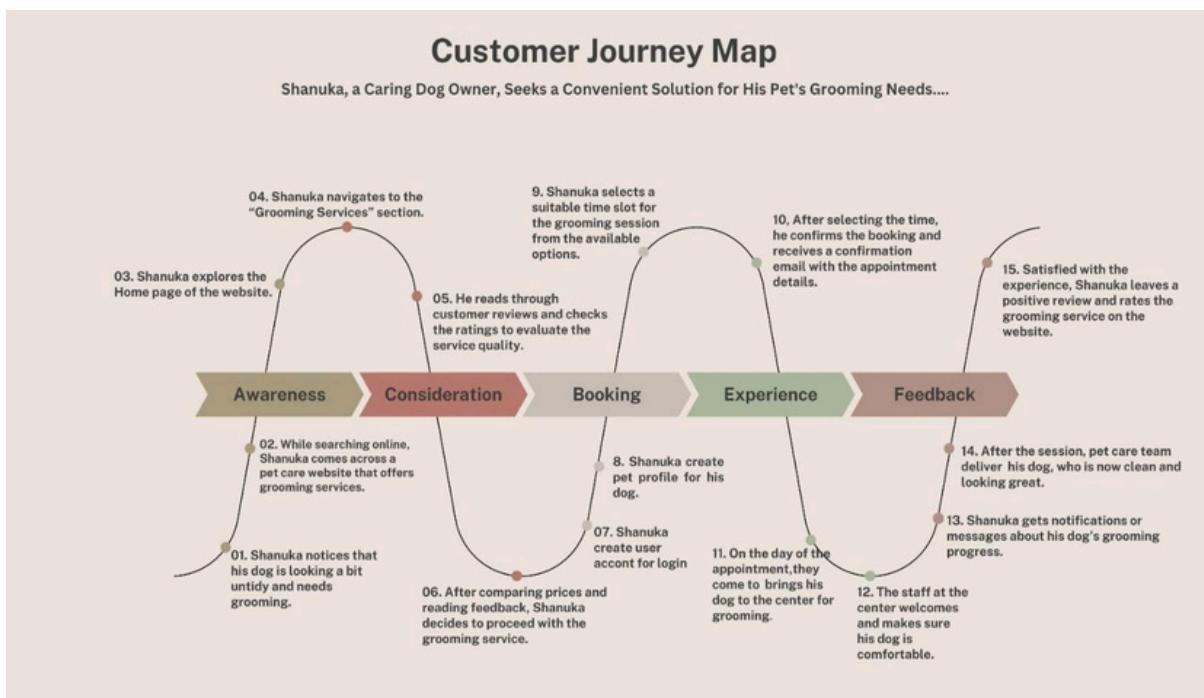


### 3. User Journeys

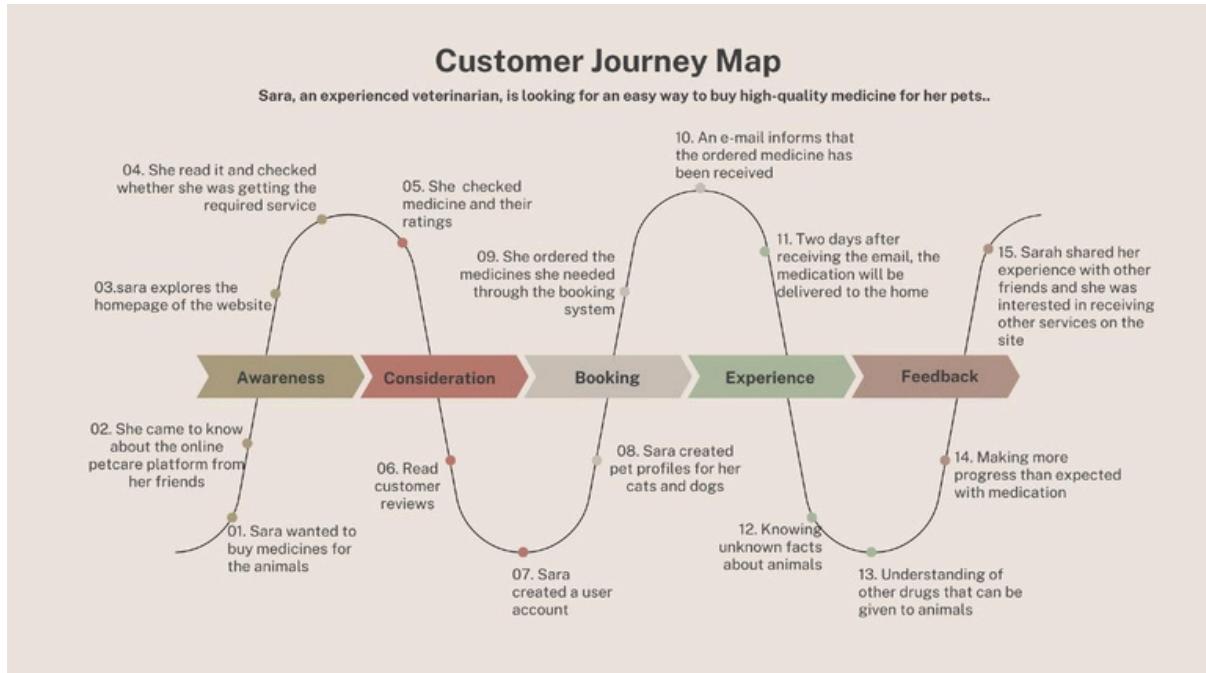
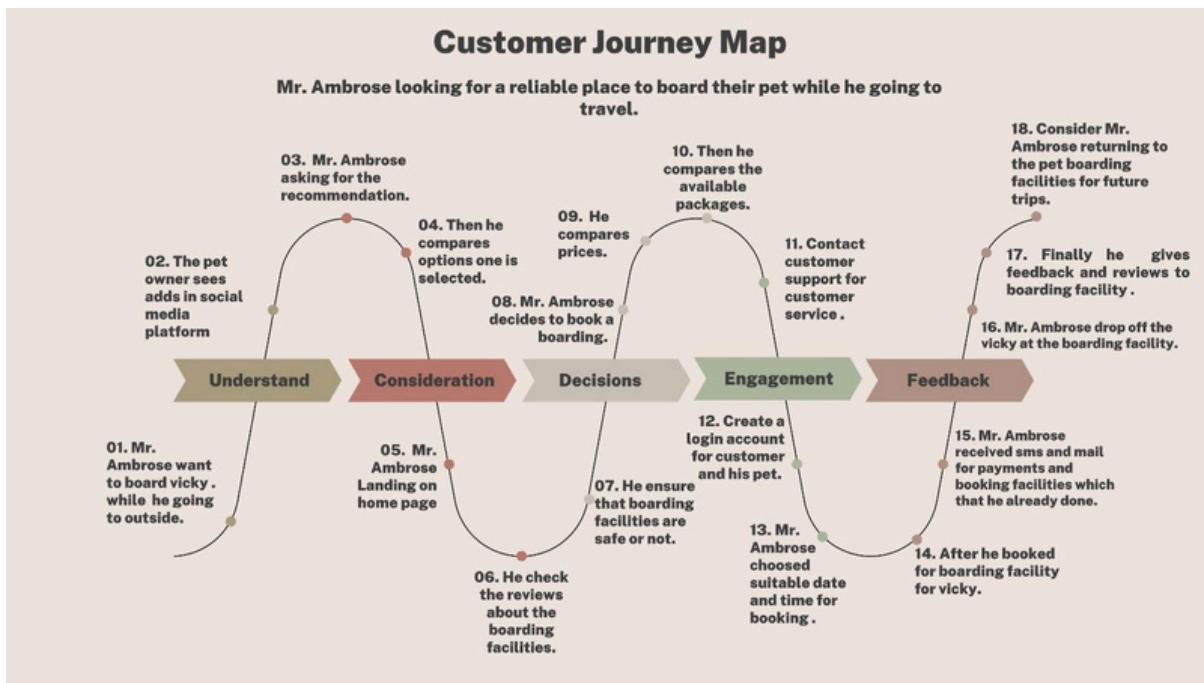
- Persona-Customer User Journey -Booking a dog walking session



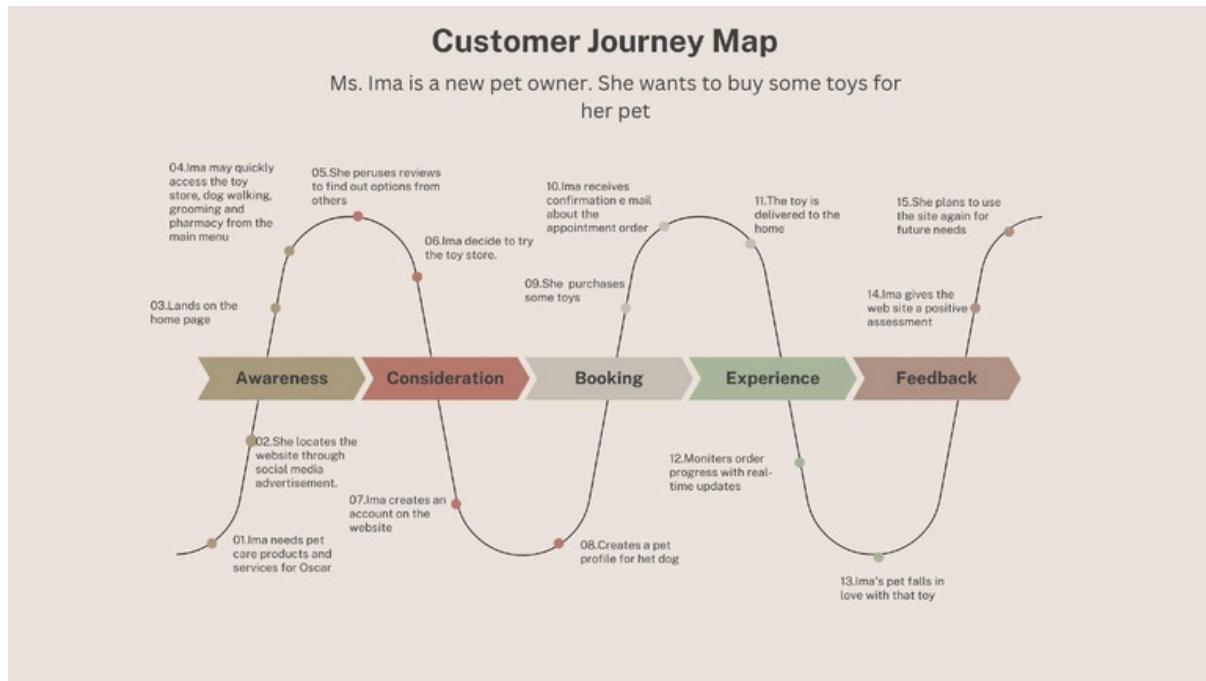
- Persona – Customer User journey -Booking a Dog grooming session



- Persona – Customer User journey -Booking a pet hostel

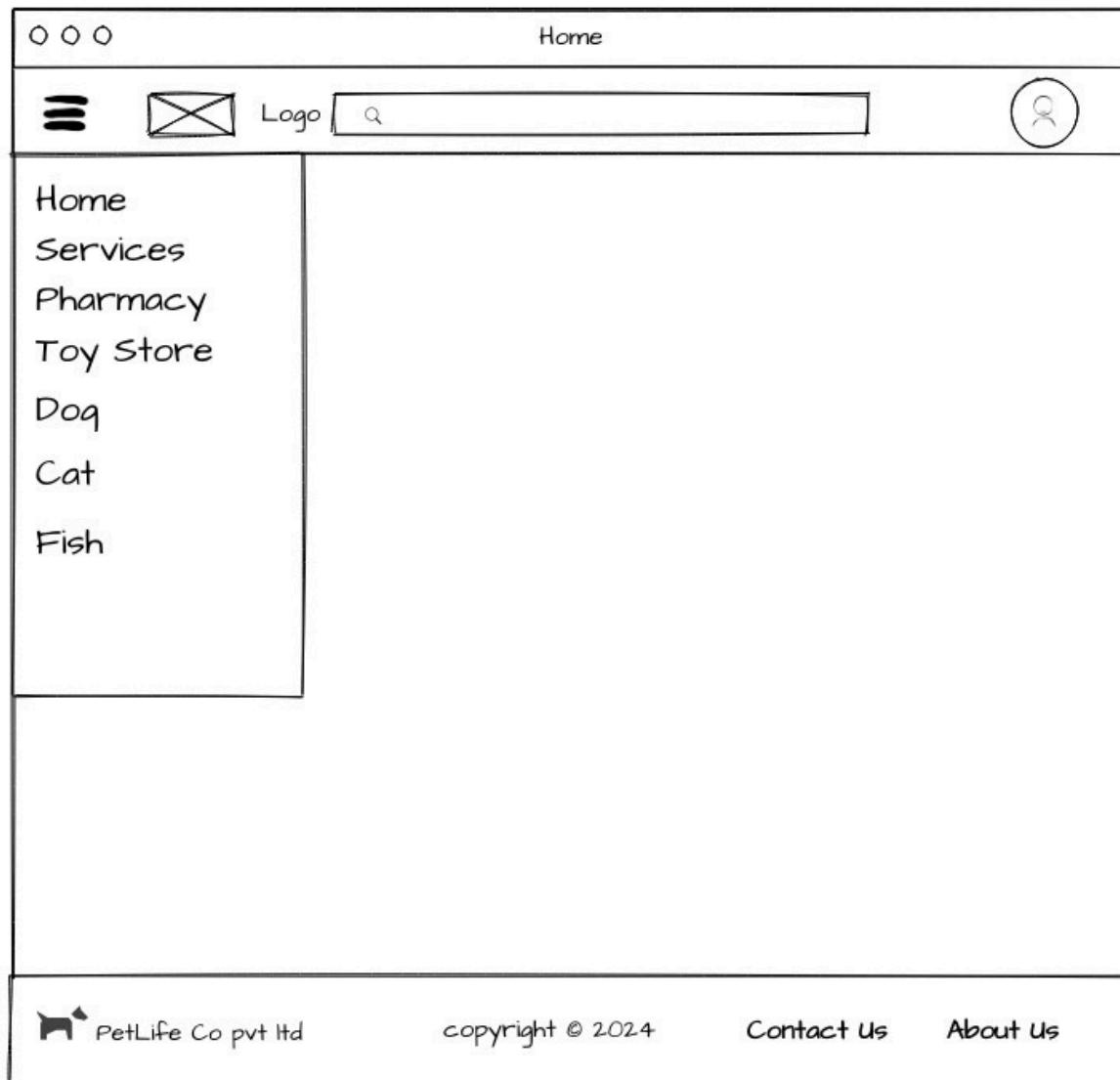


- Persona – Customer User journey -Buying pet toys

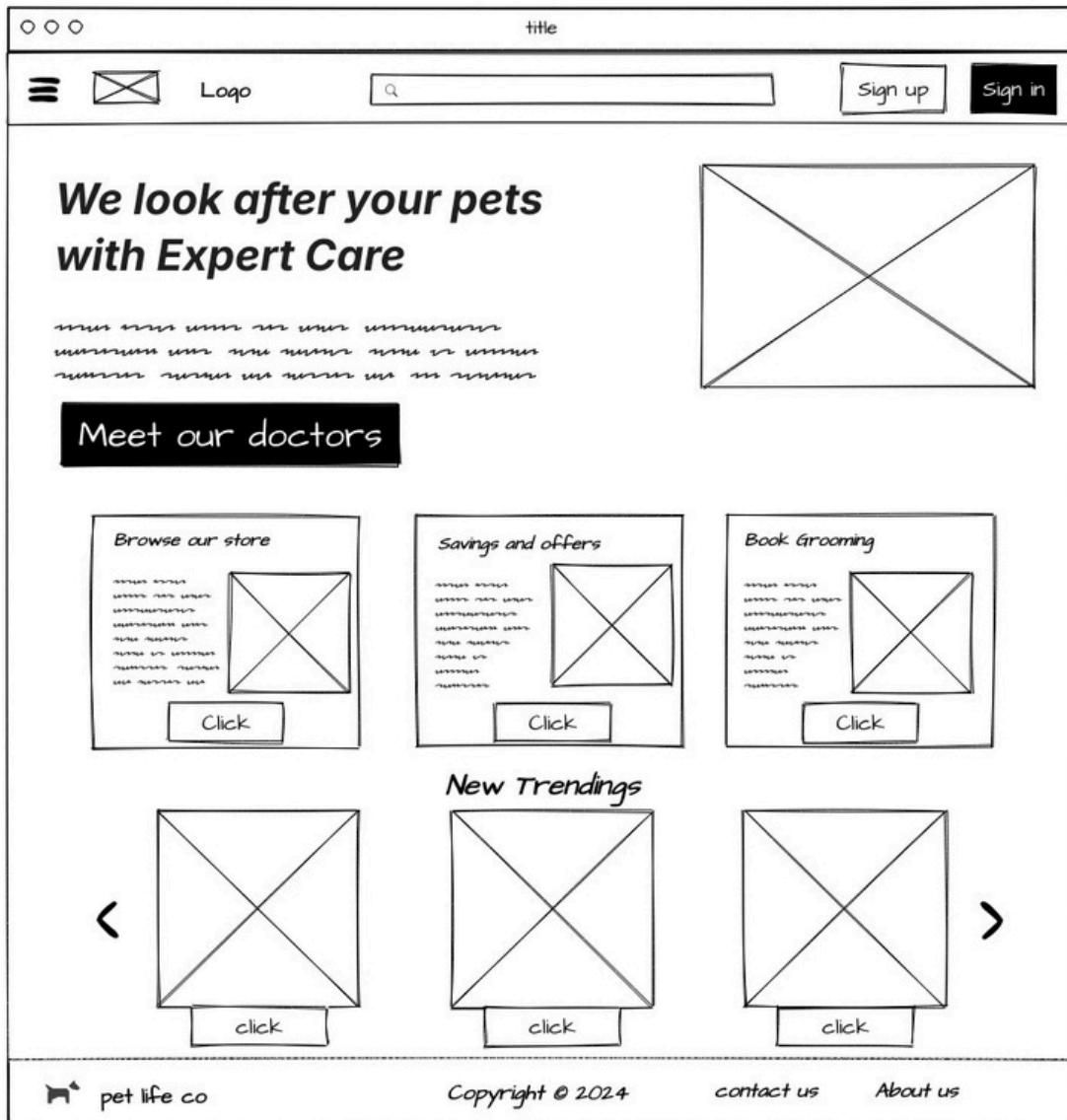


## 4. Wire Frames

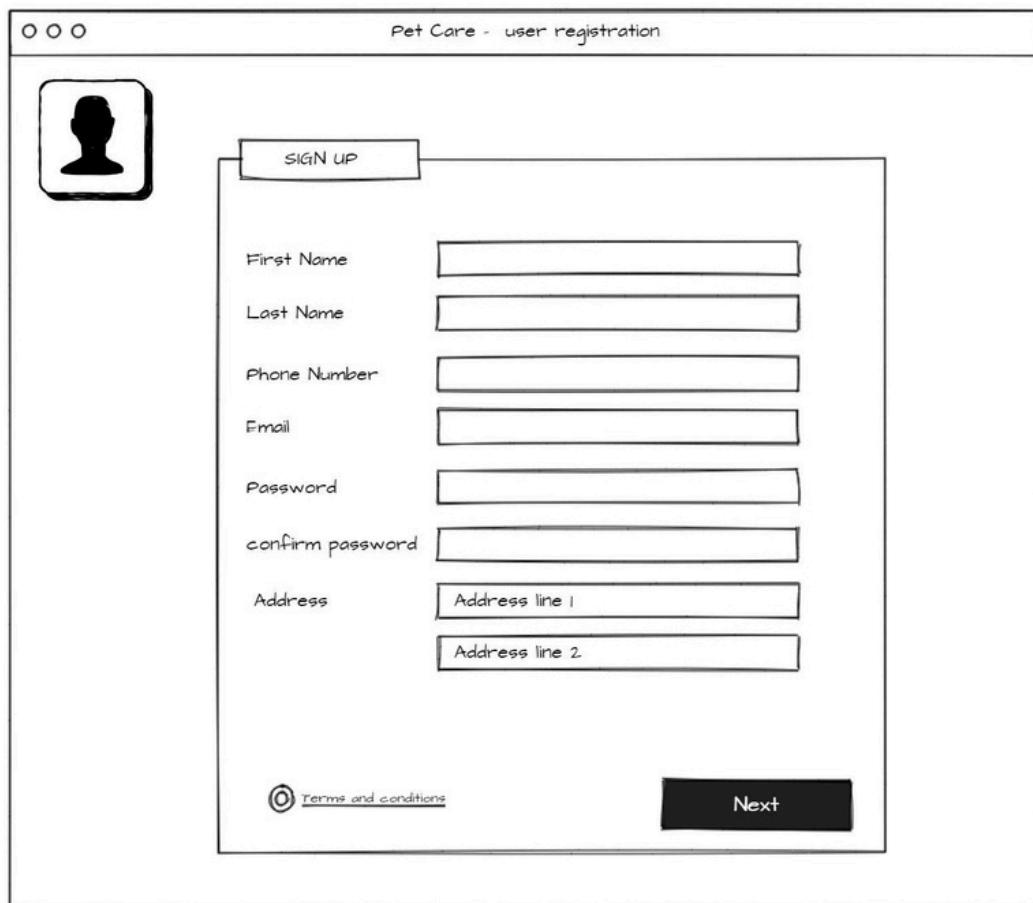
- Side-Menu panel



- Home Page



- User Registration Page



A wireframe diagram of a user registration page. The page has a header "Pet Care - user registration" and a logo icon. It features a "SIGN UP" button at the top right. Below it are input fields for First Name, Last Name, Phone Number, Email, Password, and confirm password. There are also two address input fields for Address line 1 and Address line 2. At the bottom left is a link to "Terms and conditions" with a circular icon, and at the bottom right is a "Next" button.

- Pet Registration Page



A wireframe diagram of a pet registration form titled "Pet Care - pet registration". The form includes a circular logo with a dog icon, a "SIGN UP" button at the top left, and several input fields for pet information: Pet Name, Age, Pet type (Dog), Breed, Weight, Gender, and a note section. A "Sign Up" button is located at the bottom right.

Pet Name:

Age:

Pet: Dog

Breed:

Weight:

Gender: Male

note:

**Sign Up**

- Login Page

The wireframe shows a mobile login screen. At the top, there are three circular icons on the left and the word "Log in" on the right. The main form area contains fields for "Email" and "password", a "Forgot your password?" link, a "Log in" button, and social media login options for "Continue with Google" and "Continue with Facebook". A note at the bottom says "Don't have an account yet? [Sign up here](#)". Below the form is a footer with the PetLife Co logo, copyright information, and links for "Contact Us" and "About Us". A large red "X" is overlaid on the right side of the main form area.

Log in

Email

password

Forgot your password?

Log in

or

Continue with Google

Continue with Facebook

Don't have an account yet? [Sign up here](#)

PetLife Co

Copyright©2024

Contact Us

About Us

- Contact Us Page

The wireframe shows a contact form with various input fields and icons. At the top, there's a header bar with three dots, a logo, a search bar, and a user icon. Below the header is a large title 'Contact Us' and a sub-instruction 'Any questions or remarks? just write us a message!'. There are two input fields: 'Email' and 'Name', each with a placeholder line. Below these is a larger text area labeled 'Type your issues and remarks' with a placeholder line. A 'Submit' button with a paper airplane icon is positioned below the text area. At the bottom, there's a section for contact information with icons for phone, location, and fax, and their respective details. The footer contains the company logo, copyright information, and links to 'Contact Us' and 'About Us'.

Contact Us

Any questions or remarks? just write us a message!

Email

Name

Type your issues and remarks

Submit

Phone number

+125 1245 458  
+235 4568 475

Office Location

128/B Kandy  
Road,  
Malabe

Fax

123-456-789.

PetLife Co pvt ltd

copyright©2024

Contact Us

About Us

- About Us Page

The wireframe shows a mobile-optimized website layout. At the top, there's a header bar with three dots on the left, the text "About Us" in the center, and a user icon on the right. Below the header is a navigation bar featuring a menu icon, a logo placeholder, a search bar with a magnifying glass icon, and another user icon. The main content area has a title "ABOUT US" at the top. To the right of the title is a large rectangular placeholder with a large 'X' drawn through it, likely indicating a missing or placeholder image. To the far right is a vertical sidebar with a grey gradient bar. Below the title, there's a section titled "Services you can get by joining us....." followed by a bulleted list of services. Further down, there's a section for "Our partner companies;" with four placeholder boxes labeled "Company 01" through "Company 04". At the bottom of the page is a footer bar containing the company logo, the text "PetLife Co pvt Hd", the copyright year "Copyright©2024", links for "Contact us" and "About us", and a small decorative icon.

Services you can get by joining us.....

- \*Toys & Supplies
- \*Grooming Services
- \*Dog Walking
- \*Pharmacy Services

Our partner companies;

Company 01      Company 02      Company 03      Company 04

PetLife Co pvt Hd      Copyright©2024      Contact us      About us

- FAQ page

The wireframe illustrates a user interface for a FAQ page. At the top left are three circular icons (O O O). The top right contains the word "FAQ". On the left side is a menu icon (three horizontal lines) and a logo icon (a square with an X). On the right side is a user profile icon (a circle with a stylized person). Below the header, the title "HELP (FAQ)" is centered in bold capital letters. A sub-section titled "Do you need help?" is followed by a large area containing several horizontal wavy lines, suggesting a list of frequently asked questions. To the right of this list is a vertical sidebar with a grey gradient bar. The main content area is labeled "FAQ" in bold capital letters. Below this, there are five expandable sections with dropdown arrows: "General Questions", "Order Process", "Payment Information", "Services Information", and "Account Management". At the bottom of the page, there is a footer navigation bar with links: "PetLife Co pvt Hd" (with a dog icon), "Copyright©2024", "Contact us", and "About us".

- Services Page

The wireframe shows a mobile-optimized website layout for a pet services company. At the top, there's a header bar with three dots on the left, the word "Services" in the center, and a menu icon (three horizontal lines), a logo (a stylized dog head), a search bar with a magnifying glass icon, and a user profile icon on the right.

## We Offer



### Veterinary Services

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat.

[Book](#)



### Grooming

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat.

[Book](#)



### Dog Walking

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat.

[Book](#)



### Pet Hostel

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat.

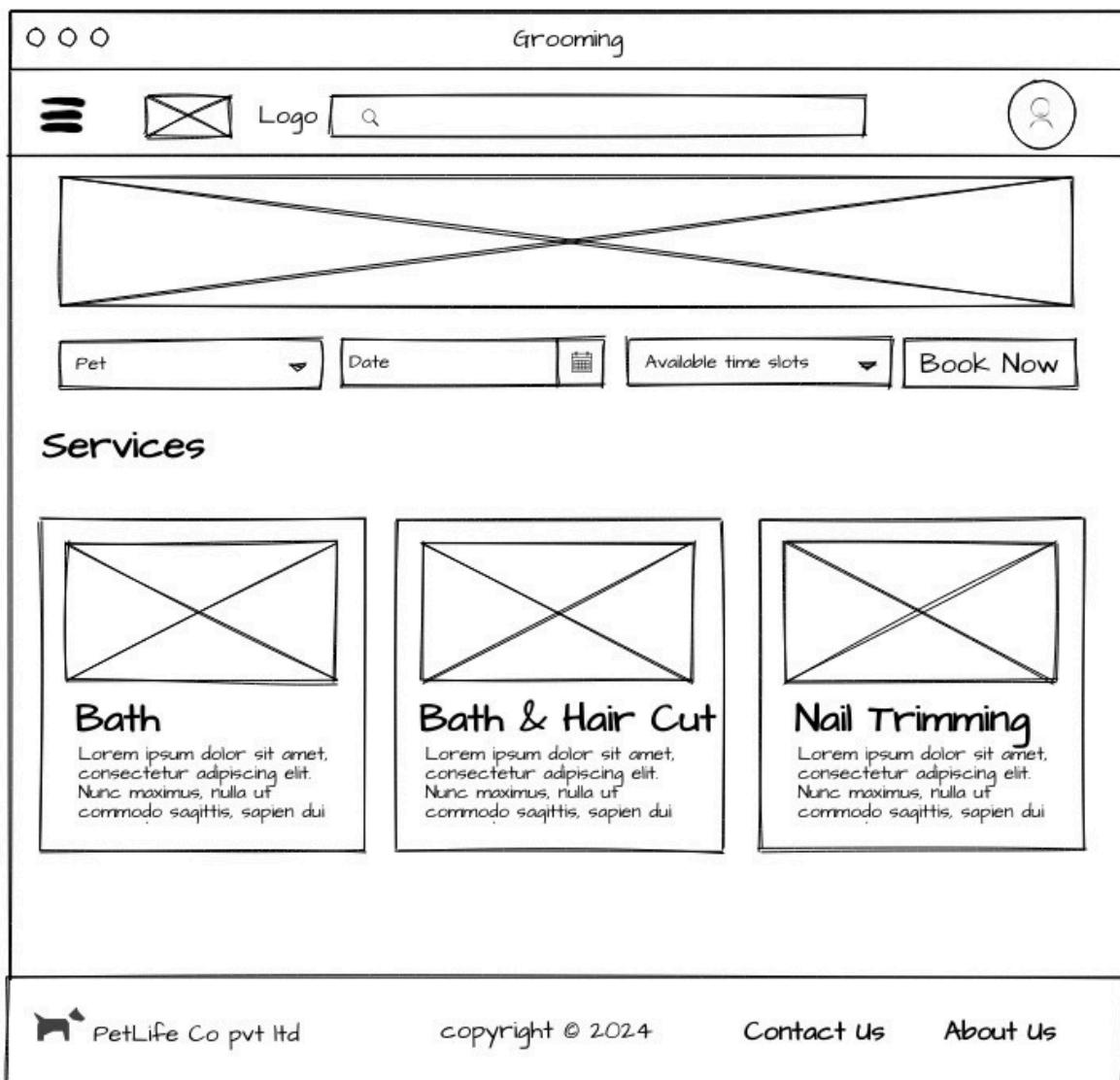
[Book](#)

 PetLife Co pvt Ltd

copyright © 2024

[Contact Us](#)   [About Us](#)

- Grooming Session Booking Page



The wireframe illustrates a user interface for booking a grooming session. At the top, there is a header bar with three dots on the left, the word "Grooming" in the center, and a search icon on the right. Below the header is a navigation bar featuring a menu icon, a logo placeholder, and a search bar. A large, empty rectangular area is positioned below the navigation bar, likely for displaying service options or promotional content. Underneath this area are four input fields: "Pet" with a dropdown arrow, "Date" with a calendar icon, "Available time slots" with a dropdown arrow, and a "Book Now" button. The main content section is titled "Services" and contains three service cards. Each card has a large X mark over it. The first card is labeled "Bath" and includes placeholder text: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui". The second card is labeled "Bath & Hair Cut" and also includes placeholder text: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui". The third card is labeled "Nail Trimming" and includes placeholder text: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui". At the bottom of the page is a footer bar containing the PetLife Co pvt Ltd logo, copyright information ("copyright © 2024"), and links for "Contact Us" and "About Us".

Grooming

Logo

Pet Date Available time slots Book Now

Services

Bath

Bath & Hair Cut

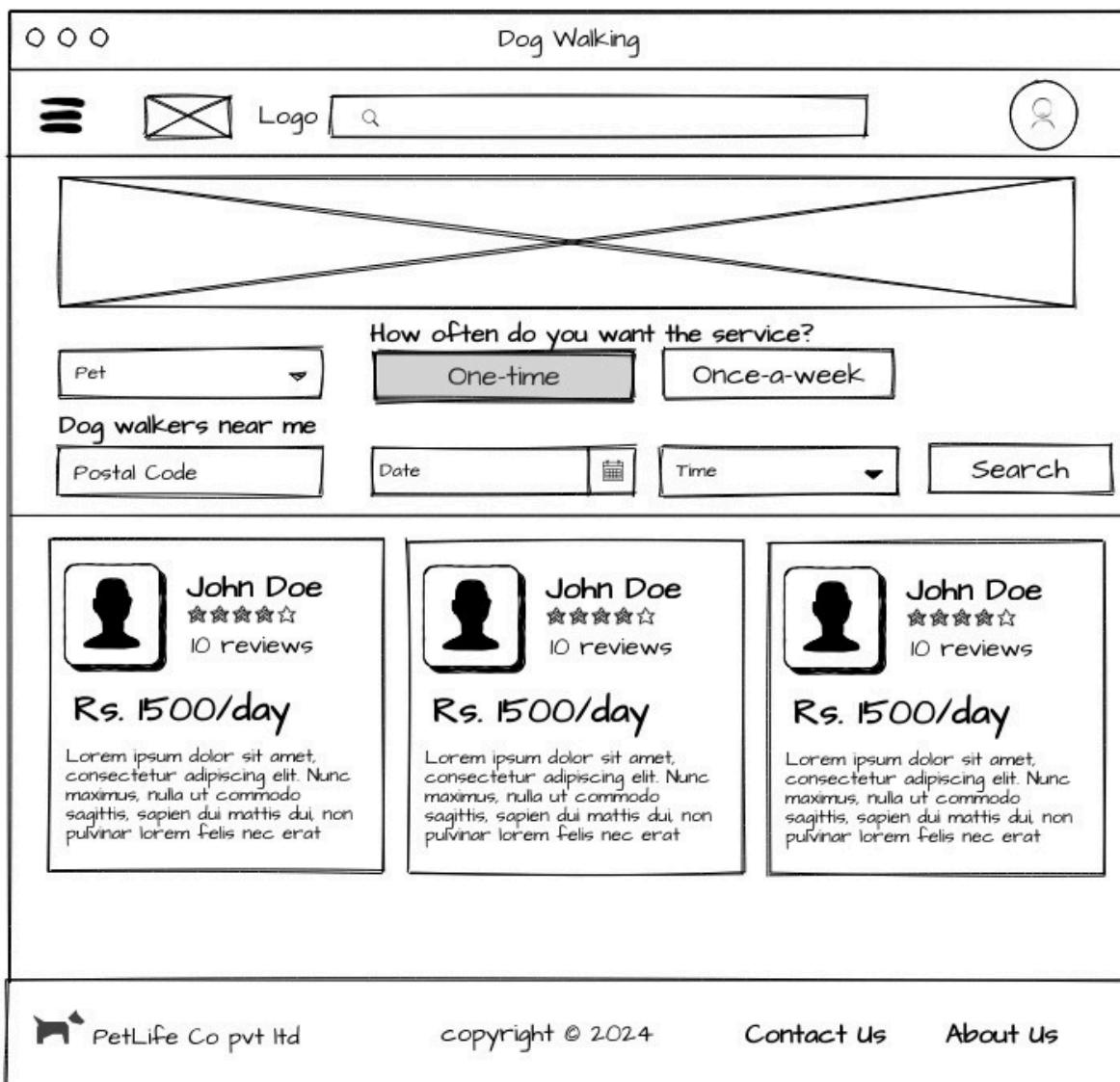
Nail Trimming

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- Veterinary Appointment Booking Page

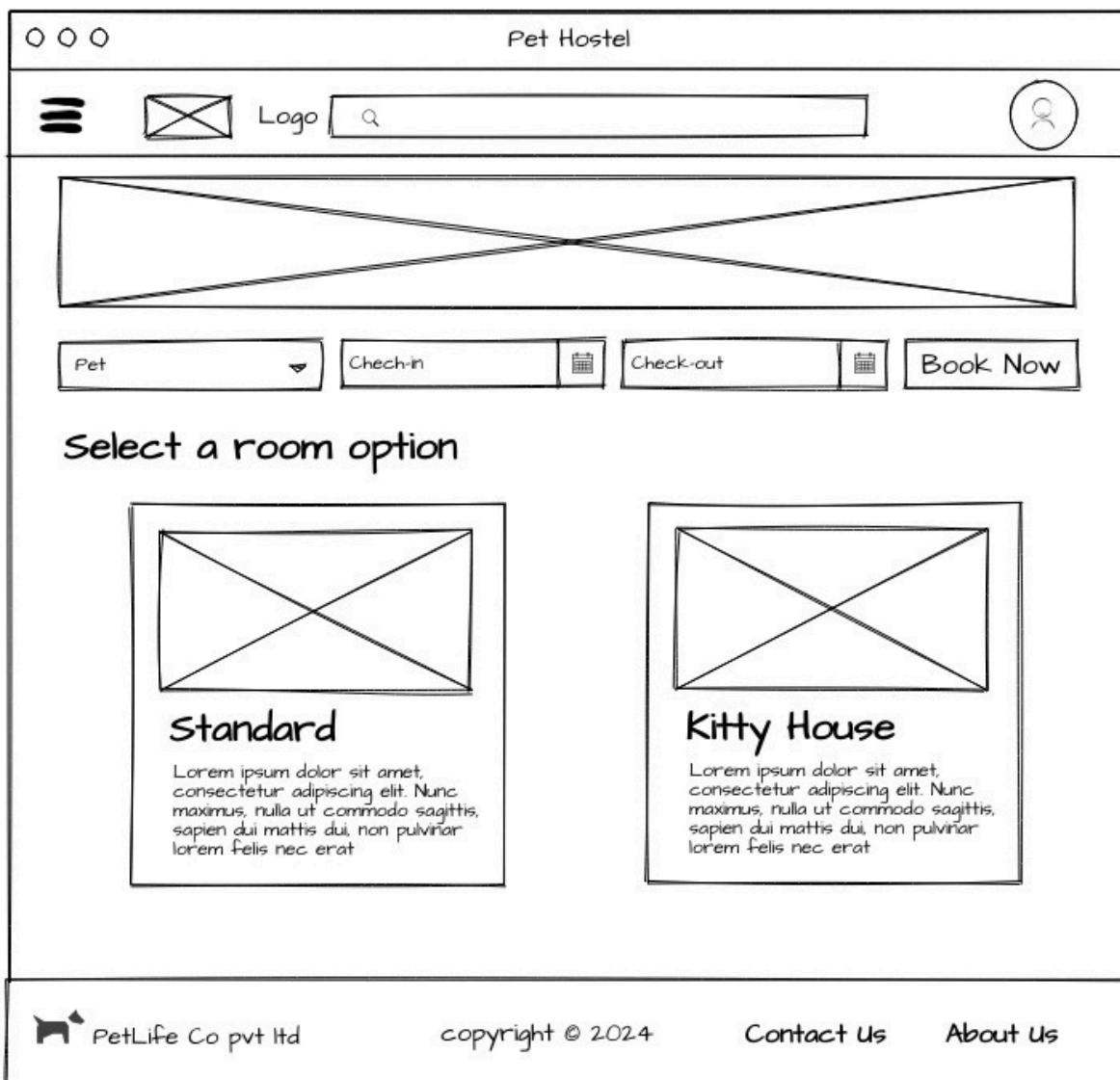
A hand-drawn wireframe of a mobile application interface for "Veterinary Booking". The top navigation bar includes three dots, the title "Veterinary Booking", a menu icon, a logo placeholder, a search bar, and a user profile icon. The main content area is titled "Select a Vet for your appointment" and displays a grid of 12 appointment slots for "Dr. John Doe". Each slot shows a profile picture, the doctor's name, a 5-star rating, 10 reviews, and two time options: "TODAY at 10:30" and "TODAY at 13:30". At the bottom, there is a footer with a dog icon, the text "PetLife Co pvt Ltd", copyright information "copyright © 2024", and links for "Contact Us" and "About Us".

- Dog Walking Booking Page



The wireframe illustrates a user interface for booking dog walking services. At the top, there's a header bar with three dots on the left, the text "Dog Walking" in the center, and a menu icon (three horizontal lines) and a search bar with a magnifying glass icon on the right. Below the header is a large rectangular area with a diagonal cross line through it. Underneath this area, the text "How often do you want the service?" is displayed, followed by three buttons: "Pet" (with a dropdown arrow), "One-time" (highlighted in grey), and "Once-a-week". Below these buttons is a section titled "Dog walkers near me" with input fields for "Postal Code", "Date" (with a calendar icon), "Time" (with a dropdown arrow), and a "Search" button. The main content area displays three cards, each featuring a profile picture of a person, the name "John Doe", a five-star rating, "10 reviews", and the price "Rs. 1500/day". Each card also contains a short paragraph of placeholder text (Lorem ipsum). At the bottom of the page is a footer bar with the PetLife Co pvt ltd logo, the text "copyright © 2024", and links for "Contact Us" and "About Us".

- Pet Hostel Booking Page



The wireframe illustrates a mobile-optimized booking interface for a pet hostel. At the top, there's a header bar with three dots on the left, the text "Pet Hostel" in the center, and a menu icon (three horizontal lines) and a search bar with a magnifying glass icon on the right. Below the header is a large rectangular placeholder for an image or video. Underneath this are four buttons: "Pet" with a dropdown arrow, "Check-in" with a calendar icon, "Check-out" with a calendar icon, and "Book Now". A call-to-action text "Select a room option" is positioned above two room selection boxes. Each box contains a large square with a diagonal cross, indicating they are currently unavailable. The first box is labeled "Standard" and the second is labeled "Kitty House". Both boxes contain placeholder text: "Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat". At the bottom of the page is a footer bar with the PetLife Co pvt ltd logo, copyright information ("copyright © 2024"), and links for "Contact Us" and "About Us".

Pet Hostel

Logo

Pet Check-in Check-out Book Now

Select a room option

Standard

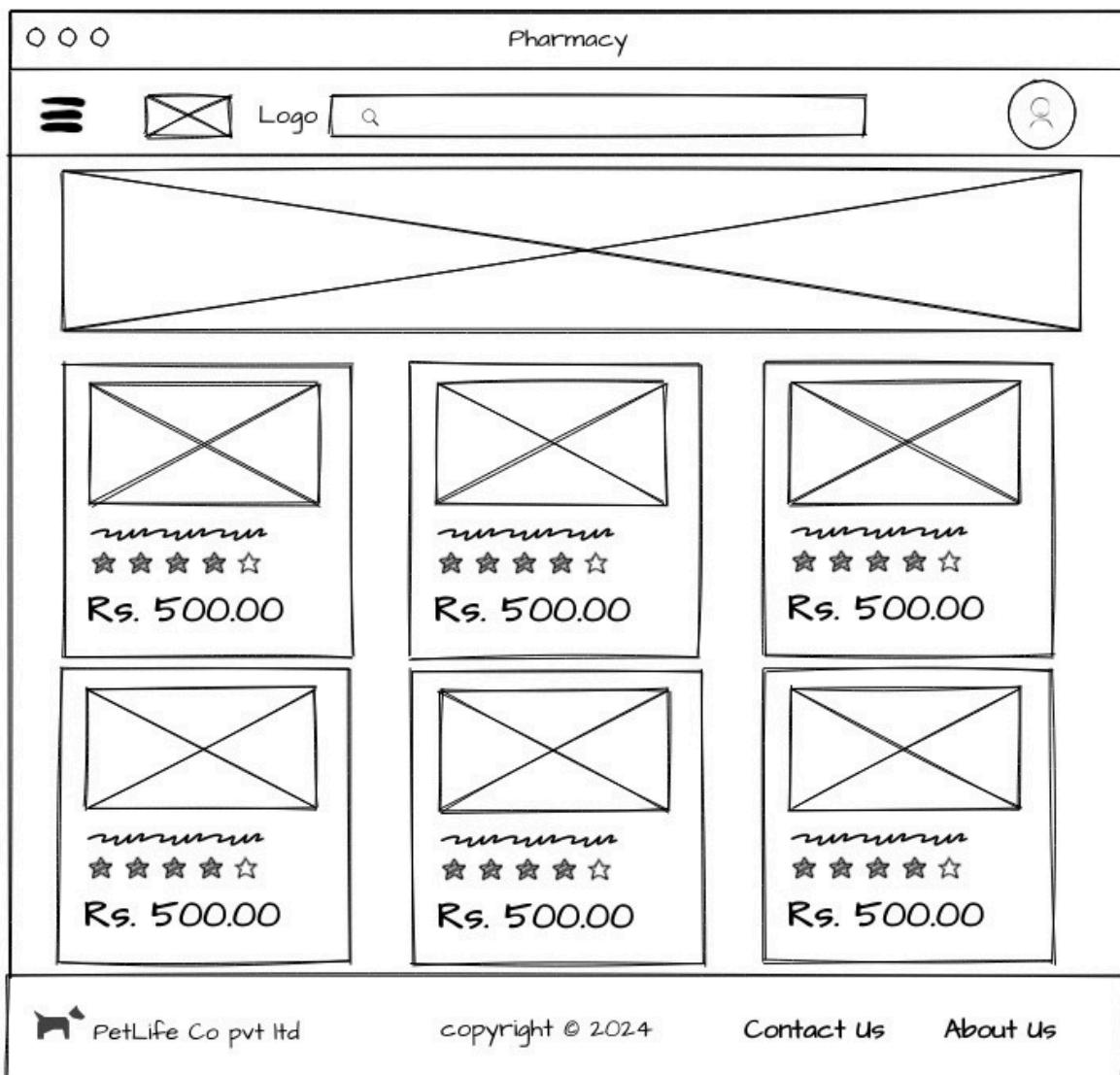
Kitty House

PetLife Co pvt ltd

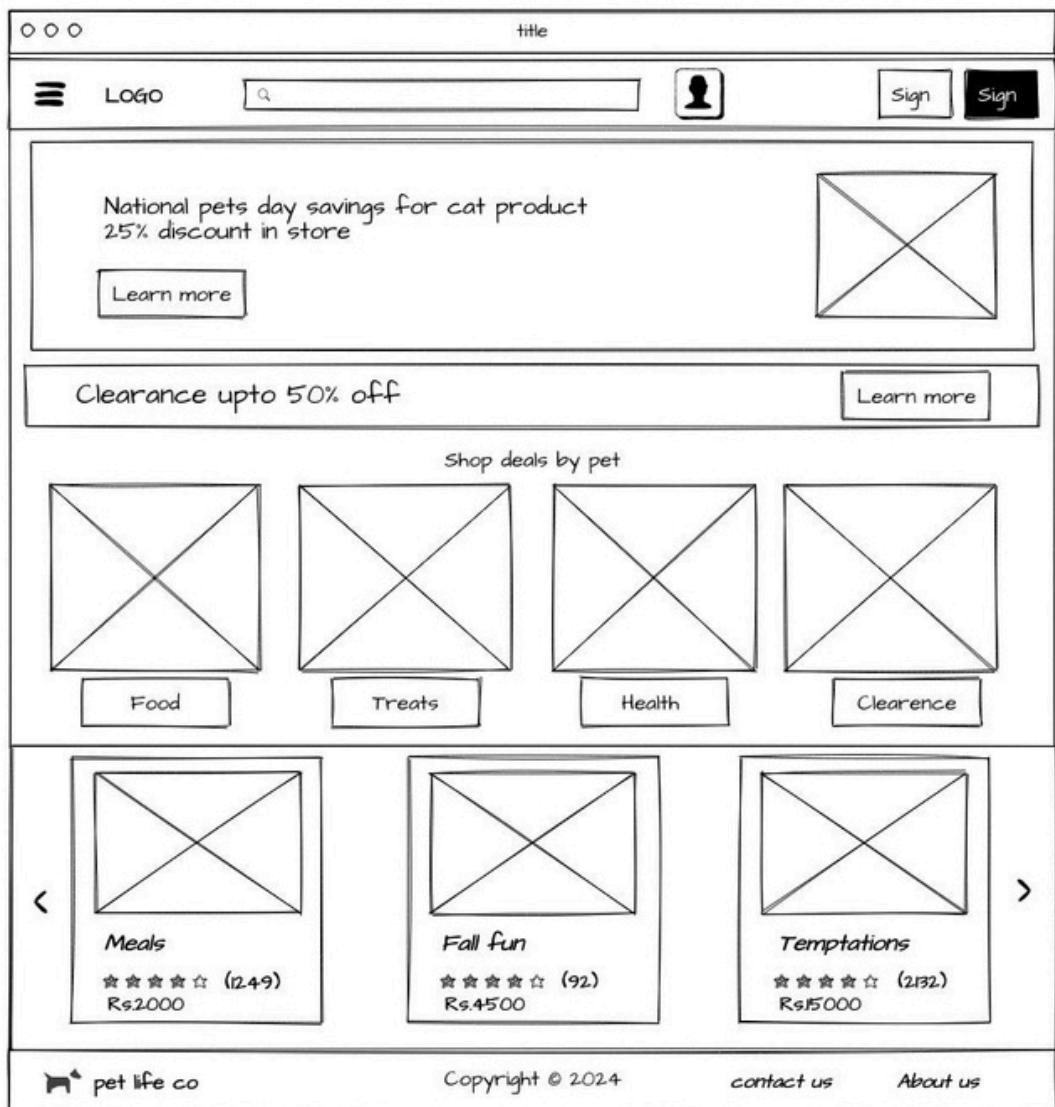
copyright © 2024

Contact Us About Us

- Pharmacy Page



- Pet Supplies Store Page



- User Profile – User Info Page

My Profile

Logo

My Account

My Pets

My Appointments

My Cart

First Name: John

Last Name: Doe

Phone Number: 070121212

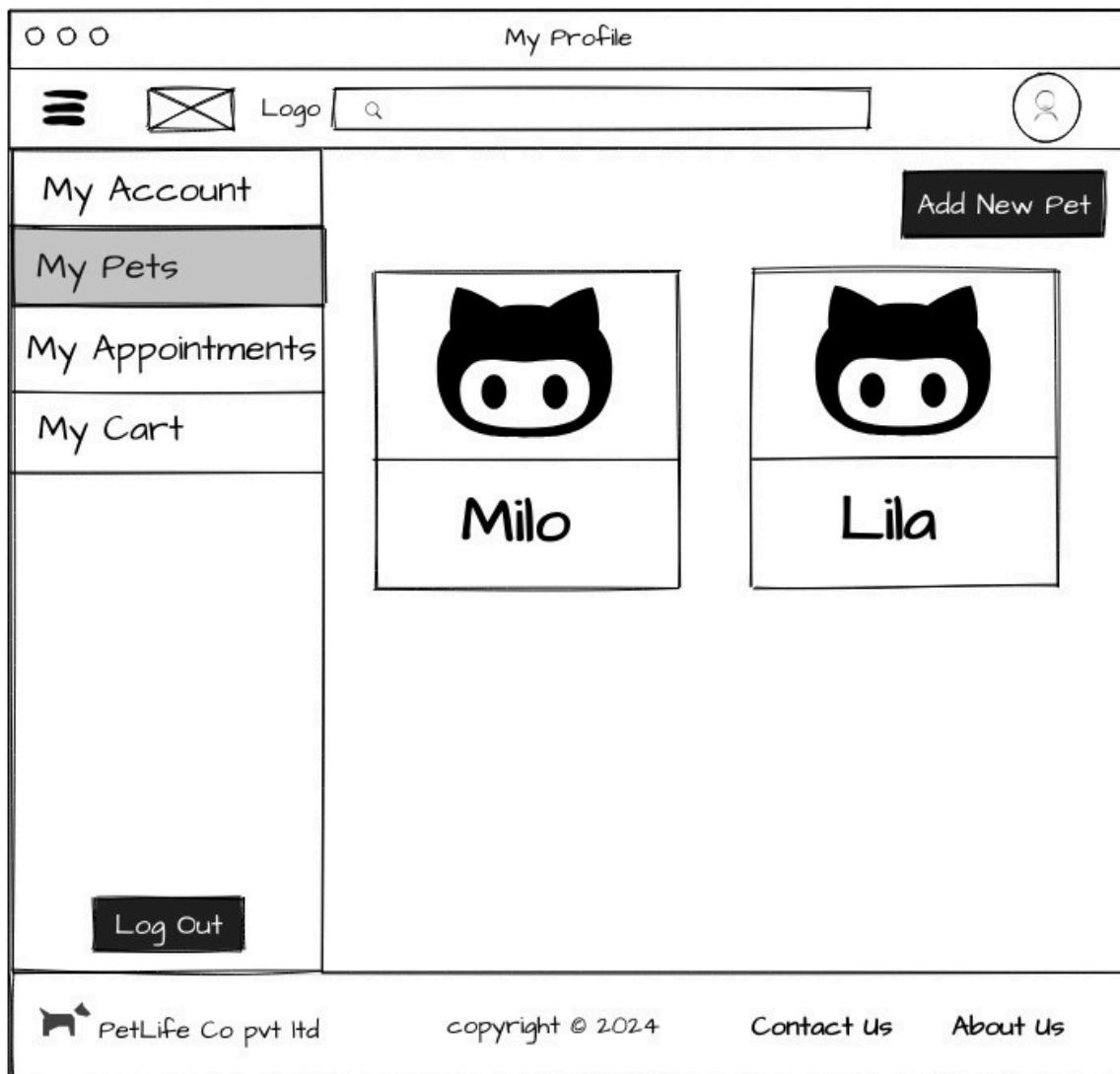
Email: john.doe@email.com

Password: \*\*\*\*\*

Log Out      Edit      Reset Password      Delete Account

PetLife Co pvt Ltd      copyright © 2024      Contact Us      About Us

- User Profile – Pet Profile Page



- User Profile – Appointments Page

The wireframe illustrates a user profile page with the following components:

- Header:** "My Profile" at the top right, with three dots on the top left.
- Top Bar:** Includes a menu icon (three horizontal lines), a logo (a stylized dog head), a search bar with a magnifying glass icon, and a user profile icon.
- Sidebar:** A vertical sidebar on the left with four items: "My Account", "My Pets", "My Appointments" (which is highlighted in blue), and "My Cart".
- Content Area:** A large central area showing a pet grooming appointment for a dog named "Grooming" at 11:30 am for Rs. 2000.00. It includes a "Re-schedule" button and a "Cancel" button.
- Footer:** Buttons for "Log Out", "PetLife Co pvt ltd" (with a dog icon), "copyright © 2024", "Contact Us", and "About Us".

- User Profile – Cart Page

My Profile

Logo

My Account

My Pets

My Appointments

My Cart

Log Out

Cat Food  
500g  
Rs. 750.00

Dog Plushie  
Rs. 500.00

Total:  
**Rs. 1250.00**

CHECK OUT

PetLife Co pvt ltd

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Contact Us    About Us

- Admin Page – Dashboard

0 0 0 Admin Page

≡ Logo Search

Dashboard

Users

Appointments

Services

Log Out

Today

Currently working  
2

Total finished  
5

Total work for today  
10

Appointments

Pending  
8

Accepted  
20

Weekly Revenue

MON 1 TUE 2 WED 3 THU 4 FRI 5 SAT 6 SUN 7

Today  
Rs. 18k

Last Week  
Rs. 116k

 PetLife Co pvt ltd

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Contact Us About Us

- Admin Page – Users

ooo Admin Page

≡ Logo  

Dashboard	Account Type	User Name
Users	<input type="button" value="Select"/>	<input type="text"/> <input type="button" value="Search"/>
Appointments		
Services	Account Type: Pet Owner Title: Mr. First Name: John Last Name: Doe Phone Number: 0701212121 Email: johndoe@email.com Date Joined: 01-01-2000	
<input type="button" value="Log Out"/>	<input type="button" value="Edit"/>	<input type="button" value="Delete"/>

 PetLife Co pvt ltd copyright © 2024 Contact Us About Us

- Admin Page – Appointments

The Admin Page – Appointments interface is structured as follows:

- Header:** Admin Page, Logo, Search icon.
- Left Sidebar:** Dashboard, Users, Appointments (selected), Services.
- Pending Section:**
  - Table headers: AppId, Service, Date, Owner, Pet.
  - Row: 1023, Grooming, 12-08-2024, JDoe, Buddy.
  - Actions: Accept, Re-schedule.
- Approved Section:**
  - Table headers: AppId, Service, Date, Owner, Pet.
  - Row: 1010, Walking, 12-08-2024, JDoe, Luna.
  - Actions: Remove, Re-schedule.
- Bottom Buttons:** Log Out.
- Page Footer:** PetLife Co pvt ltd, copyright © 2024, Contact Us, About Us.

- Admin Page – Services

Admin Page

Logo

Add New

Veterinary Services

Services

Walking

Log Out

PetLife Co pvt ltd

copyright © 2024

Contact Us

About Us

This wireframe illustrates the 'Admin Page – Services' interface. The top navigation bar includes a logo, search bar, and user profile icon. The left sidebar lists 'Dashboard', 'Users', 'Appointments', and 'Services' (which is selected). The main content area shows two service entries: 'Veterinary Services' and 'Walking'. Each entry has a thumbnail icon, a title, a short description, and 'Edit' and 'Delete' buttons. An 'Add New' button is located in the top right of the main content area. The footer contains the PetLife logo, copyright information, and links to 'Contact Us' and 'About Us'.

- Payment Portal

The wireframe illustrates a payment portal with the following components:

- Header:** Features three dots (○ ○ ○) on the left, the word "Payment" in the center, and a menu icon (≡), a logo placeholder, a search icon (🔍), and a user profile icon on the right.
- Main Content:** A title "Select a payment method" is centered above two options:
  - Credit/Debit Card:** This section contains fields for Card Number (1234 5678 9012 3456), Expiry Date (MM/YY), CVC, Name on Card (Name on Card), and a checkbox for "Save my card for future payments".
  - Cash On Delivery:** This section is represented by a simple radio button icon.
- Summary:** A summary box on the right displays "Total" and a "Complete Checkout" button.
- Footer:** Includes the PetLife Co pvt Ltd logo, copyright information (copyright © 2024), and links for "Contact Us" and "About Us".

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## 1. Introduction

We were tasked with developing an Online Pet Care System where users have access to pet care services and products. After doing thorough research we have identified what are the basic needs pet owners expect to fulfil from a such a system. They are,

- Book veterinary appointments
- Book pet grooming and walking sessions
- Buy pet care products including pet food and medicine

After integrating these basic services and more other services such as booking a pet hostel, we have created a one-stop solution for pet owners to fulfil all their pet related needs. Through this platform users can book appointments, buy products, and pay for them using a preferred payment method via the built-in secure payment portal. Customers can also make inquiries and suggestions through the platform.

To fulfil all these goals, the system must have data retention which enables the platform to cater to individual customer needs. All the data about customers, employees, services, products, appointments, and payment details must be stored for retrieval when necessary. To achieve this feature, a database system must be used.

In the solution implementation, MariaDB, a relational database management system (RDBMS) that has been developed based on the popular RDBMS, MySQL was used. By using a database, the following goals could be achieved.

- Data organization and management
- Data integrity
- Data security
- Improved decision making

The database was designed after doing a requirement analysis which is important to discover the vital needs that system should have to function properly.

## 2. Hypothetical Scenario

PetLife is an Online Pet Care system designed to serve the various needs of pet owners. This platform offers a wide range of services including,

- Veterinary services
- Grooming services
- Dog walking services
- Pet hostel
- Pet care products store
- Pet pharmacy

PetLife serves as a one stop solution for all the needs of pet owners with a sense of reliability and expertness. Customers can easily book all the appointments at the comfort and ease of their fingertips. By using PetLife's store and pharmacy services pet owners can buy all the pet supplies and medicine their pets need and get them delivered to their doorsteps. All the payments can be made through the easy to use and secure payment portal integrated into the platform.

When booking dog walking sessions, pet owners can input their postal code to find the nearest contract-based dog walker nearest to their location. Both the user and the service provider get a confirmation email providing details including contact details and location details. Nevertheless, with all other services users get a confirmation email regarding their request.

Users can use the Contact Us page to post their questions and concerns and they will be promptly answered via email.

Finally, Users can read the About us page to gain a thorough understanding of the qualifications and motivations of the service providers.

### 3. Requirement Analysis

#### 3.1. Functional Requirements

After careful inspection, functional requirements which are the essential services that the system must provide to function correctly could be identified for four main users. They are,

- Guest/Registered User
- Staff member
- System Administrator
- Manager

##### 1. Guest/Registered user

- User Requirements
  - Guest user should be able to browse services.
  - Guest user should be able to browse online stores.
  - Guest user should be able to check frequently asked questions (FAQ).
  - Guest user should be able to register with the platform by creating an account.
  - Registered user should be able to log in to the system.
  - Registered user should be able to post inquiries.
  - Registered user should be able to purchase items
  - Registered user should be able to make payments.
  - Registered user should be able book services.
  - Registered user should be able manage their own account and pet accounts.
  - Registered user should be able to create new pet accounts.

- System Requirements
  - System should be able to validate user login.
  - System should be able to create new user accounts.
  - System should be able to create new pet accounts.
  - System should be able validate payment details.
  - System should be able to reserve services.
  - System should be able to store inquiries.
  - System should be able to show error messages.
  - System should be able to calculate discount for purchases based on purchase frequency of the user.
  - System should be able to store customer payment details if the customer wishes to do so.

## 2. Staff member

- User Requirements
  - Staff member should be able to login to the system.
  - Staff member should be able to view appointments
  - Staff member should be able to manage appointments.
  - Staff member should be able to view work schedules.
  - Staff member should be able to view inventory.
  - Staff member should be able to manage FAQ.
  - Staff member should be able respond to inquiries.
- System Requirements
  - System should validate staff login.
  - System should display information relevant to staff member.
  - System should send email to customer following action regarding service appointments.

### 3. System Administrator

- User Requirements
  - System Administrator should be able to login to the system.
  - System Administrator should be able to manage services.
  - System Administrator should be able to manage inventory.
  - System Administrator should be able to manage customer accounts.
  - System Administrator should be able to manage staff accounts.
- System Requirements
  - System should validate System Administrator login.
  - System should display information relevant System Administrator.
  - System should be able to add or delete accounts.
  - System should be able to log System Administrator activities.

### 4. Manager

- User Requirements
  - Manager should be able to login to the system.
  - Manager should be able to generate reports including monthly revenue reports and user engagement reports.
- System Requirements
  - System should validate manager login.
  - System should be able to generate reports based on available data.
  - System should be able to log manager activities.

### 3.2. Non-Functional Requirements

Non-functional requirements define how the system behaves rather than what the system does. They focus on the quality attributes of the system. The main non-functional requirements the system should possess are,

- Performance
  - System should respond to requests quickly.
  - System should be able to provide for many users at the same time.
- Security
  - Sensitive user data such as passwords and payment details should be encrypted.
- Reliability
  - System should be fault tolerance.
  - System should be working consistently.
- Availability
  - System should be available 24/7 with minimum down-time.
- Scalability
  - The system should be able to be scaled and expanded without affecting the current performance.
- Usability
  - User should be able to complete any task within the system easily.

### 3.3. Data Requirements

Data requirements present the data needed by different entities associated with the system to perform the defined tasks. This section describes the types of the data stored and data formats that are essential for the system functionalities.

- Registered User
  - User id - Int
  - First name - varchar, max 50 characters
  - Last name – varchar, max 50 characters
  - City – varchar, max 100 characters
  - Street - varchar, max 100 characters
  - Postal code – Int
  - Email – varchar, max 100 characters
  - Password – varchar, max 50 characters, encrypted
  - User image path – varchar, max 50 characters
  - Purchase frequency – Int
  - Role – int
- User\_Phone
  - User id – int
  - Phone number – int

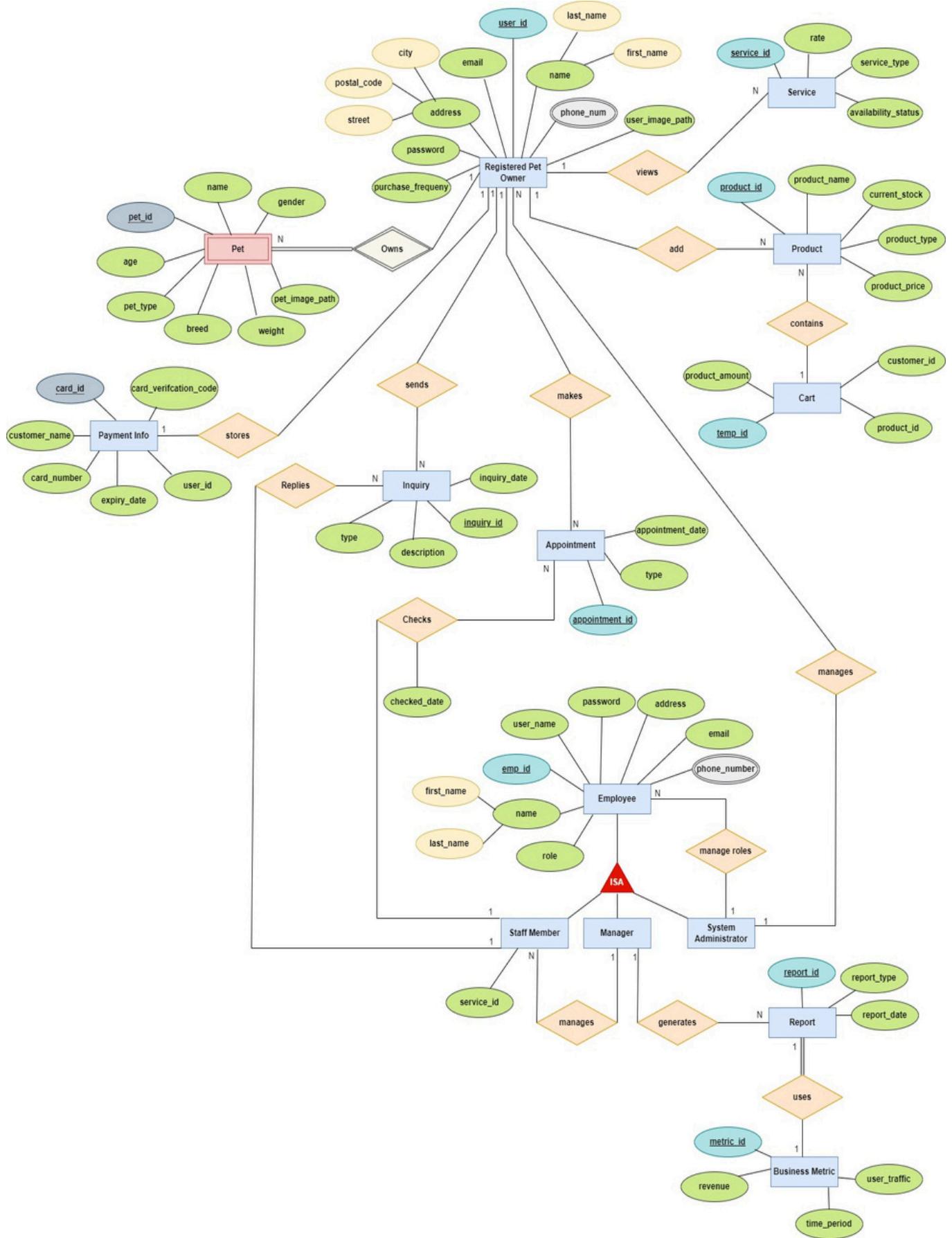
- Pet
  - Pet id – Int
  - Owner id – int
  - Name – varchar, max 50 characters
  - Age – int
  - Breed – varchar, max 50 characters
  - Gender – char, max 1 character ('M' or 'F')
  - Weight – decimal, max 2 decimal places
  - Pet type – varchar, max 20 characters
  - Pet image path - varchar, max 50 characters
  - Pet note - varchar, max 500 characters
- Employee
  - Employee id – Int
  - First name - varchar, max 50 characters
  - Last name – varchar, max 50 characters
  - City – varchar, max 100 characters
  - Street - varchar, max 100 characters
  - Postal code – Int Email – varchar, max 100 characters
  - Password – varchar, max 50 characters, encrypted
  - Service provided – varchar, max 50 characters
  - Role – int
- Employee\_Phone
  - Employee id – int
  - Phone number – int

- Products
  - Product id – int
  - Product name – varchar, max 200 characters
  - Product price – decimal
  - Product rating – int
  - Product type - varchar, max 50 characters
  - Current stock – int
- Services
  - Service id – int
  - Service rate – decimal
  - Service type - varchar, max 255 characters
  - Availability status – char, max 1 character ('Y' or 'N')
- Cart
  - Temporary id – int
  - Product id – int
  - Customer id – int
  - Product amount – int
- Inquiry
  - Inquiry id – int
  - customer id – int
  - Inquiry date – timestamp
  - Inquiry type – varchar, max 50 characters
  - Inquiry description – varchar, max 500 characters

- Report
  - Report id – int
  - Report type - varchar, max 50 characters
  - Report date – timestamp
  - Metric\_id - int
  - Manager id – int
- Metrics
  - Metric id – int
  - Start date – datetime, format (DD-MM-YYYY)
  - Revenue – decimal
  - User traffic – int
- Payment information
  - Card id – int
  - Customer id – int
  - Customer name – varchar, max 100 characters
  - Card number – varchar, max 255 characters, encrypted
  - Expiry date – char, format (MM/YY)
  - Card verification code – varchar, max 255 characters, encrypted
- Admin\_manages\_uses
  - User id – int
  - Admin id – int
  - Action – varchar, max 50 characters

- Appointments
  - Appointment id – int
  - Customer id – int
  - Appointment date – date
  - Appointment time - time
  - Checking date – date
  - Checkout date – date
  - Vet id – int
  - Service frequency – varchar, max 20 characters
  - Postal code – int
  - Hostel type - varchar, max 50 characters
  - Appointment type – varchar, max 50 characters

## 4. Entity Relationship Diagram (ER diagram)



## 5. Relational Schema



## 6. SQL queries

### 6.1. SQL queries to create the database

```
/* create the data base */

CREATE DATABASE petlife_db;

/* User data table */

CREATE TABLE User_Data(
    user_id int not null auto_increment=1000,
    first_name varchar(50) not null,
    last_name varchar(50) not null,
    city varchar(100) not null,
    street varchar(100) not null,
    postal_code int not null,
    email varchar(100) not null,
    password varchar(50) not null,
    user_image_path varchar(50) not null,
    purchase_freq int not null,
    role int not null check (role='customer'),

    CONSTRAINT USER_PK PRIMARY KEY(user_id)
);

/* User phone numbers TABLE */

CREATE TABLE User_Phone(
    user_id int,
    phone_num int not null,
    CONSTRAINT USER_PHONE_FK FOREIGN KEY(user_id) REFERENCES User_Data(user_id) on DELETE CASCADE on
UPDATE CASCADE,

    CONSTRAINT USER_PHONE_PK PRIMARY KEY(user_id, phone_num)
);
```

```

/* Pet data TABLE */

CREATE TABLE Pet_Data(
    pet_id int not null auto_increment,
    owner_id int,
    name varchar(50) not null,
    age int not null,
    breed varchar(50) not null,
    gender char(1) not null check (gender in ('M', 'F')),
    weight decimal(3, 2) not null,
    pet_type varchar(20) not null,
    pet_image_path varchar(50) not null,

    CONSTRAINT PET_DATA_FK FOREIGN KEY(owner_id) REFERENCES User_Data(user_id) on DELETE CASCADE on
    UPDATE CASCADE,

    CONSTRAINT PET_DATA_PK PRIMARY KEY(pet_id, owner_id)

);

/* Product data TABLE */

CREATE TABLE Product_Data(
    product_id int not null auto_increment=100,
    product_name varchar(200) not null,
    product_price decimal(10, 2) not null,
    product_rating int not null,
    product_type varchar(50) not null,
    current_stock int not null,

    CONSTRAINT PRODUCT_DATA_PK PRIMARY KEY(product_id)
);

/* Service data TABLE */

CREATE TABLE Services(
    service_id int not null auto_increment=500,
    service_rate decimal(10, 2) not null,
    service_type varchar(255) not null,
    availability_status char(1) not null check(availability_status='Y' or availability_status='N'),

    CONSTRAINT SERVICES_PK PRIMARY KEY(service_id)
);

```

```
/* Employee data TABLE */

CREATE TABLE Employee(
    emp_id int not null auto_increment=5000,
    first_name varchar(50) not null,
    last_name varchar(50) not null,
    city varchar(100) not null,
    street varchar(100) not null,
    postal_code int not null,
    email varchar(100) not null,
    password varchar(50) not null,
    service_provided varchar(50),
    role varchar(50) not null check(role in ('admin', 'staff', 'manager')),

    CONSTRAINT EMP_PK PRIMARY KEY(emp_id)
);

/* Business metrics TABLE */

CREATE TABLE Metrics(
    metric_id int not null auto_increment,
    start_date datetime not null,
    revenue decimal(10,2) not null,
    user_traffic int not null,

    CONSTRAINT METRICS_PK PRIMARY KEY(metric_id)
);

/* Cart TABLE */

CREATE TABLE Cart(
    item_id int not null auto_increment,
    product_id int,
    customer_id int,
    product_amount int,

    CONSTRAINT CART_FK_PRODUCT_ID FOREIGN KEY(product_id) REFERENCES Product_Data(product_id) on
    DELETE CASCADE on UPDATE CASCADE,

    CONSTRAINT CART_FK_USER_ID FOREIGN KEY(customer_id) REFERENCES User_Data(user_id) on DELETE
    CASCADE on UPDATE CASCADE,

    CONSTRAINT CART_PK PRIMARY KEY(item_id)
);
```

```
/* User payment information TABLE */

CREATE TABLE Payment_Info(
    card_id int not null auto_increment,
    customer_id int,
    customer_name varchar(100) not null,
    card_number bigint not null,
    expiry_date char(5) not null,
    card_verification_code int not null,

    CONSTRAINT PAYMENT_INFO_FK_USER_ID FOREIGN KEY(customer_id) REFERENCES User_Data(user_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT PAYMENT_INFO_PK PRIMARY KEY(card_id)
);

/* User inquiry TABLE */

CREATE TABLE Inquiry(
    inquiry_id int not null auto_increment,
    customer_id int,
    inquiry_date timestamp default current_timestamp,
    inquiry_type varchar(50) not null,
    inquiry_description varchar(500) not null,

    CONSTRAINT INQUIRY_FK_USER_ID FOREIGN KEY(customer_id) REFERENCES User_Data(user_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT INQUIRY_PK PRIMARY KEY(inquiry_id)
);

/* Employee phone number TABLE */

CREATE TABLE Employee_Phone(
    emp_id int,
    phone_num int not null,

    CONSTRAINT EMPLOYEE_PHONE_FK FOREIGN KEY(emp_id) REFERENCES Employee(emp_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT EMPLOYEE_PHONE_PK PRIMARY KEY(emp_id, phone_num)
);
```

```

/* Report data TABLE */

CREATE TABLE Report(
    report_id int not null auto_increment,
    report_type varchar(50) not null,
    report_date timestamp default current_timestamp,
    metric_id int,
    manager_id int,
    CONSTRAINT REPORT_FK_MANAGER_ID FOREIGN KEY(manager_id) REFERENCES Employee(emp_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT REPORT_FK_METRIC_ID FOREIGN KEY(metric_id) REFERENCES Metrics(metric_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT REPORT_PK PRIMARY KEY(report_id)
);

/* User appointment TABLE */

CREATE TABLE Appointment(
    appointment_id int not null auto_increment,
    customer_id int,
    pet_id int,
    service_id int,
    appointment_date date not null,
    appointment_time time,
    checkin_date date,
    checkout_date date,
    vet_id int,
    service_freq varchar(20),
    postal_code int,
    hostel_type varchar(50),
    CONSTRAINT APPOINTMENT_FK_USER_ID FOREIGN KEY(customer_id) REFERENCES User_Data(user_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT APPOINTMENT_FK_PET_ID FOREIGN KEY(pet_id) REFERENCES Pet_Data(pet_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT APPOINTMENT_FK_VET_ID FOREIGN KEY(vet_id) REFERENCES Employee(emp_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT APPOINTMENT_FK_SERVICE_ID FOREIGN KEY(service_id) REFERENCES Services(service_id) on DELETE CASCADE on UPDATE CASCADE,
    CONSTRAINT APPOINTMENT_PK PRIMARY KEY(appointment_id)
);

```

## 6.2. SQL queries to insert data to the database

```
/* Insert values to User_Data table */

INSERT INTO User_Data(first_name, last_name, city, street, postal_code, email, password, user_image_path,
purchase_freq, role)
VALUES
('Sanuja', 'Rubasinghe', 'Kaduwela', 'first lane', 10100, 'sanuja@gmail.com', 'f68920fc122acc487bc4e4191487d03c',
'saman.jpeg', 0, 'customer'),
('Chanuka', 'Sampath', 'Homagama', 'second lane', 10200, 'chanuka@gmail.com',
'fc9ea3bf4c1c266412e34948a09801a4', 'chanuka.jpeg', 0, 'customer'),
('Dinithi', 'Dilshani', 'Kandy', 'third lane', 10300, 'dilshani@gmail.com', '9a011b4a4f64ac17779138796888a2ef',
'dilshani.jpeg', 0, 'customer'),
('S', 'Menurangi', 'Monaragala', 'fourth lane', 10400, 'menurangi@gmail.com',
'887ed9d400305e823f17d05c7f09179e', 'menurangi.jpeg', 0, 'customer'),
('Javid', 'Mushtan', 'Matara', 'fifth lane', 10500, 'javid@gmail.com', '8dee9814672fe8b4a48d39e4af06a73d',
'javid.jpeg', 0, 'customer');

/* Insert values to User_Phone table */

INSERT INTO User_Phone(user_id, phone_num)
VALUES
(1000, '0745863216'),
(1001, '0720857478'),
(1002, '0745493394'),
(1003, '0745345346'),
(1004, '0744534536');

/* Insert values into Pet_Data table */

INSERT INTO Pet_Data(owner_id, name, age, breed, gender, weight, pet_type, pet_image_path)
VALUES
(1000, 'Timmy', 2, 'German Shepherd', 'M', 20.5, 'Dog', 'timmy0.jpeg'),
(1001, 'Brownie', 3, 'Labrador Retriever', 'F', 30.0, 'Dog', 'brownie1.jpeg'),
(1002, 'Rose', 6, 'American Longhair', 'F', 4.5, 'Cat', 'rose2.png'),
(1003, 'Luna', 1, 'Lhasa Apso', 'F', 15.7, 'Dog', 'Luna3.jpeg'),
(1004, 'King', 5, 'Maine Coon', 'M', 10.5, 'Cat', 'king4.jpeg');

/* Insert values into Product_Data table */

INSERT INTO Product_Data(product_name, product_price, product_rating, product_type, current_stock)
VALUES
('Dog Shampoo', 500.99, 4.7, 'Pet Care', 150),
('Cat Flea Collar', 1000.00, 4.5, 'Pharmacy', 100),
('Bird Cage Cleaner', 500.00, 4.3, 'Pet Care', 75),
('Fish Antibiotic', 1500.75, 4.8, 'Pharmacy', 50),
('Hamster Wheel', 2000.00, 4.6, 'Pet Care', 200);
```

```
/* Insert values into Services table */

INSERT INTO Services(service_rate, service_type, availability_status)
VALUES
(1000, 'groom', 'Y'),
(100, 'walk', 'Y'),
(1500, 'hostel', 'Y'),
(2000, 'vet', 'Y');

/*Insert values into Employee table*/

INSERT INTO Employee(first_name, last_name, city, street, postal_code, email, password, service_provided, role)
VALUES
('Saman', 'Kumara', 'Kaduwela', 'first lane', 10100, 'saman@gmail.com', 'f68920fc122acc487bc4e4191487d03c',
'admin', 'admin'),
('Kamal', 'Sampath', 'Homagama', 'second lane', 10200, 'kamal@gmail.com',
'fc9ea3bf4c1c266412e34948a09801a4', 'groom', 'staff'),
('Dinithi', 'Weerasekara', 'Kandy', 'third lane', 10300, 'dinithi@gmail.com', '9a011b4a4f64ac17779138796888a2ef',
'walk', 'staff'),
('Sayumini', 'Pathirana', 'Monaragala', 'fourth lane', 10400, 'sayumini@gmail.com',
'887ed9d400305e823f17d05c7f09179e', 'hostel', 'staff'),
('Ziyad', 'Mohomad', 'Matara', 'fifth lane', 10500, 'ziyad@gmail.com', '8dee9814672fe8b4a48d39e4af06a73d',
'manager', 'manager');

/* Insert values into Metrics table */

INSERT INTO Metrics(start_date, revenue, user_traffic)
VALUES
('2024-09-08', 134545.45, 45),
('2024-09-15', 123435.43, 38),
('2024-09-22', 123446.65, 40),
('2024-09-29', 134540.35, 46),
('2024-10-06', 150050.00, 55);

/* Insert values into Cart table */

INSERT INTO Cart(product_id, customer_id, product_amount)
VALUES
(100, 1002, 4),
(101, 1003, 5),
(102, 1001, 1),
(103, 1004, 2),
(104, 1001, 1);
```

```
/* Insert values into Payment_Info table*/

INSERT INTO Payment_Info(customer_id, customer_name, card_number, expiry_date, card_verification_code)
VALUES
(1000, 'Sanuja Rubasinghe', 'abeac07d3c28c1bef9e730002c753ed4', '03/25',
'd840cc5d906c3e9c84374c8919d2074e'),
(1001, 'Chanuka Sampath', 'abeac07d3c28c1bef9e730002c753ed4', '06/25',
'd840cc5d906c3e9ssdfsdfc8919d2074e'),
(1002, 'Dinithi Dilshani', 'abeac07d3c34534bef9e730002c753ed4', '03/29', 'd840ccwr45r3e9c84374c8919d2074e'),
(1003, 'S Menurangi', '098fd07d3c28c1bef9e730002c753ed4', '06/30', 'wew345we6c3e9c84374c8919d2074e'),
(1004, 'Javid Mushtan', 'dfgac07d3c2345f9e730002c753ed4', '05/27', 'd678cc5d906c3e9c84354c8919d2074e');

/* Insert values into Inquiry table */

INSERT INTO Inquiry(customer_id, inquiry_type, inquiry_description)
VALUES
(1000, 'service', 'Do you provide home visits for dog grooming?'),
(1001, 'vet', 'I want to change my vet.'),
(1002, 'product', 'When will new dog collars be available?'),
(1003, 'product', 'The water bowl I purchased is cracked. I want to return it.'),
(1004, 'service', 'Do you accomodate lizards in your pet hostel.');

/* Insert values into Employee_Phone table */

INSERT INTO Employee_Phone(emp_id, phone_num)
VALUES
(5000, '0712345678'),
(5001, '0719876543'),
(5002, '0723456789'),
(5003, '0734567890'),
(5004, '0745678901');

/* Insert values into Report table */

INSERT INTO Report(report_type, report_date, metric_id, manager_id)
VALUES
('rev_report', '2024-09-03', 1, 5004),
('usr_report', '2024-10-03', 2, 5004),
('rev_report', '2024-11-03', 3, 5004),
('rev_report', '2024-12-03', 1, 5004),
('usr_report', '2025-01-03', 1, 5004);

/* Insert values into Appointment table */

INSERT INTO Appointment(customer_id, pet_id, service_id, appointment_date, appointment_time, checkin_date,
checkout_date, vet_id, service_freq, postal_code, hostel_type)
VALUES
(1000, 1, 500, '2024-09-30', '10:30:00', NULL, NULL, NULL, NULL, '12345', NULL),
(1001, 2, 501, '2024-10-01', '09:00:00', NULL, NULL, NULL, 'Weekly', '23456', NULL),
(1002, 3, 503, '2024-10-02', '11:00:00', NULL, NULL, 5002, NULL, '34567', NULL),
(1003, 1, 502, '2024-10-05', '08:45:00', '2024-10-04', '2024-10-06', NULL, NULL, '45678', 'Standard'),
(1004, 1, 500, '2024-10-30', '11:30:00', NULL, NULL, NULL, NULL, '12765', NULL);
```

## 7. Special Security Requirements

- Sensitive data of users should be encrypted before storing in the database.
- Role based access system should be used to prevent unauthorized access.
- Only the system administrator can access and modify system data.
- One email address should be allowed to have only one account.

# Introduction

PetLife is an Online Pet Care System designed to serve the various needs of pet owners. By registering with this platform users can book various services including veterinary appointments, pet grooming appointments, pet walking sessions, and pet hostel services. When registering user accounts, users also must create pet profiles to make the service booking process easy.

Though guest users can browse the pet supplies store and the online pharmacy section,

users must be logged in to add products to the cart or to purchase items. Users can make payments through the secured payment portal integrated to the platform using credit or debit cards or the user can opt to pay with cash on delivery. If a user is a frequent customer, they can be eligible for occasional discounts and promotions.

As users send requests for appointments through the platform, they are being accepted or

declined by a staff member logged in to the system using a staff account. Staff members have access to view the inventory status, view the work schedule and to manage the FAQ section of the platform.

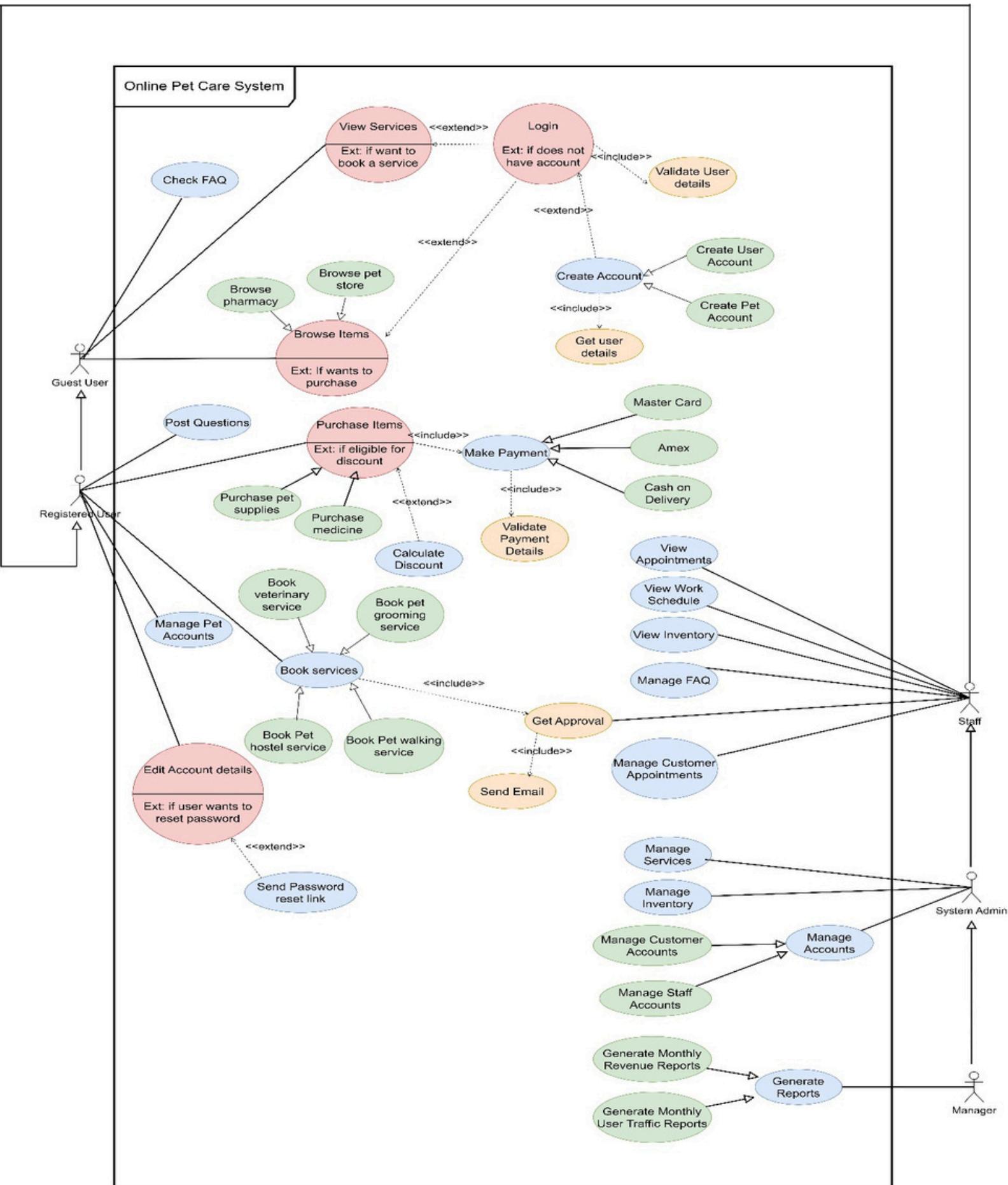
System administrators are responsible for managing the services offered including editing

or updating, adding new services to the platform or deleting an existing service. They can also manage accounts including user accounts and staff accounts.

Finally, the managers have access to all the functionality that staff and system administrators have. In addition to that the manager can generate reports including monthly revenue reports and monthly user traffic reports.

The following use case diagrams and use case scenarios explain the general flow of the PetLife Online Pet Care System.

# **Use Case diagram and Use Case Scenarios**



Number	01	
Name	Request for a pet service appointment.	
Summary	User books a pet service appointment.	
Priority	01	
Precondition	User must be a registered user.	
Postcondition	User gets a confirmation message.	
Primary Actor	Registered user.	
Trigger	User decides to make an appointment	
Main Scenario	Step	Action
	1.	User visits the website.
	2.	User login to the website.
	3.	User visits the services page.
	4.	User selects the relevant service.
	5.	User Customize the service requirements.
	6.	User enters pet details.
	7.	User sets the appointment date.
	8.	System checks the availability.
	9.	User posts the appointment by pressing submit button.
	10.	System displays a success message to the user.
Extension	Step	Branching Action
	2a	System notifies the user that the user credentials are incorrect.
	6a	System notifies the user that the selected pet type is not eligible for the service.
	8a	System notifies the user that the selected date is not available.
	9a	System notifies the user that the request failed due to an error.
Open Issues	1.	Should the user get suggested the available date for an appointment.

Number	10	
Name	Cancel a service appointment.	
Summary	User cancels a service appointment.	
Priority	01	
Precondition	User must be a registered user.	
Postcondition	User gets a confirmation message.	
Primary Actor	Registered user.	
Trigger	User decides to cancel an appointment	
Main Scenario	Step	Action
	1.	User visits the website.
	2.	User login to the website.
	3.	User goes to the user profile.
	4.	User goes to the appointments section.
	5.	User selects the relevant appointment.
	6.	User clicks cancel button.
	7.	System prompts the user to enter the reason to cancel.
	8.	User enters the reason to cancel.
	9.	User clicks the confirm cancellation button.
	10.	System displays a success message to the user.
Extension	Step	Branching Action
	2a	System notifies the user that the user credentials are incorrect.
	9a	System notifies the user that the request failed due to an error.

Number	02	
Name	Purchase an Item	
Summary	User purchases an item from the pet care system's online store.	
Priority	01	
Precondition	User must be a registered user and logged into the system.	
Postcondition	User receives a payment confirmation message and order details.	
Primary Actor	Registered user.	
Trigger	User decides to purchase an item	
Main Scenario	Step	Action
	1.	User visits the website.
	2.	User login to the website.
	3.	User navigates to the online store.
	4.	User browses and selects an item.
	5.	User adds the selected item to the shopping cart.
	6.	User reviews the cart and proceeds to checkout.
	7.	User enters shipping information.
	8.	User selects a payment method.
	9.	User confirms the order by pressing the submit button.
	10.	System processes the payment.
	11.	System displays an order confirmation message.
	12.	User receives a payment confirmation message and order details via email.
Extension	Step	Branching Action
	2a	System notifies the user that the user credentials are incorrect.
	4a	System notifies the user that the selected item is out of stock.
	8a	System notifies the user that the payment method is invalid.
	10a	System notifies the user that the payment failed due to an error.
	11a	System notifies the user that the order submission failed due to an error.
Open Issues	1.	Should the system suggest alternative items if the selected item is out of stock?

Number	03	
Name	Approve Booking	
Summary	Staff member approves a booking request made by a customer.	
Priority	01	
Precondition	The booking request must be submitted by a customer and available for approval.	
Postcondition	The booking is confirmed, and the customer receives a confirmation message.	
Primary Actor	Staff member	
Trigger	Staff member receives a notification of a new booking request.	
Main Scenario	Step	Action
	1.	Staff member logs into the system.
	2.	Staff member navigates to the booking management page.
	3.	Staff member reviews the list of pending booking requests.
	4.	Staff member selects a booking request to review its details.
	5.	Staff member checks the customer's booking history and notes any special requirements.
	6.	Staff member verifies the availability of resources (e.g., staff, facility, equipment).
	7.	Staff member communicates with other team members, if necessary, to confirm resource availability.
	8.	Staff member approves the booking by clicking the approve button.
	9.	System updates the booking status to confirmed and schedules the service.
	10.	System sends a booking confirmation message and details to the customer.
Extension	Step	Branching Action
	1a	System notifies the staff member that the login credentials are incorrect.
	4a	Staff member rejects the booking due to unavailability of resources.
	4a	Staff member requests additional information from the customer.
	7a	Team members inform the staff member that the resources are unavailable.
	8a	System notifies the staff member that the approval process failed due to an error.
	10a	System notifies the customer that the booking confirmation failed.
Open Issues	1.	Should the system allow staff to suggest alternative dates or services if the booking cannot be approved as requested?

Number	08	
Name	Add new product.	
Summary	Admin add new products to system.	
Priority	01	
Precondition	Admin must be login to system.	
Postcondition	The newly added products are visible in the product list.	
Secondary Actor	Admin	
Trigger	The admin select a option to add a new product.	
Main Scenario	Step	Action
	1.	Admin selects a add new product option.
	2.	System prompt the product details.
	3.	Admin fill the form of newly adding product details.
	4.	System validates product details.
	5.	Admin clicks the submit.
	6.	System saves product information.
	7.	System shows success message of submission.
Extension	Step	Branching Action
	1a	System navigation issue.
	2a	Category not available.
	3a	Product image upload failure.
	4a	Incorrect or incomplete data.
	5a	Submission error due to server error.
	6a	System detected for duplicate product.
Open Issues	1.	Should system prompt confirm product details after submission.

Number	09	
Name	Post a Question.	
Summary	A registered user	
Priority	01	
Precondition	User must be a log in to the system.	
Postcondition	Confirm message displayed after posting the questions.	
Primary Actor	Registered user.	
Trigger	The user choosing to post a new questions.	
Main Scenario	Step	Action
	1.	The system displays a "post a new question".
	2.	User enters details about question.
	3.	System ask for category of question to select the user.
	4.	User Select suitable category.
	5.	System prompts the user to confirm.
	6.	User clicks the submit button after confirmation.
	7.	System validate the questions for any missing or inappropriate content.
	8.	System stores it in the question database.
	9.	System shows that question is successfully posted as confirmation.
	10.	System is redirect to list of same questions posted in page.
Extension	Step	Branching Action
	7a	System notifies the user that specific required field are missing and prompt them to fill them.
	7b	System found any unsuitable language and ask user to revise them.
	7c	System finds that question type is similar to existing question and redirect the answer of existing question in that page.
	8a	System doesn't store in database due to technical issue or server slow down cases.
Open Issues	1.	Should the system automatically suggesting tags related to posted question.

Number	06	
Name	Generate reports.	
Summary	The manager prepares various reports to check the effectiveness of the pet care system.	
Priority	1	
Precondition	Logging in to the manager system and having the data needed to prepare the reports.	
Postcondition	Sufficient preparation of requested reports.	
Primary Actor	Manager.	
Trigger	The manager initiates the preparation of reports as part of a routine work-forming review or a specific inquiry.	
Main Scenario	Step	Action
	1.	The manager logs into the online pet care system.
	2.	The manager navigates to the generate report segment.
	3.	The system displays a list of possible report types.
	4.	The manager selects the required report type.
	5.	The report parameters are specified by the manager.
	6.	The system performs validation of the input parameters.
	7.	The request for report generation is approved by the manager.
	8.	The request is processed by the system, which also produces the report.
	9.	The system notifies the manager as soon as the report is ready.
	10.	The generate report is seen or download by the manager.
Extension	Step	Branching Action
	2a	The system takes the manager to the login page if they are not already logged in.
	4a	If the selected record type requires specific permission, the system manager's permission is checked.
	6a	The system notifies the manager to fix the issues if the input parameters are not valid.
	8a	The system displays an error message if report generation is unsuccessful. then the abnormality is recorded.
Open Issues	1.	The problem is how much the report can be customized.

Number	07	
Name	Add staff account.	
Summary	Admin will add a new staff account to the online pet care system.	
Priority	02	
Precondition	Admin has logged into the system dashboard.	
Postcondition	Admin can add new staff account or updates selected account.	
Primary Actor	Admin.	
Trigger	Admin decides to add a new staff member.	
Main Scenario	Step	Action
	1.	The administrator, accesses the account management section.
	2.	The system displays the list of current staff accounts and an option to add a new account.
	3.	The administrator selects the option to add new staff account.
	4.	The admin is prompted by the system to enter the details of the new staff member.
	5.	The administrator inputs the necessary data.
	6.	The system verifies the accuracy and completeness of the data entered.
	7.	The system will request confirmation from the administrator before creating a new staff account.
	8.	The action is verified by the admin.
	9.	The system generates the staff account and grants the necessary rights.
	10.	A success message appears in the system and the new staff account appears in the list.
Extension	Step	Branching Action
	6a	If the information entered is incorrect or incomplete, the system will highlight the errors and request the administrator to correct them.
	9a	If there are problems creating the account, the system will display an error message and the administrator can try again.
Open Issues	1.	Error handling for system failures during the account creation process.

Number	04	
Name	Admin Sets Up and Manages Pet Training classes Service	
Summary	New "Pet Training Class" service enabling users to book on the platform	
Priority	01	
Precondition	An admin must have permission to modify the service on the platform	
Postcondition	New "Pet Training Class" service enabling users to book on the platform easily	
Primary Actor	Admin.	
Trigger	The admin prepares a plan for the changes to be made on the platform	
Main Scenario	Step	Action
	1.	Admin log in to the platform
	2.	Select the Service Management option.
	3.	Create New service
	4.	Define Service details
	5.	Set Availability and schedule
	6.	Set Up Payment and Reservation Preferences
	7.	Launch the Service
	8.	Monitor and Manage the Service
	9.	Review Feedback and Optimize service
	10.	Encourage Use of the Service
Extension	Step	Branching Action
	1a	The administrator inputs the wrong password or username when logging in.
	3a	The form submission is blocked by the system, which highlights the mandatory fields that are missing and shows a prompt.
	6a	A problem arises when the administrator integrates the payment gateway.
	6b	System displays error message when payment is not successful.
Open Issues	1.	The system asks if you want to access more services

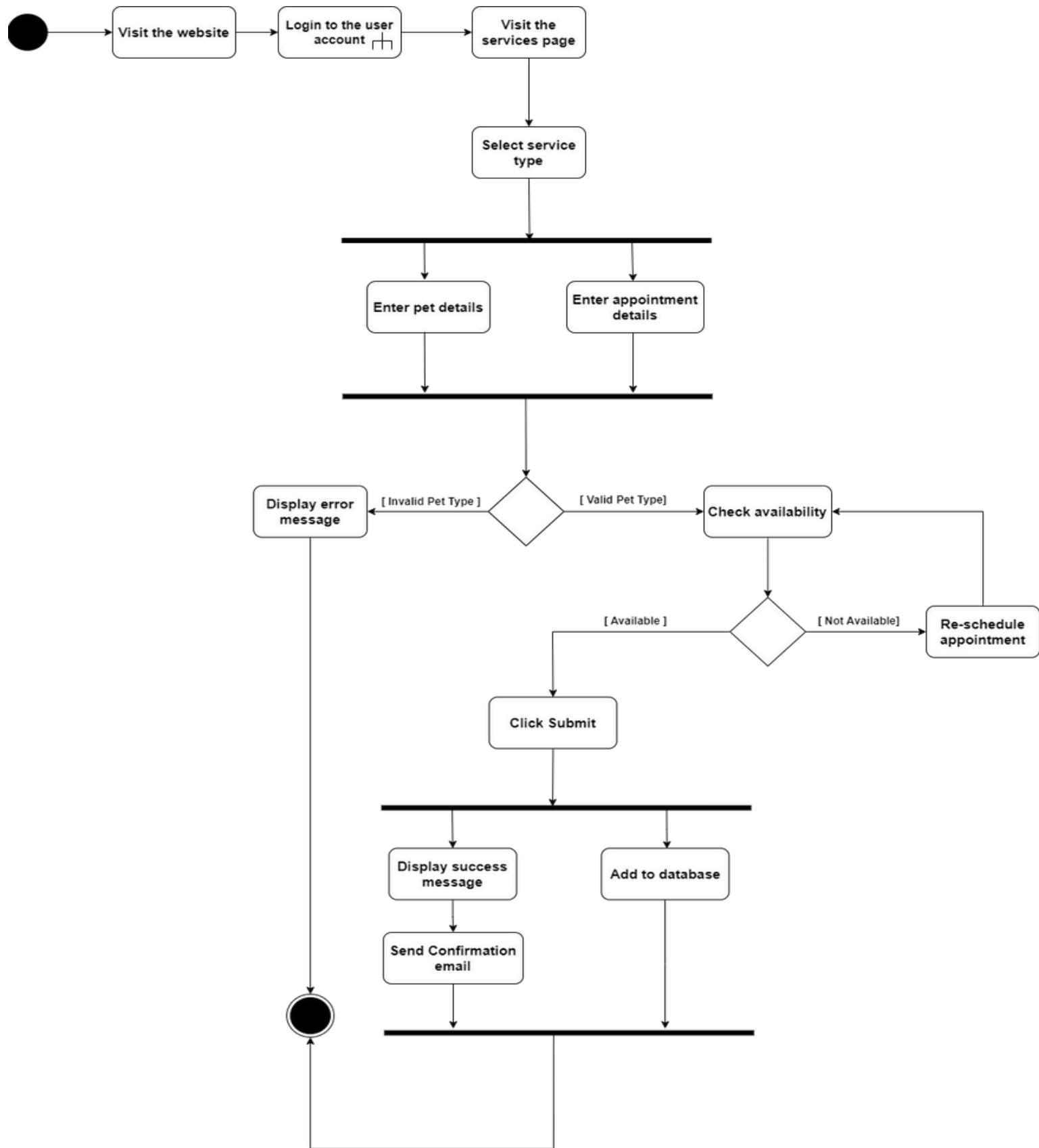
Number	05	
Name	Admin Handling Customer Inquiries	
Summary	The customer's question is swiftly and successfully answered.	
Priority	01	
Precondition	The email system and admin dashboard are accessible to the admin.	
Postcondition	The customer's question is quickly and efficiently answered.	
Primary Actor	Admin	
Trigger	Through the online pet care website, a consumer sends a question (by email, live chat, or contact form).	
Main Scenario	Step	Action
	1.	Admin logs into the system and accesses customer enquiries
	2.	Read and understand directed customer inquiries
	3.	Classify investigations by content
	4.	Gather information for the investigation
	5.	Drafts a response tailored to the customer's inquiry
	6.	Review the response and forward it to the customer through appropriate channel
	7.	The admin logs the inquiry and the response in the customer relationship management (CRM) system for future reference.
	8.	Admin directs the communication channel for customer questions and additional inquiries
	9.	Queries are closed when the customer's inquiry is fully resolved
	10.	Improves customer service by reviewing past inquiries
Extension	Step	Branching Action
	1a	When the password is wrong during admin login, a message like "invalid password" will be received
	1b	There will be an opportunity to change the password given the option "Forgot Password".
	1c	If the question is unclear, an email will be sent asking you to refer the question again
	8a	Notice to the customer that it will take time to send replies due to the high number of inquiries
Open Issues	1.	The system asks if you have any more questions

Number	01	
Name	Request for a pet service appointment.	
Summary	User books a pet service appointment.	
Priority	01	
Precondition	User must be a registered user.	
Postcondition	User gets a confirmation message.	
Primary Actor	Registered user.	
Trigger	User decides to make an appointment	
Main Scenario	Step	Action
	1.	User visits the website.
	2.	User login to the website.
	3.	User visits the services page.
	4.	User selects the relevant service.
	5.	User Customize the service requirements.
	6.	User enters pet details.
	7.	User sets the appointment date.
	8.	System checks the availability.
	9.	User posts the appointment by pressing submit button.
	10.	System displays a success message to the user.
Extension	Step	Branching Action
	2a	System notifies the user that the user credentials are incorrect.
	6a	System notifies the user that the selected pet type is not eligible for the service.
	8a	System notifies the user that the selected date is not available.
	9a	System notifies the user that the request failed due to an error.
Open Issues	1.	Should the user get suggested the available date for an appointment.

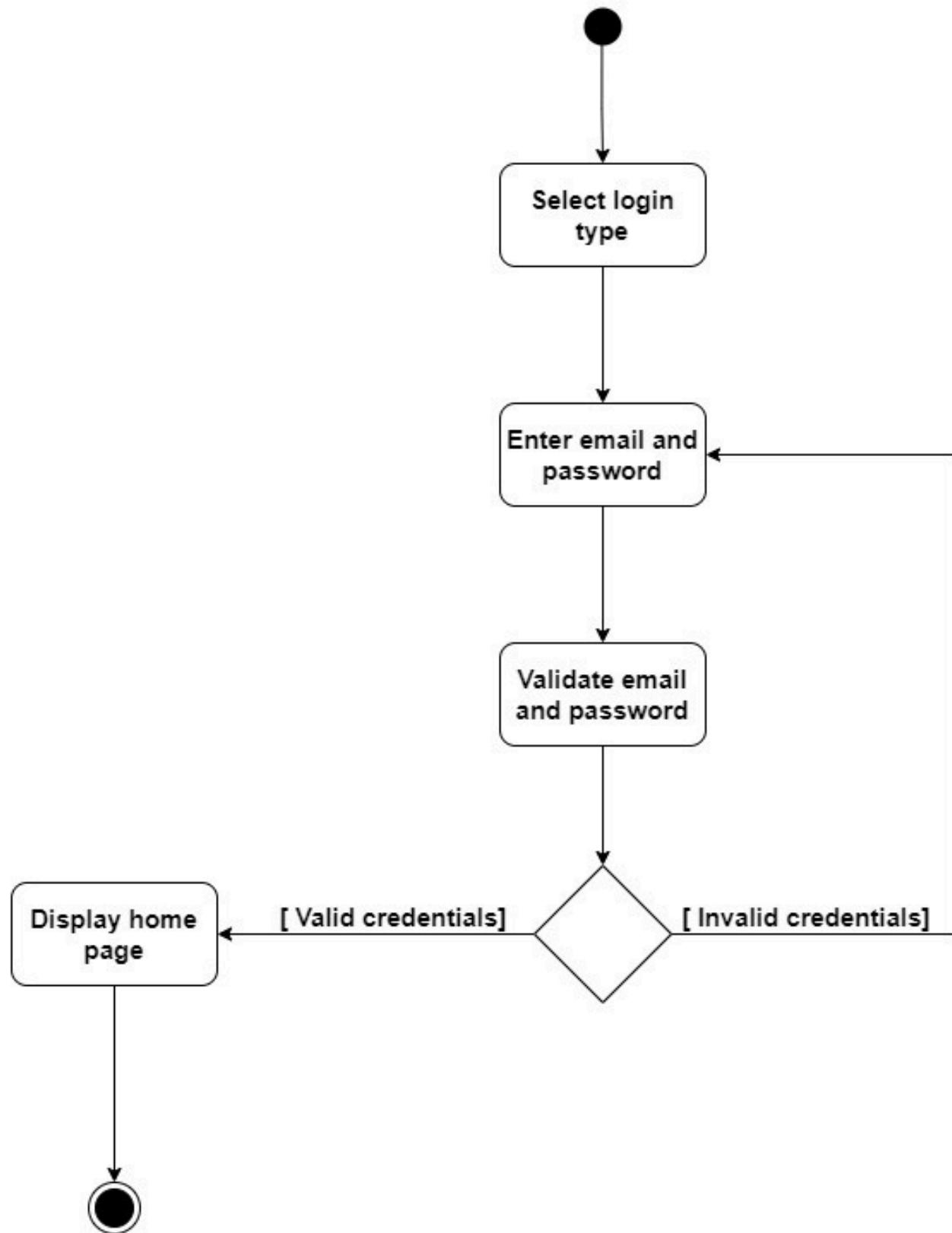
Number	06	
Name	Generate reports.	
Summary	The manager prepares various reports to check the effectiveness of the pet care system.	
Priority	1	
Precondition	Logging in to the manager system and having the data needed to prepare the reports.	
Postcondition	Sufficient preparation of requested reports.	
Primary Actor	Manager.	
Trigger	The manager initiates the preparation of reports as part of a routine work-forming review or a specific inquiry.	
Main Scenario	Step	Action
	1.	The manager logs into the online pet care system.
	2.	The manager navigates to the generate report segment.
	3.	The system displays a list of possible report types.
	4.	The manager selects the required report type.
	5.	The report parameters are specified by the manager.
	6.	The system performs validation of the input parameters.
	7.	The request for report generation is approved by the manager.
	8.	The request is processed by the system, which also produces the report.
	9.	The system notifies the manager as soon as the report is ready.
	10.	The generate report is seen or download by the manager.
Extension	Step	Branching Action
	2a	The system takes the manager to the login page if they are not already logged in.
	4a	If the selected record type requires specific permission, the system manager's permission is checked.
	6a	The system notifies the manager to fix the issues if the input parameters are not valid.
	8a	The system displays an error message if report generation is unsuccessful. then the abnormality is recorded.
Open Issues	1.	The problem is how much the report can be customized.

Number	02	
Name	Purchase an Item	
Summary	User purchases an item from the pet care system's online store.	
Priority	01	
Precondition	User must be a registered user and logged into the system.	
Postcondition	User receives a payment confirmation message and order details.	
Primary Actor	Registered user.	
Trigger	User decides to purchase an item	
Main Scenario	Step	Action
	1.	User visits the website.
	2.	User logs in to the website.
	3.	User navigates to the online store.
	4.	User browses and selects an item.
	5.	User adds the selected item to the shopping cart.
	6.	User reviews the cart and proceeds to checkout.
	7.	User enters shipping information.
	8.	User selects a payment method.
	9.	User confirms the order by pressing the submit button.
	10.	System processes the payment.
	11.	System displays an order confirmation message.
	12.	User receives a payment confirmation message and order details via email.
Extension	Step	Branching Action
	2a	System notifies the user that the user credentials are incorrect.
	4a	System notifies the user that the selected item is out of stock.
	8a	System notifies the user that the payment method is invalid.
	10a	System notifies the user that the payment failed due to an error.
	11a	System notifies the user that the order submission failed due to an error.
Open Issues	1.	Should the system suggest alternative items if the selected item is out of stock?

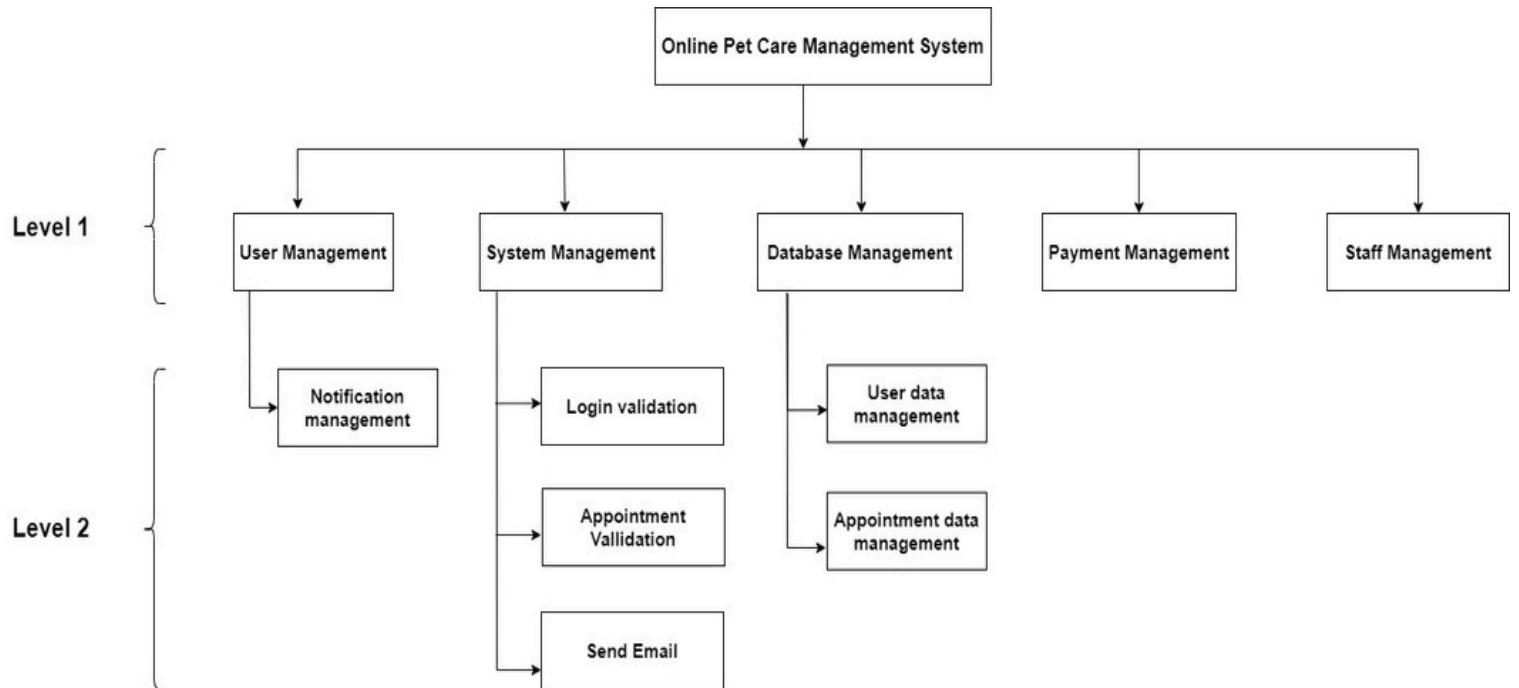
## Activity Diagram



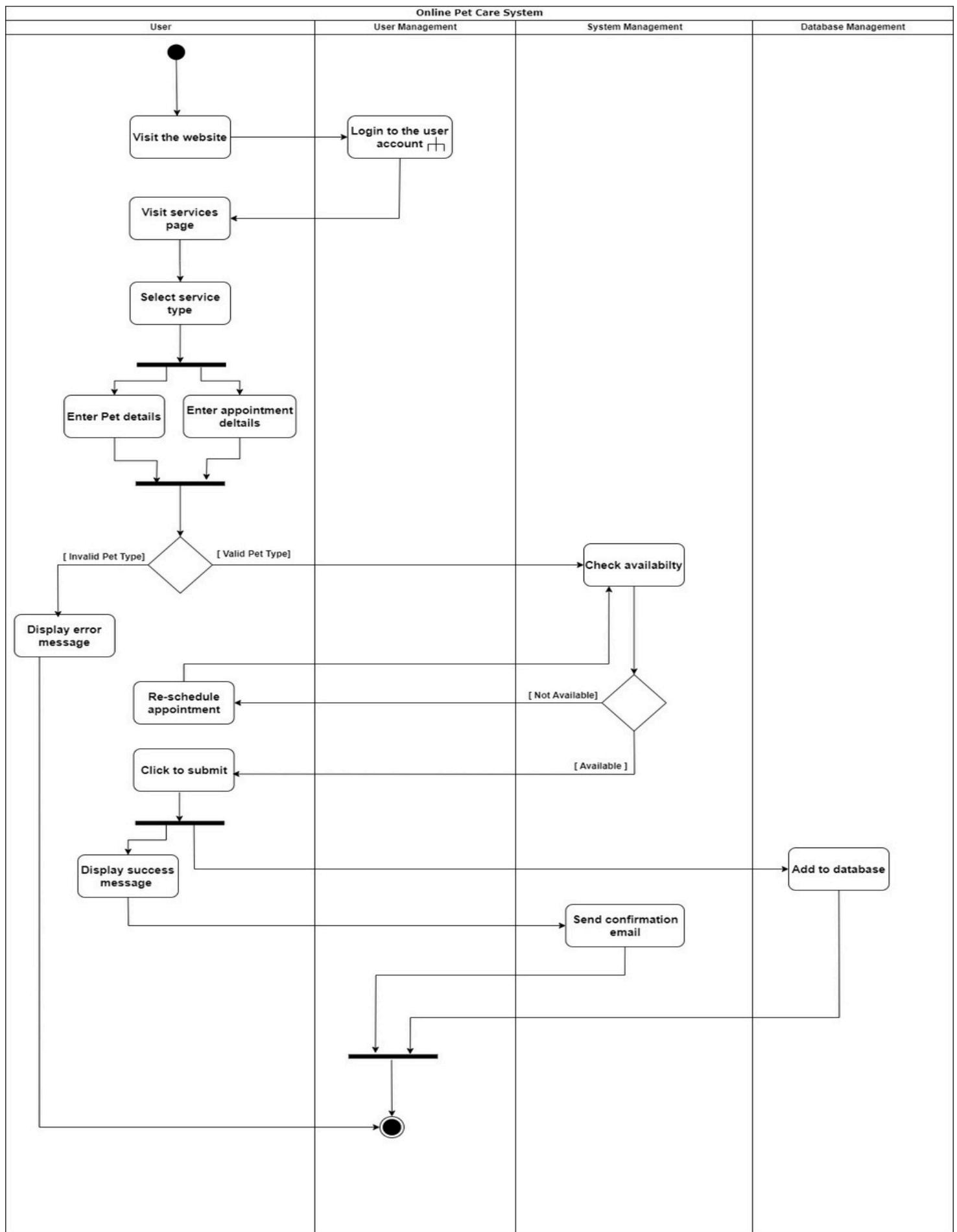
## User Login



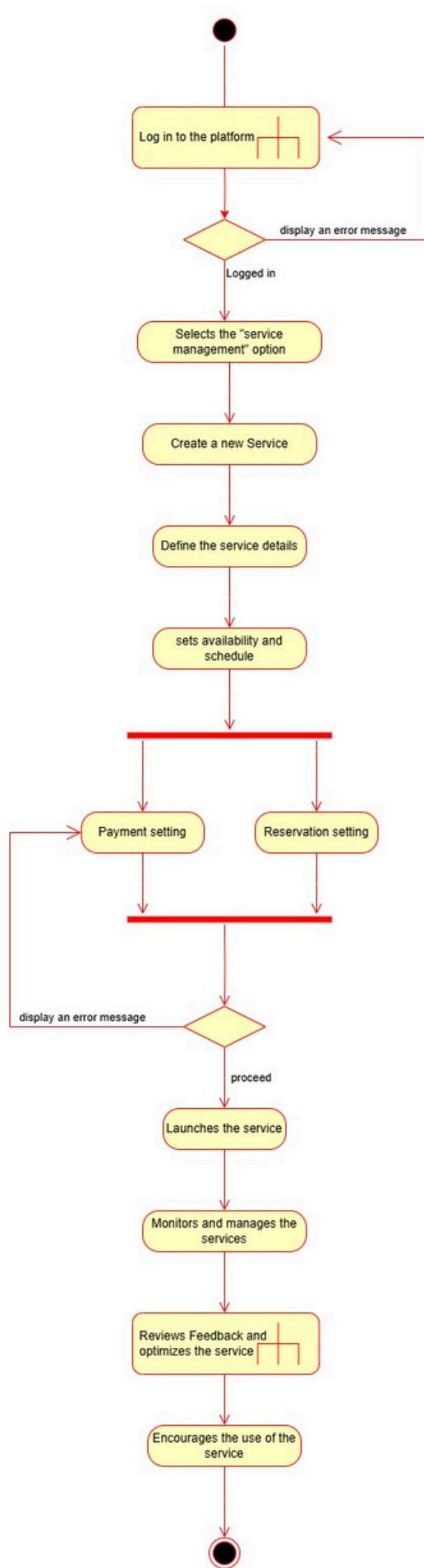
## Sub System



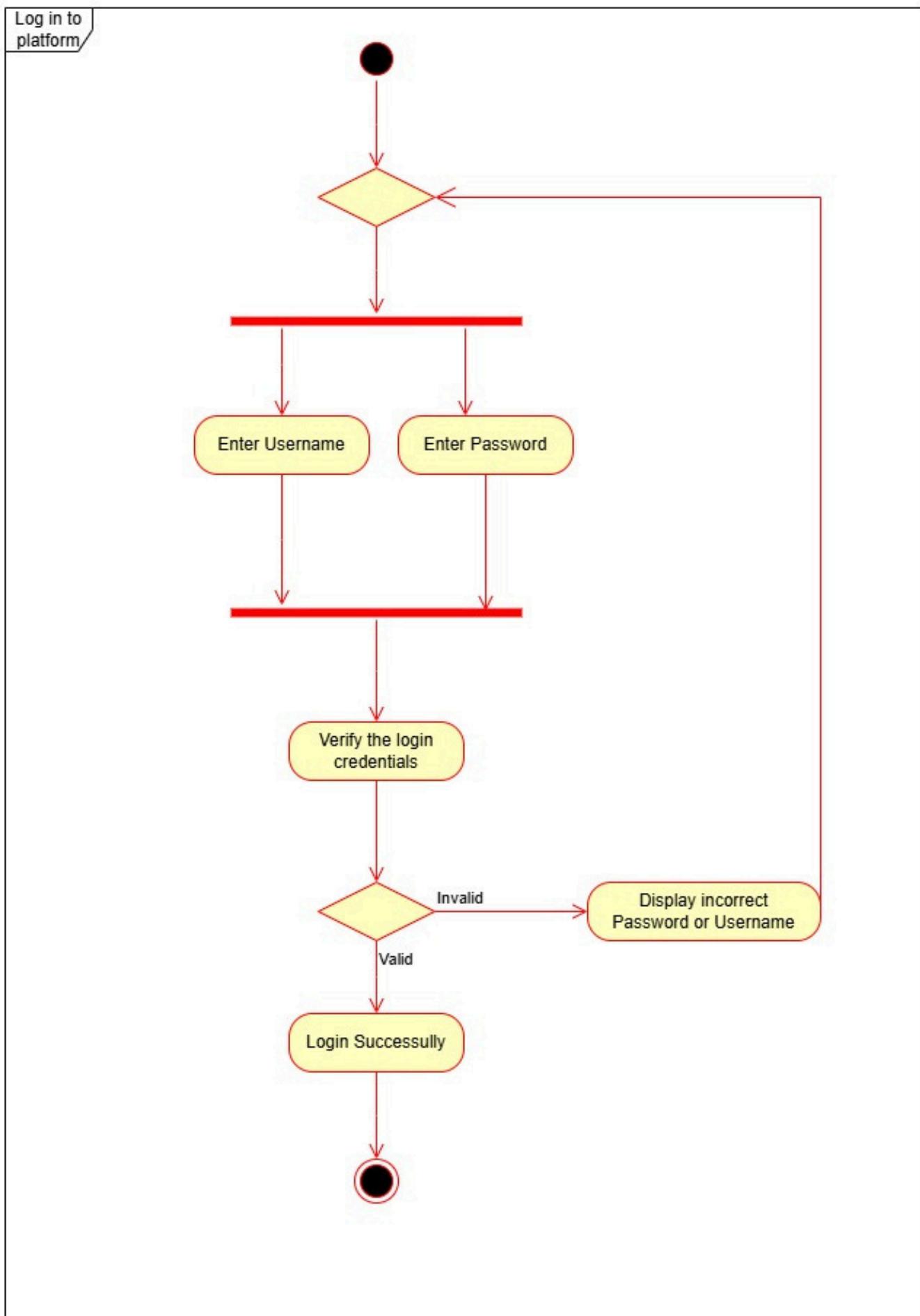
# Activity Diagram with partitioning



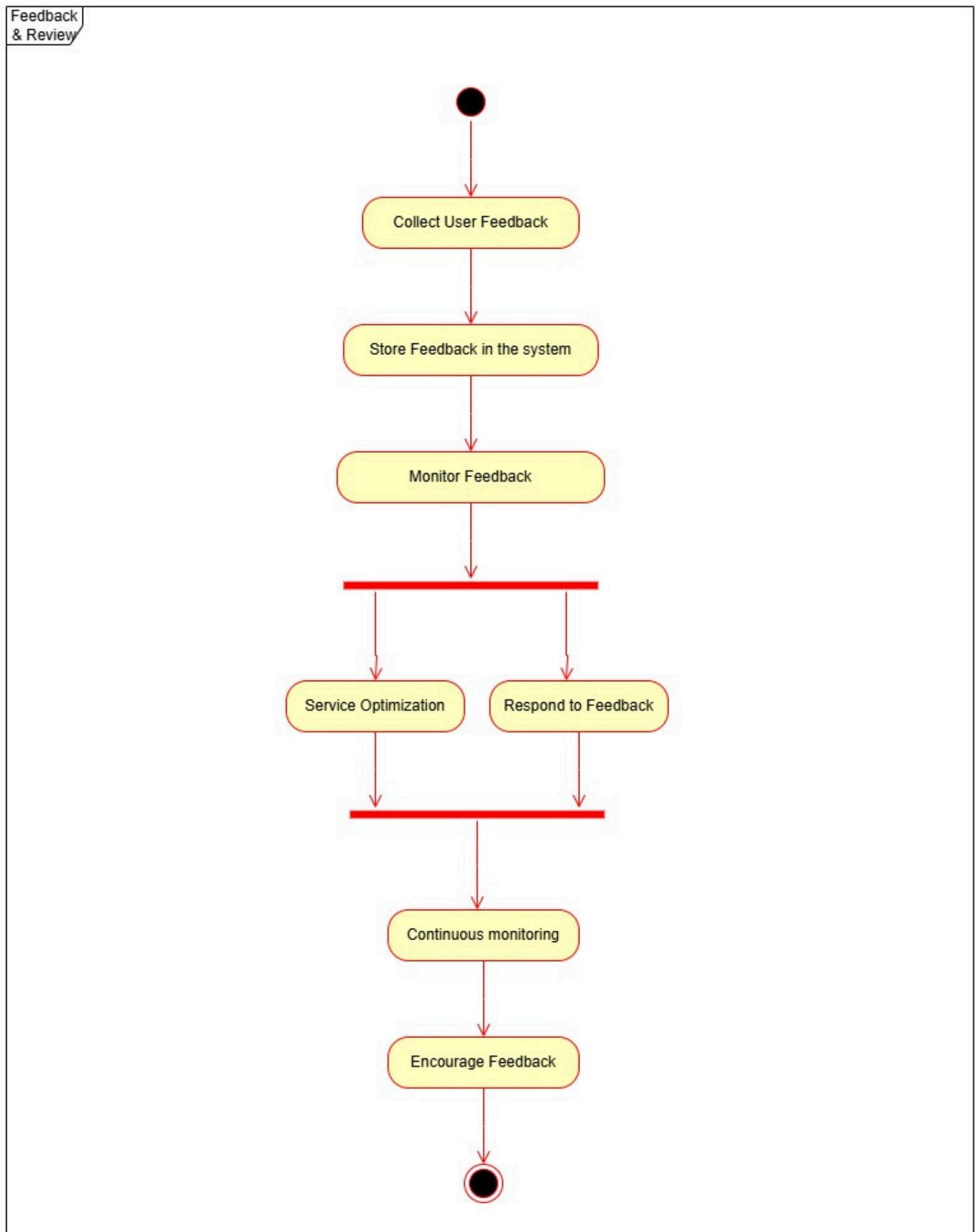
## Activity Diagram



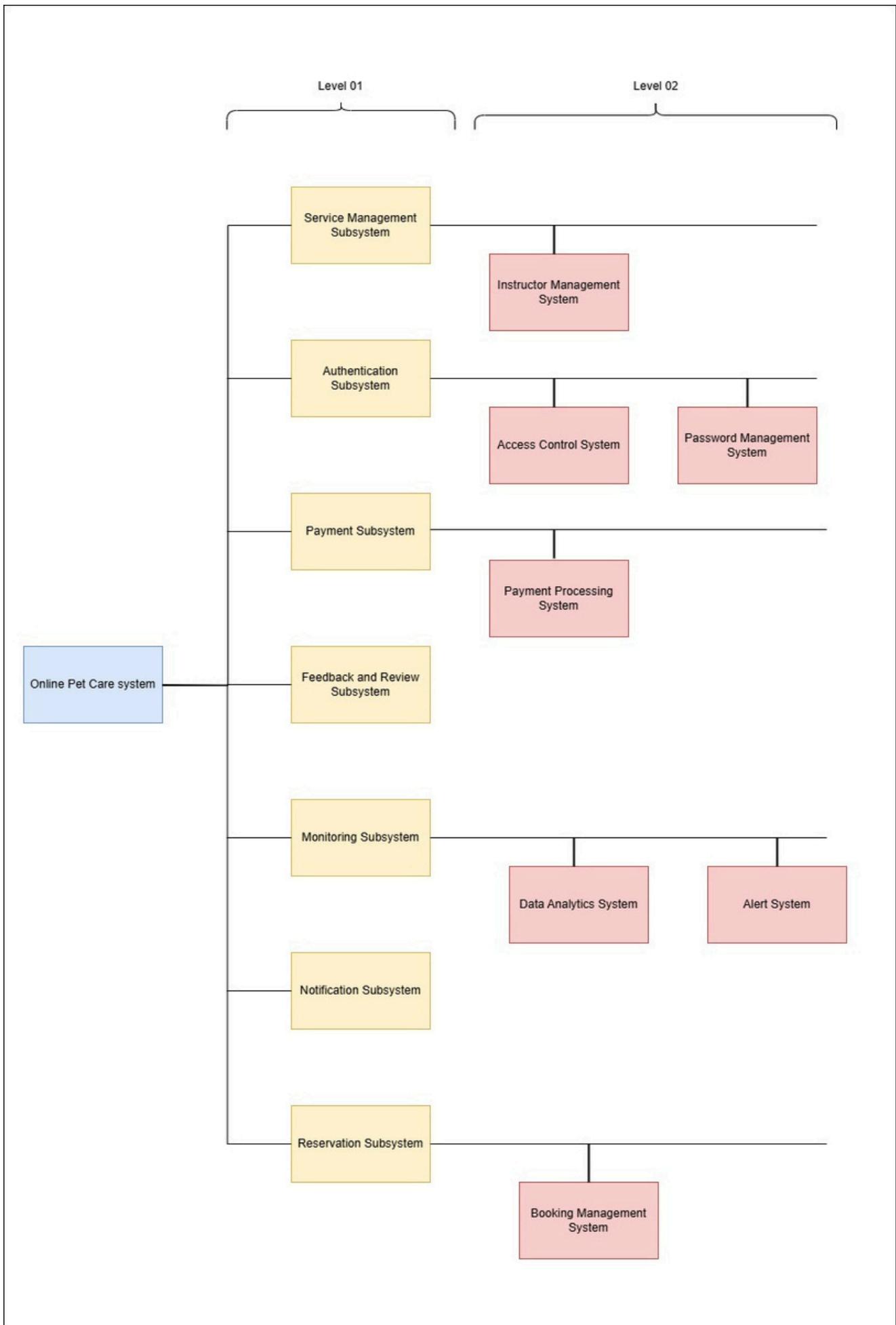
## Call Action



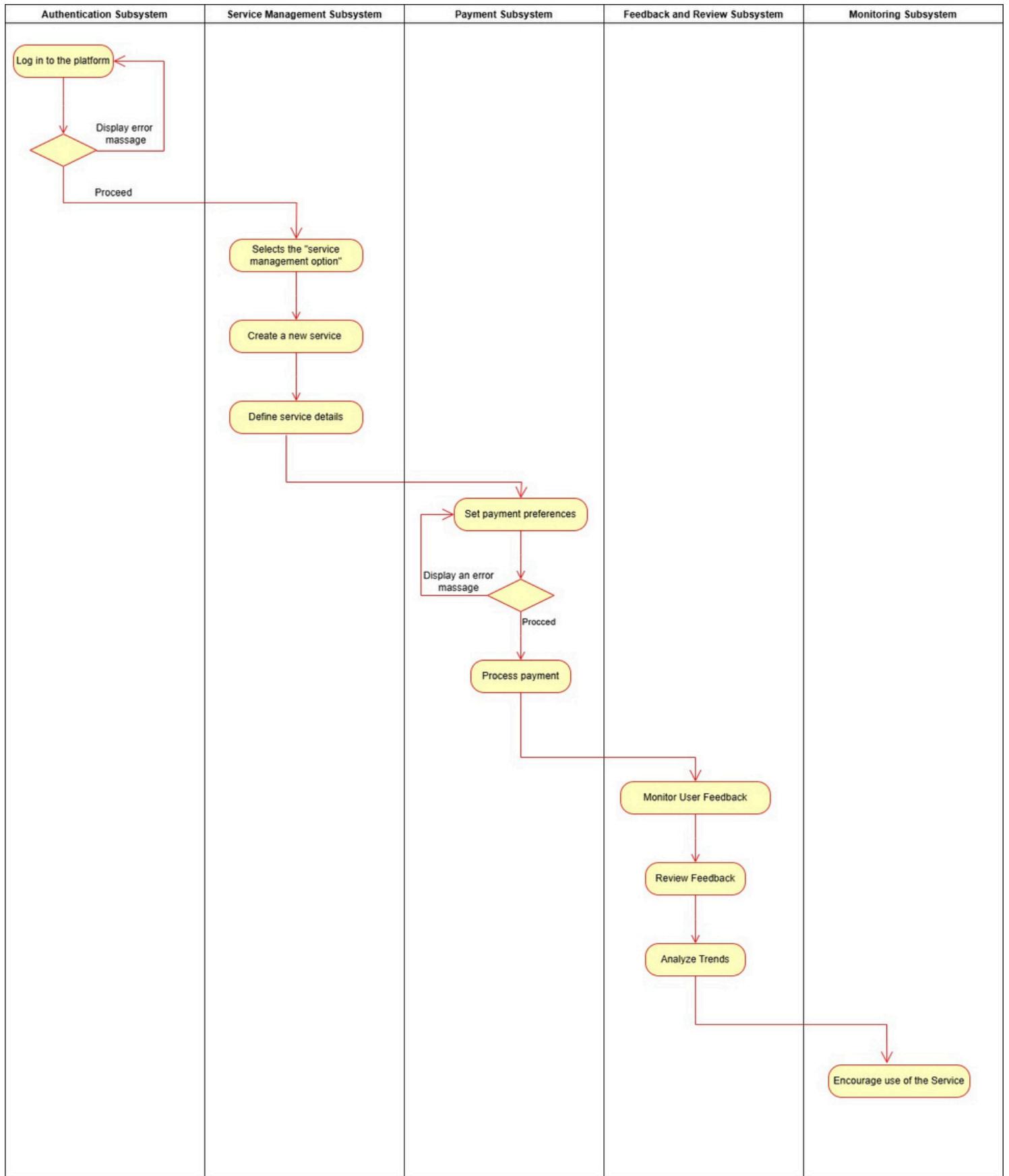
## Call Action



## 1) Sub Systems(Part II)

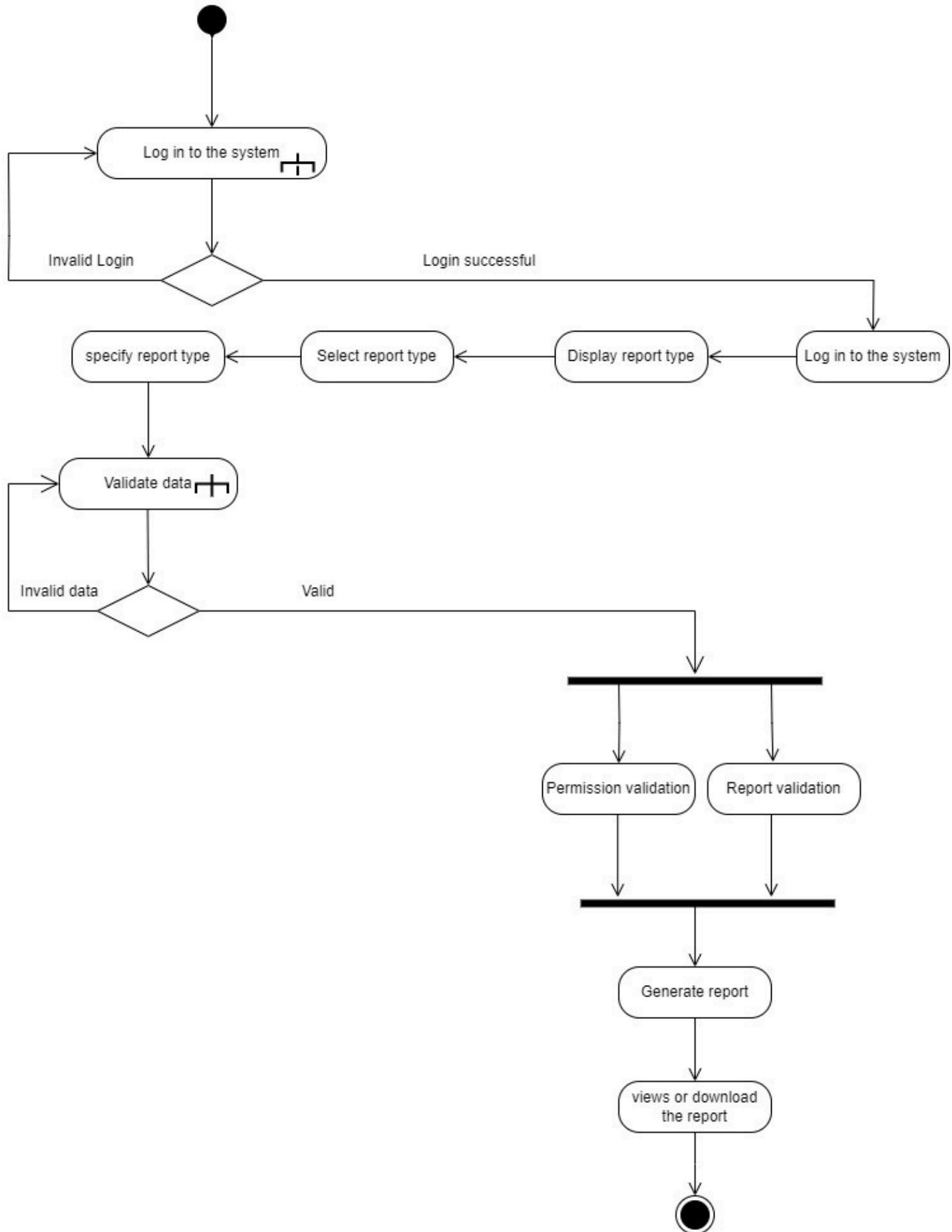


## 2) Activity Diagram – With partitioning



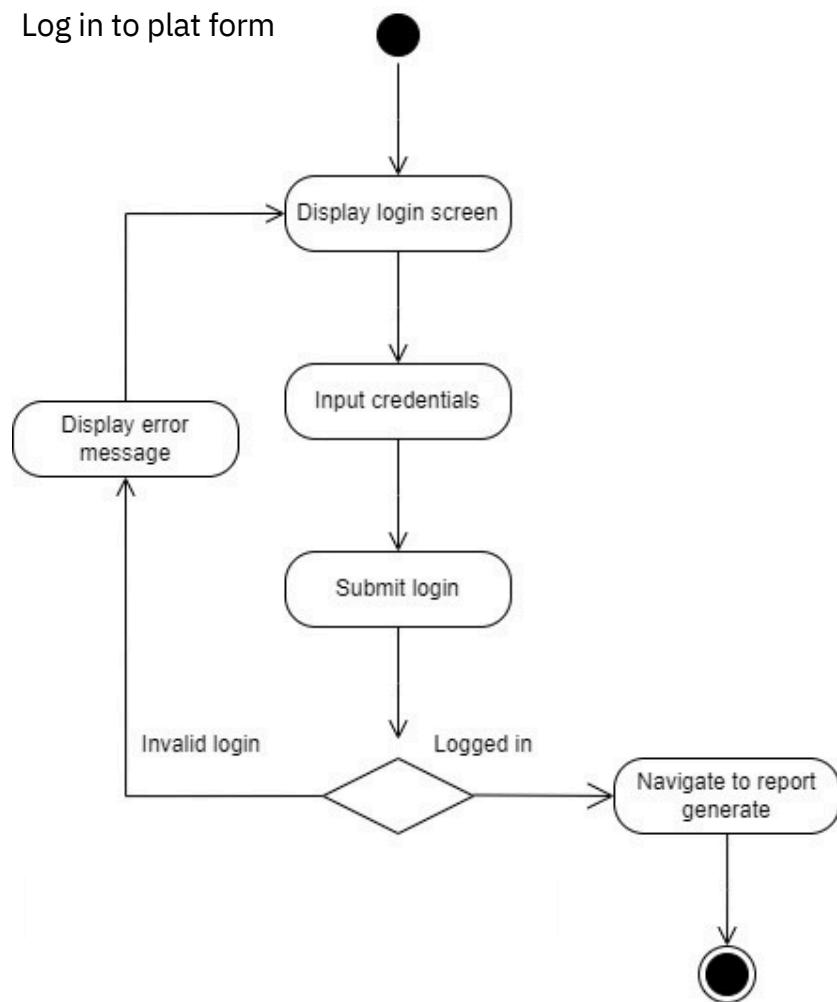
## 2)Activity Diagram

### Generate Report

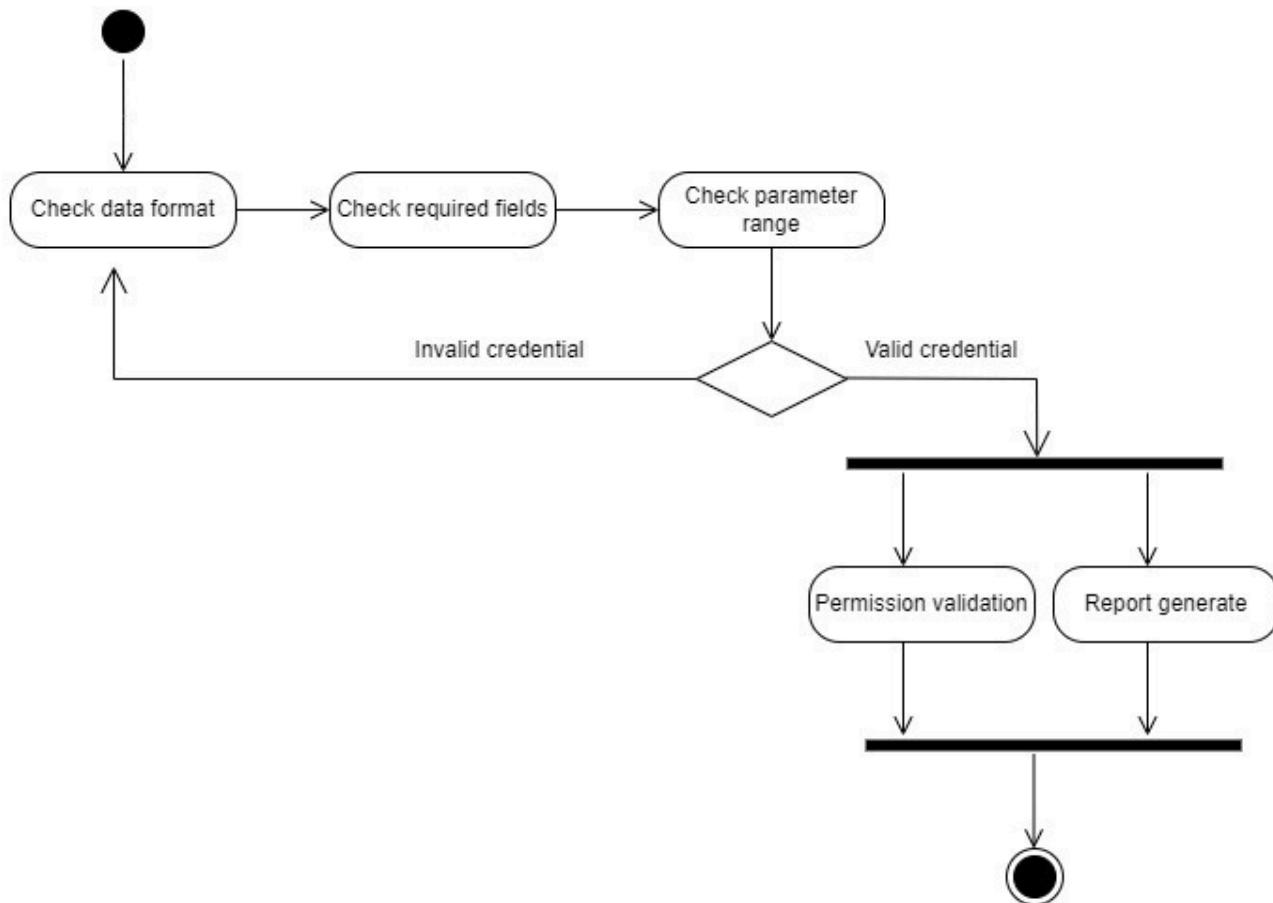


## Call Action

Log in to plat form

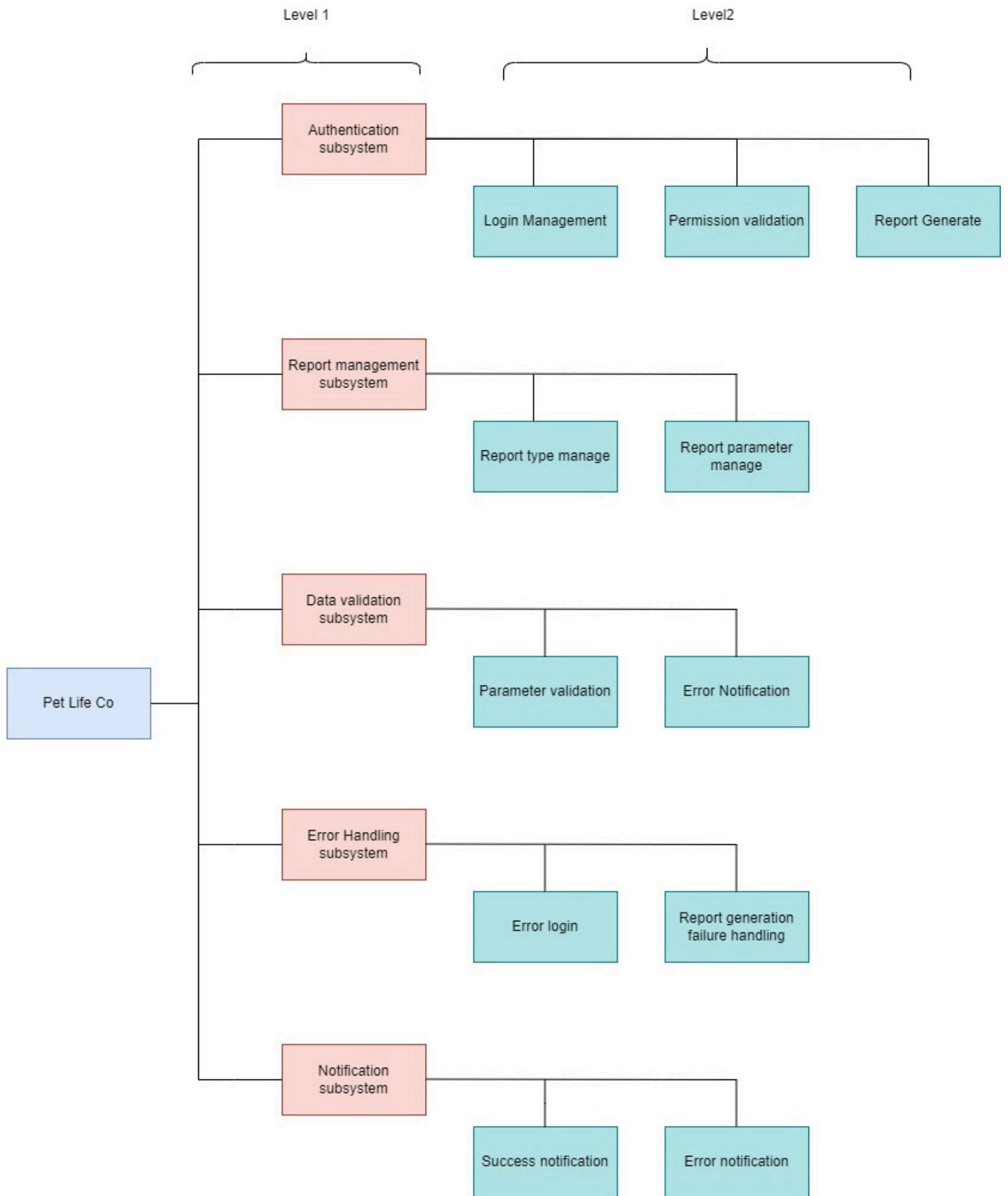


Data validation

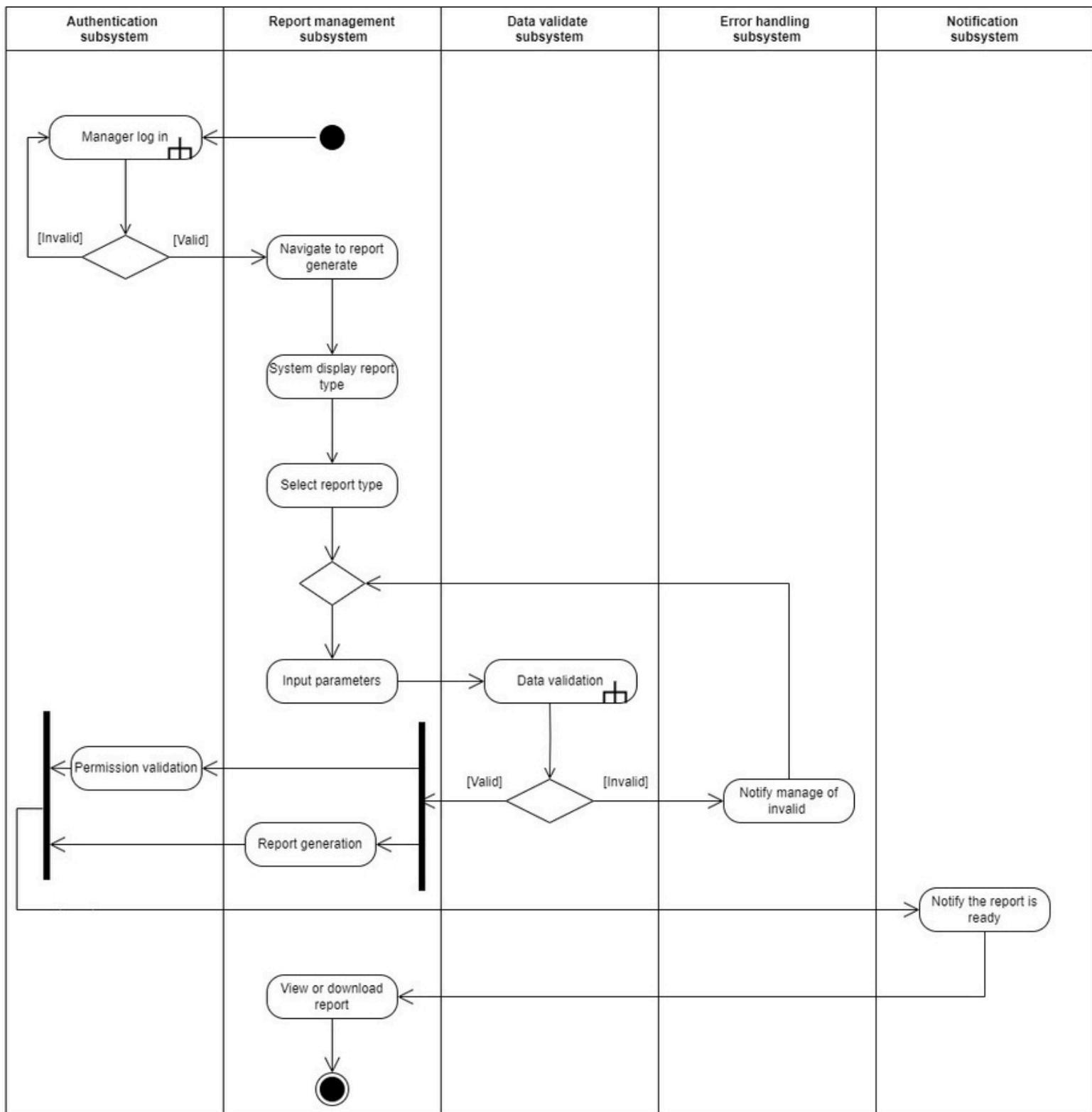


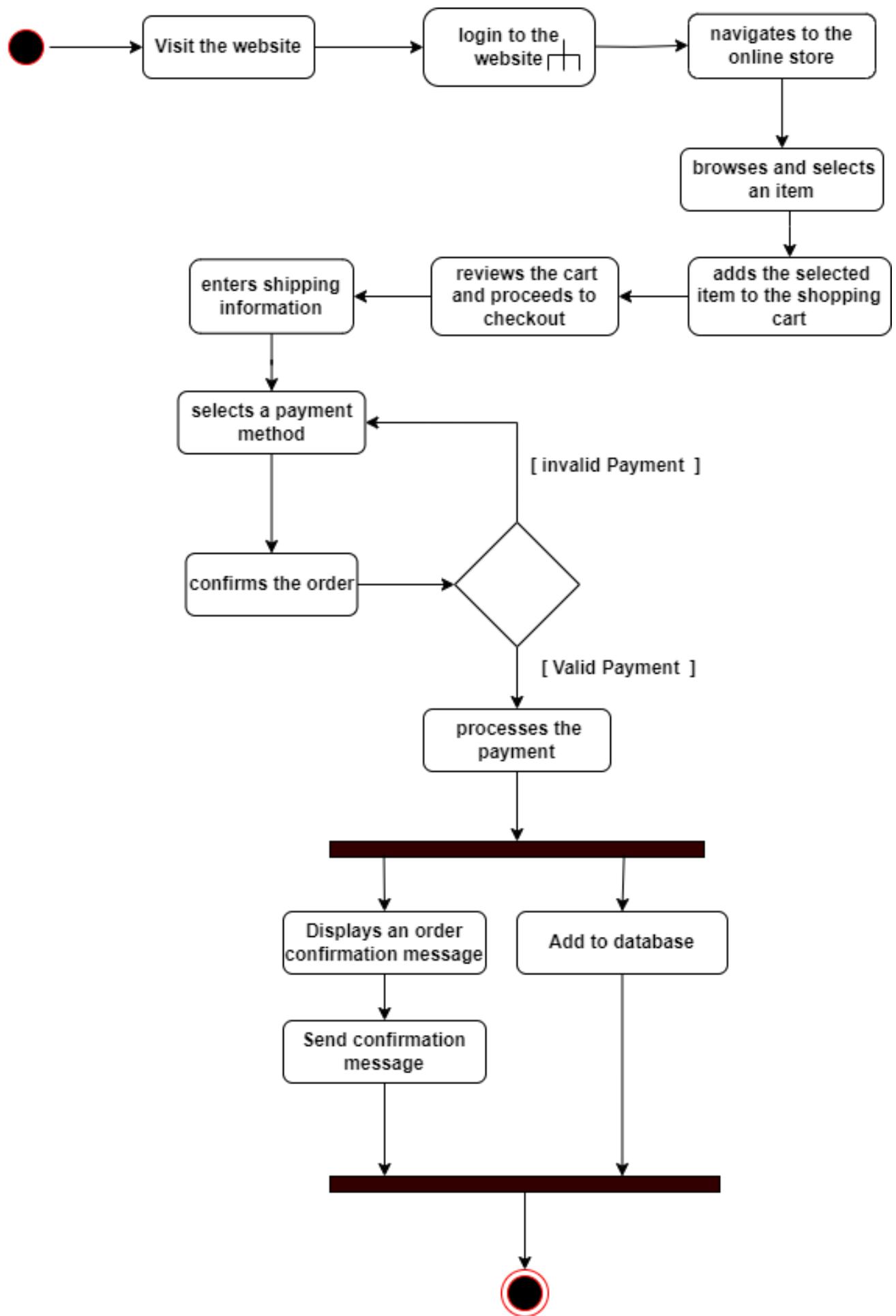
## Part 2

### 1) Sub systems

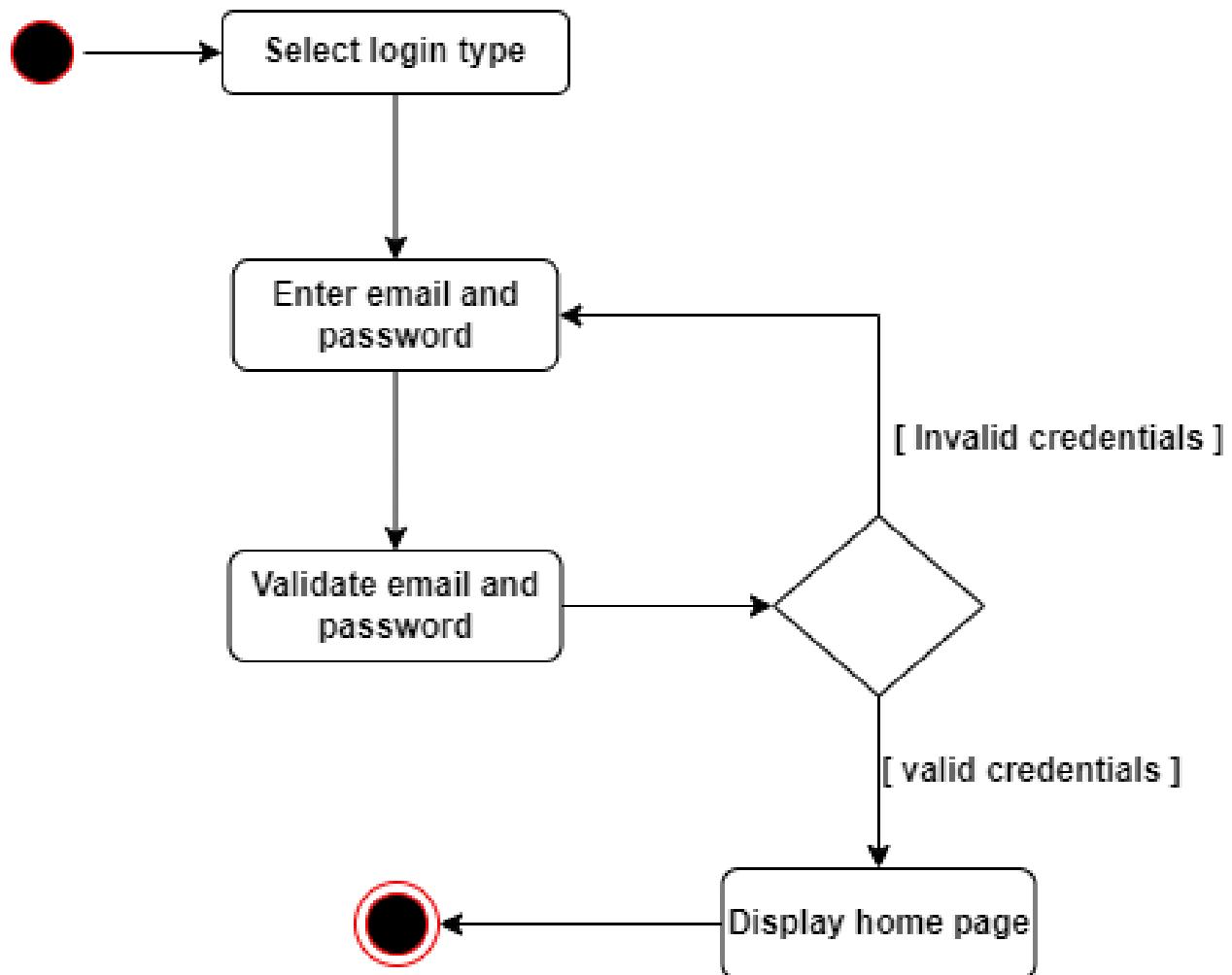


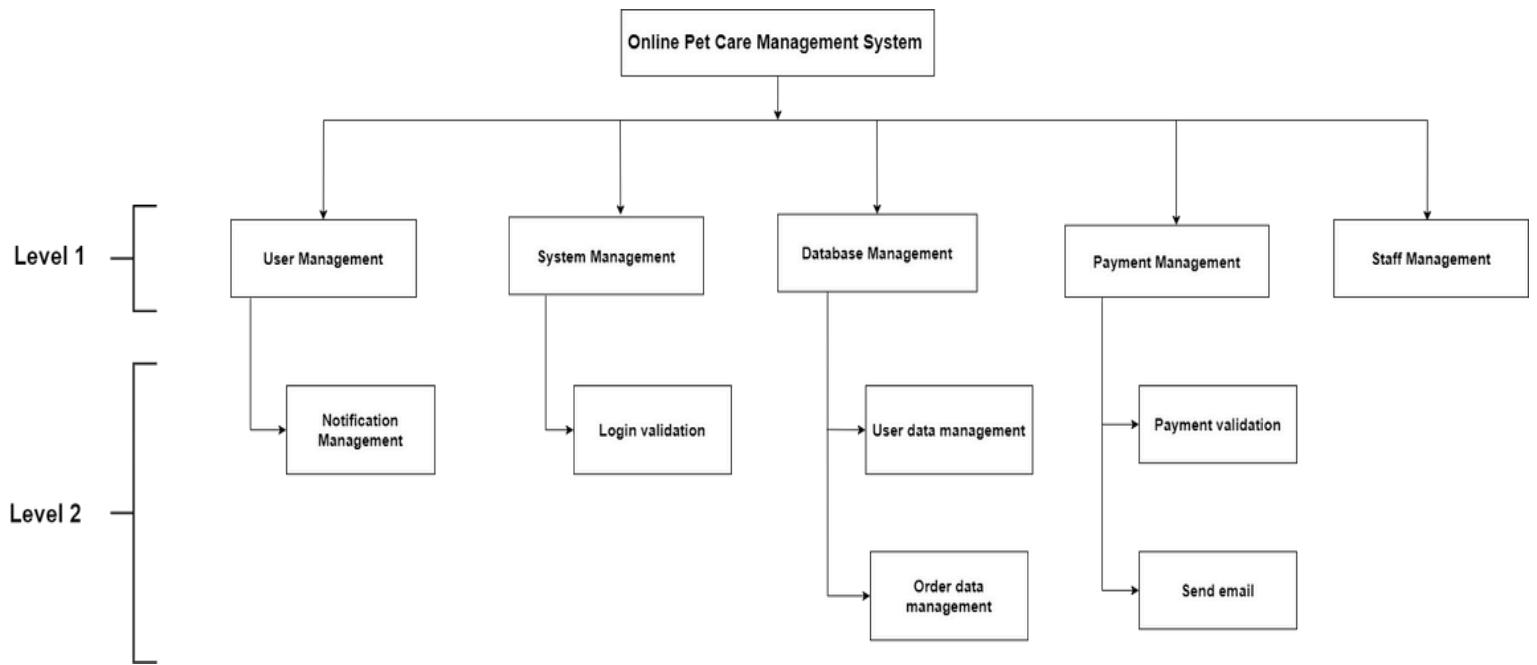
## 2) Activity Diagram with partitioning

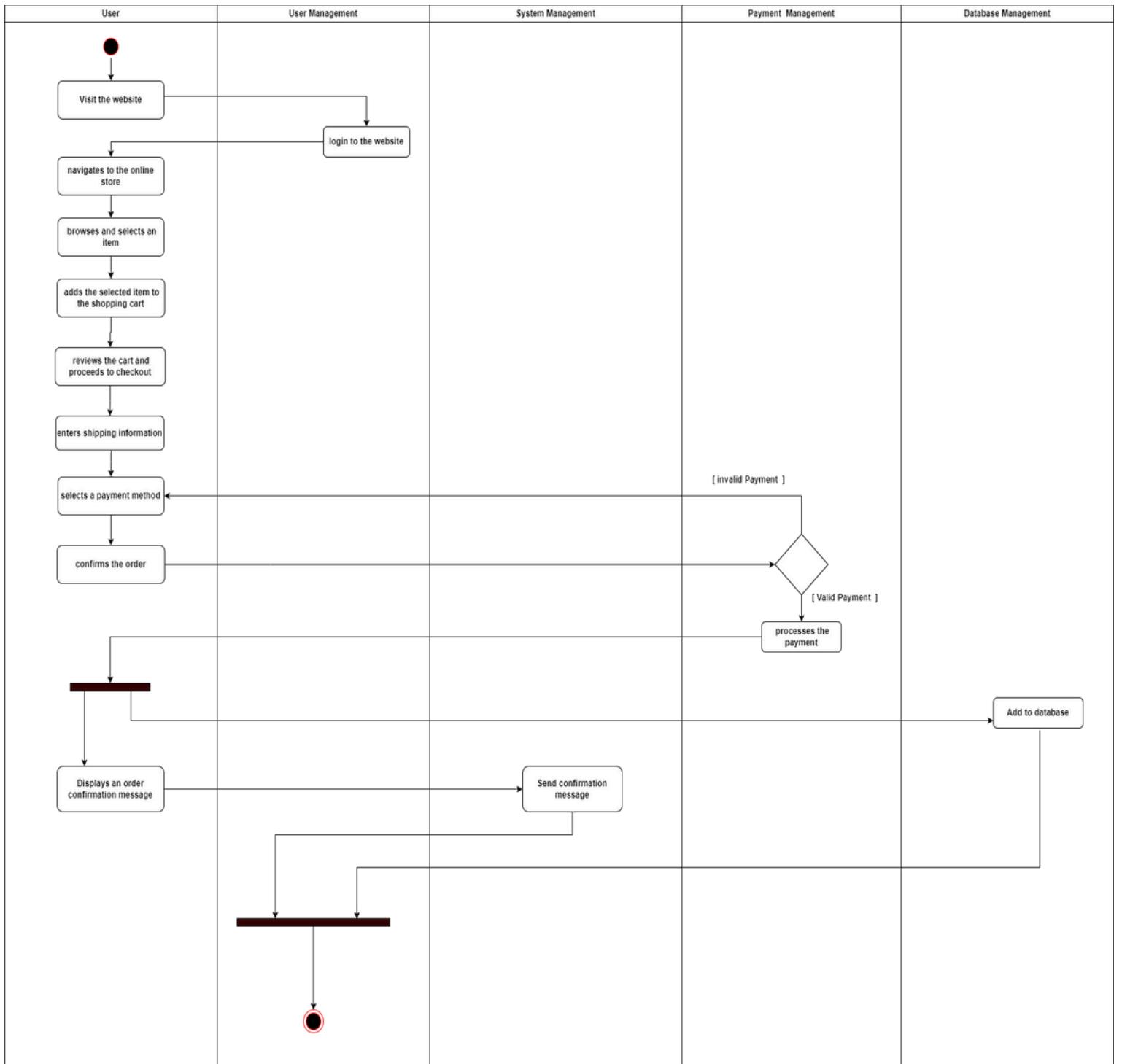




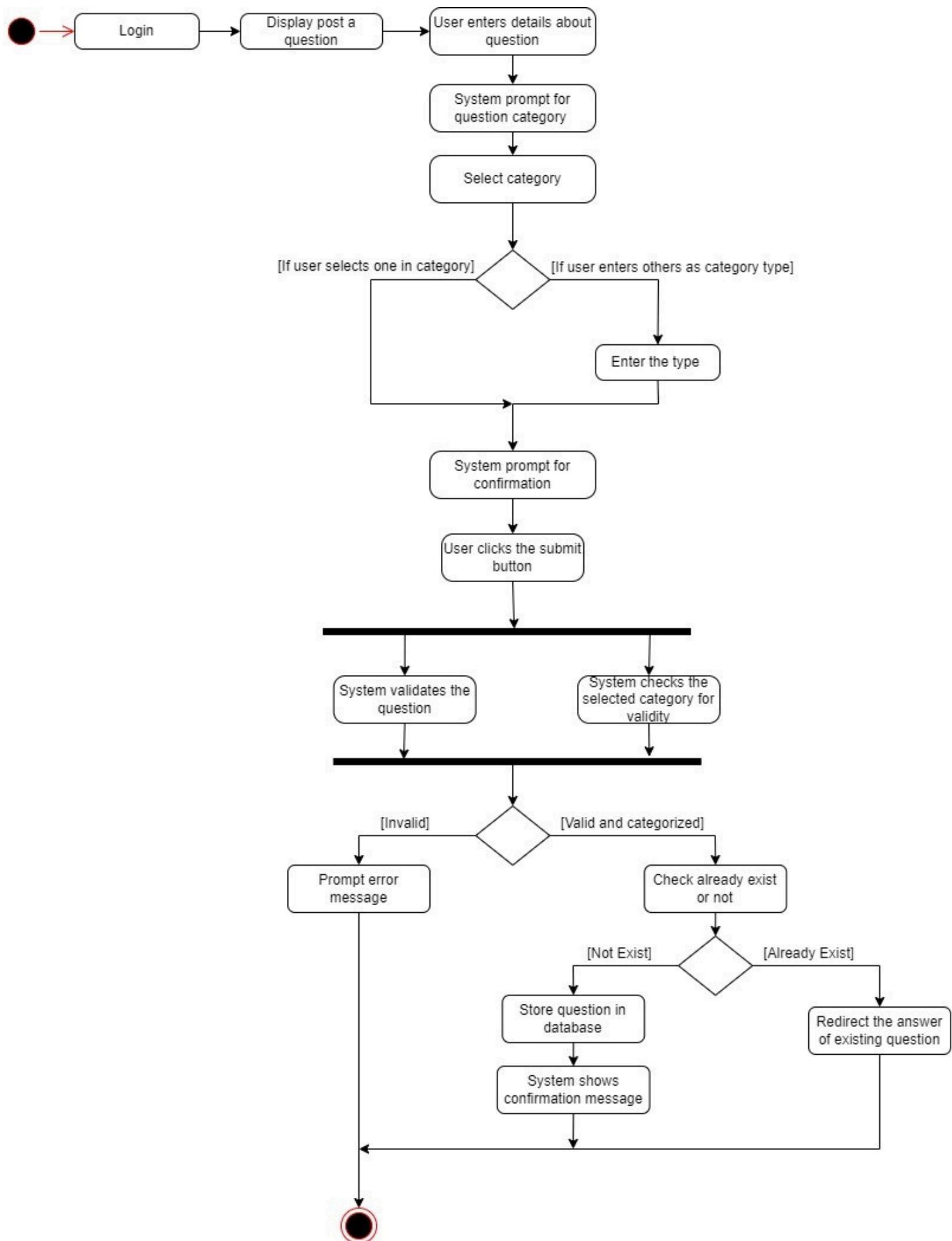
User login



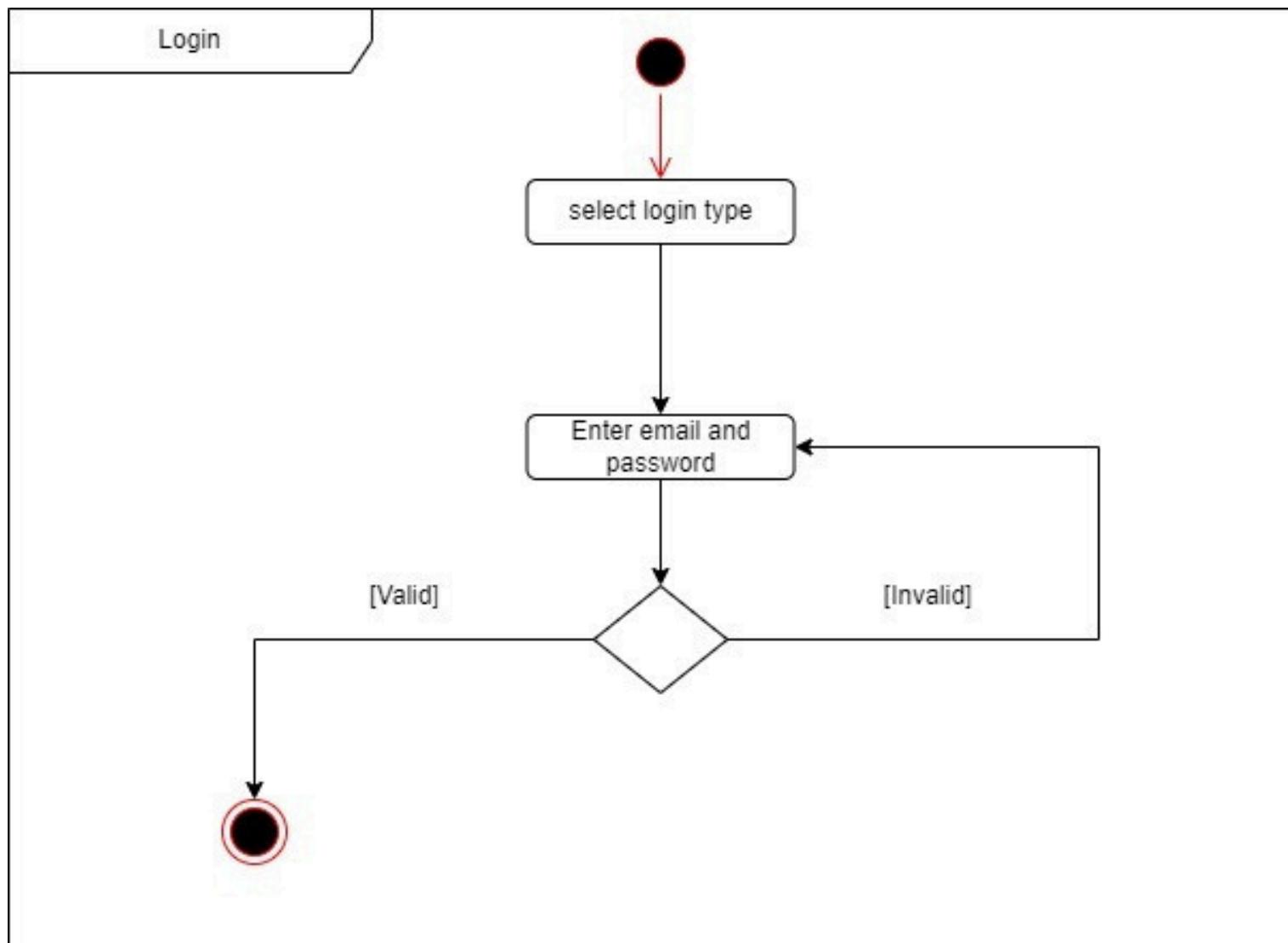


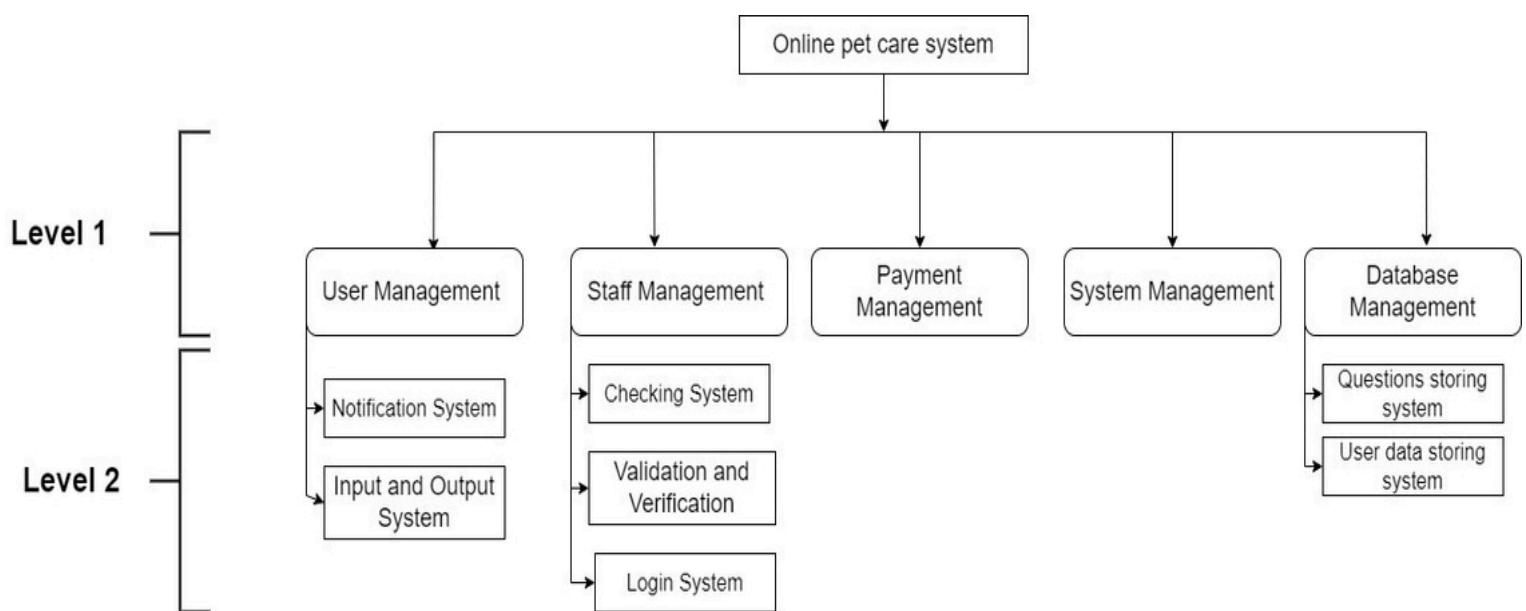
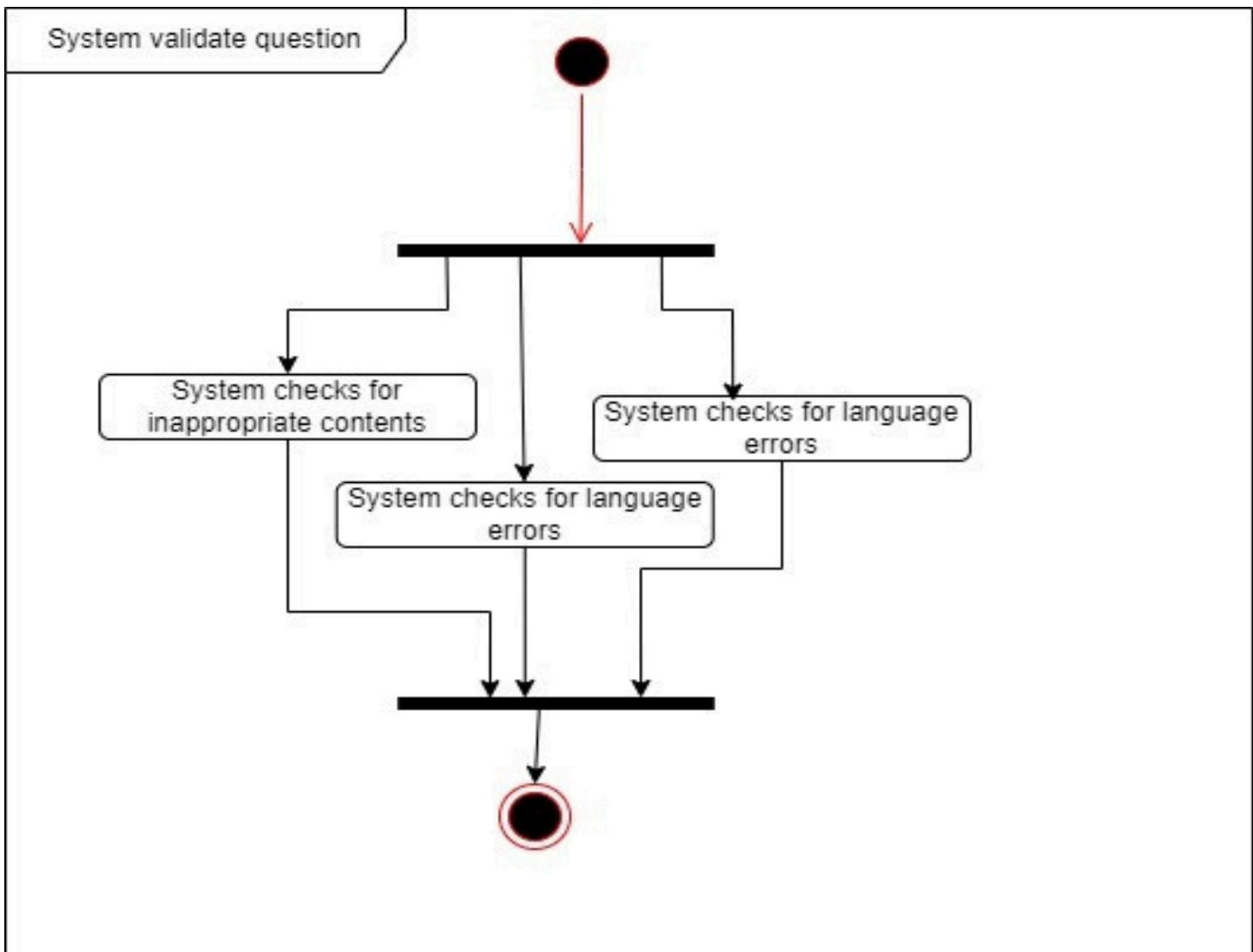


# 1) .Activity Diagram

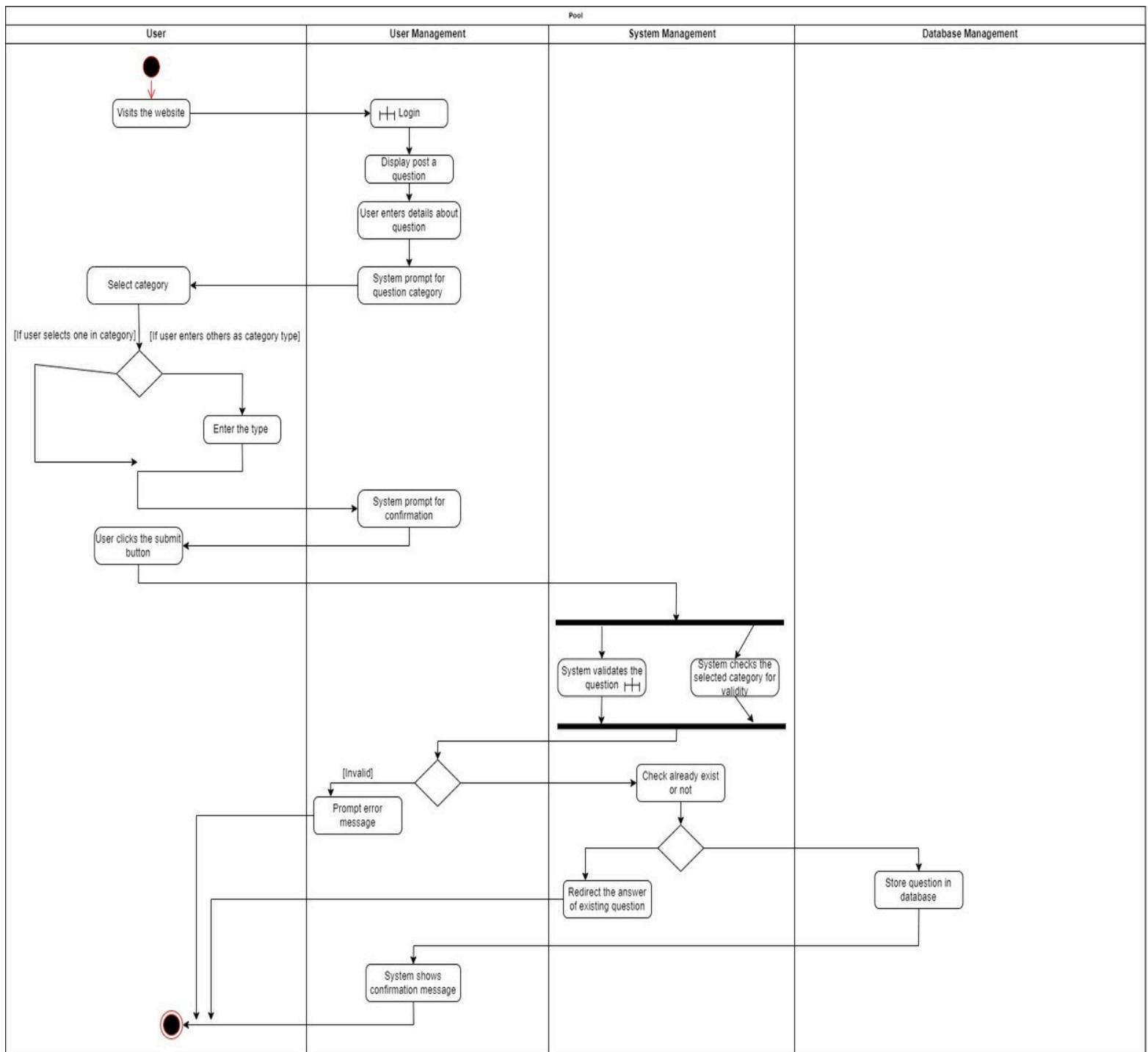


.Subsystems



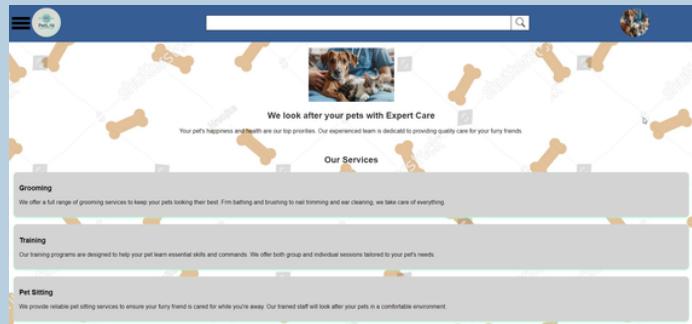


## Partitioning process



# Website

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- **User login**
- **Contact Us**
- **About us**
- **Admin panel**
- **User registration**
- **FAQ page**
- **User profile**
- **Book dog walking session page**
- **My pets page**
- **Pet registration page**
- **Book pet hostel page**
- **Pharmacy**
- **Book grooming session page**
- **Home page**
- **Payment portal**
- **cart**
- **Search functionality**
- **Pet store**
- **Dashboard**
- **Appointments page**

# Addmin panel

Dashboard

Users

Appointments

Products

Services

Inquiry

Log out

Today

Currently working  
2

Total finished  
8

Total work for today  
10

Appointments

Currently working  
2

Total finished  
8

Total work for today  
10

Revenue



Today  
**Rs. 15000.00**

Last week  
**Rs. 85000.00**

Dashboard

Users

Appointments

Products

Services

Inquiry

Log out

Pending

App id	Service	Date	Time	Checkin Date	Checkout Date	Service Freq	Customer name	Pet Name
No Pending Appointments								

Approved

App id	Service	Date	Time	Checkin Date	Checkout Date	Service Freq	Customer name	Pet Name
No Approved Appointments								



[Dashboard](#)
[Users](#)
[Appointments](#)
[Products](#)
[Services](#)
[Inquiry](#)

[Log out](#)

## Admin Panel - Pet Care Services



### Available Services

[Click To Watch Available Services](#)

[Click To Stop from Watching Available Services](#)

### Add New Service

Enter Service Name To Add...

Enter Service Rate To Add...

[Add Service](#)

### Remove Existing Service

Enter Service Name To Remove...

[Remove Service](#)



[Dashboard](#)
[Users](#)
[Appointments](#)
[Products](#)
[Services](#)
[Inquiry](#)

[Log out](#)

Customer Name	Customer Email	Inquiry Date - Time	Inquiry Type	Inquiry Description	Action
Sanuja Rubasinghe	sanuja@gmail.com	2024-09-29 17:44:22	service	Do you provide home visits for dog grooming?	<a href="#">Remove</a>
Chanuka Sampath	chanuka@gmail.com	2024-09-29 17:44:22	vet	I want to change my vet.	<a href="#">Remove</a>
Dinithi Dilshani	dilshani@gmail.com	2024-09-29 17:44:22	product	When will new dog collars be available?	<a href="#">Remove</a>
S Menurangi	menurangi@gmail.com	2024-09-29 17:44:22	product	The water bowl I purchased is cracked. I want to return it.	<a href="#">Remove</a>
Javid Mushtan	javid@gmail.com	2024-09-29 17:44:22	service	Do you accomodate lizards in your pet hostel.	<a href="#">Remove</a>



First Name  
adam

Last Name  
smith

Phone Number  
1234098765

Email  
test@gmail.com

Password  
...

Confirm Password

Address  
no

horas

10000

Profile Picture  
 dog.jpg

Agree to Terms and Conditions

**Sign Up**

## Log in

Customer 

Email



Password



[Forgot your password?](#)

**Log in**

or

Don't have an account yet? [Sign up here](#)

**We look after your pets with Expert Care**

Your pet's happiness and health are our top priorities. Our experienced team is dedicated to providing quality care for your furry friends.

**Our Services**

**Grooming**  
We offer a full range of grooming services to keep your pets looking their best. From bathing and brushing to nail trimming and ear cleaning, we take care of everything.

**Training**  
Our training programs are designed to help your pet learn essential skills and commands. We offer both group and individual sessions tailored to your pet's needs.

**Pet Sitting**  
We provide reliable pet sitting services to ensure your furry friend is cared for while you're away. Our trained staff will look after your pets in a comfortable environment.

# Home

# Services

# Pharmacy

# Pet Store

# FAQ

**We look after your pets with Expert Care**

Your pet's happiness and health are our top priorities. Our experienced team is dedicated to providing quality care for your furry friends.

**Our Services**

Services to keep your pets looking their best. From bathing and brushing to nail trimming and ear cleaning, we take care of everything.

Help your pet learn essential skills and commands. We offer both group and individual sessions tailored to your pet's needs.



## Services



Grooming Session

**Book Now**



Pet Walking

**Book Now**



Pet Hostel

**Book Now**



Veterinary Care

**Book Now**

View All Services



### Our Grooming Services



Bath and Brush

Keep your pet clean and shiny.

Rs.1000



Haircuts and Trims

Custom styles for your pet's look.

Rs 2000



Nail Clipping

Safe and gentle nail trimming.

Rs.3000



Pet Boarding

Safely you can board your pet.

Rs.4500

### Book Your Grooming Session

Pet's Name:

Select Service:

Preferred Date:

Preferred Time:

Submit

## Register Your Pet

### Pet Name

Enter your pet's name

### Age

Enter pet age

### Pet Type

Dog



### Breed

Enter pet breed

### Weight (kg)

Enter weight

### Gender

Male



### Additional Notes

Any special notes about your pet

### Pet Photo

Choose File No file chosen

Register Now

# My Pets

Add New Pet



bany

Delete Pet

≡   

[My Account](#) [User Profile](#) 

[My Pets](#) [Choose File](#) [No file chosen](#) [Change Photo](#)

[My Appointments](#) [First Name:](#) adam [Last Name:](#) smith [Email:](#) test@gmail.com [Edit](#)

[My Cart](#) [New Password:](#) [Reset Password](#)

[Log out](#) [Delete Account](#)

Select Pet: **baby**

Check-in Date:  Check-out Date:  Book Now

**Standard**  
Basic pet hostel with all essential services.

**Kitty House**  
Premium hostel for your feline friends.



## Select a Vet for your appointment



**Dr. John Doe**

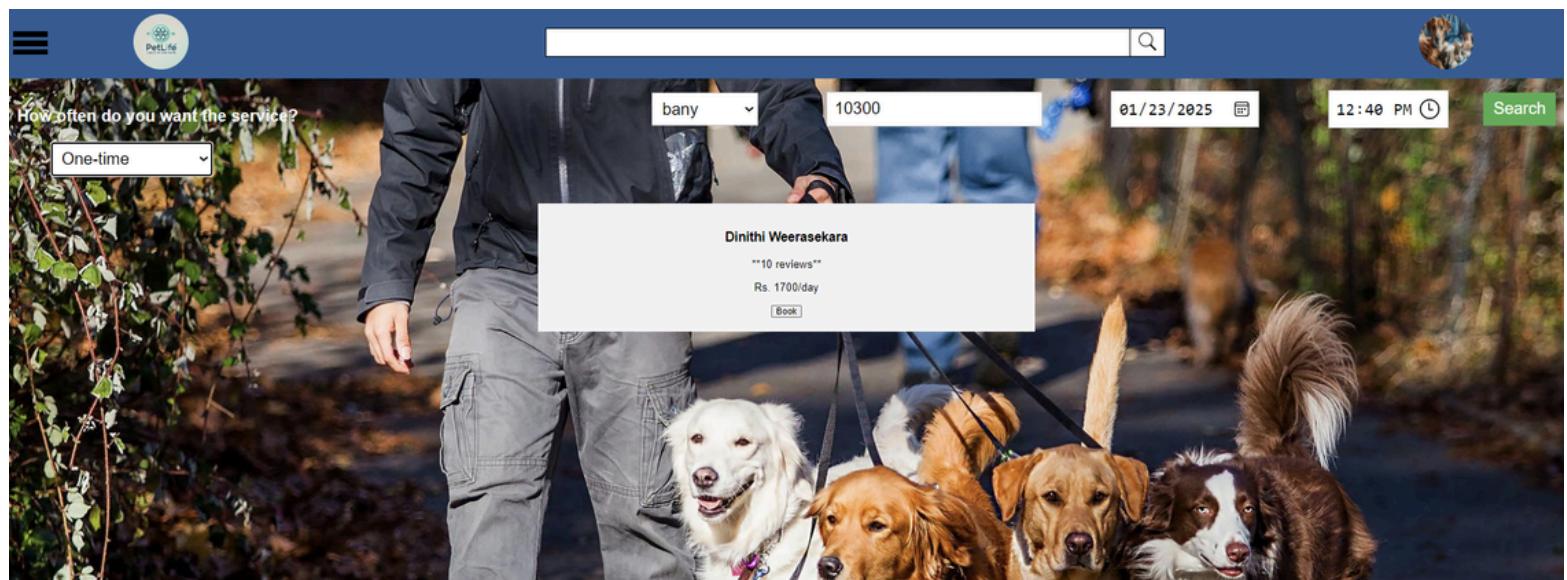
Contact: [vet@gmail.com](mailto:vet@gmail.com)

Service Rate: \$2000.00

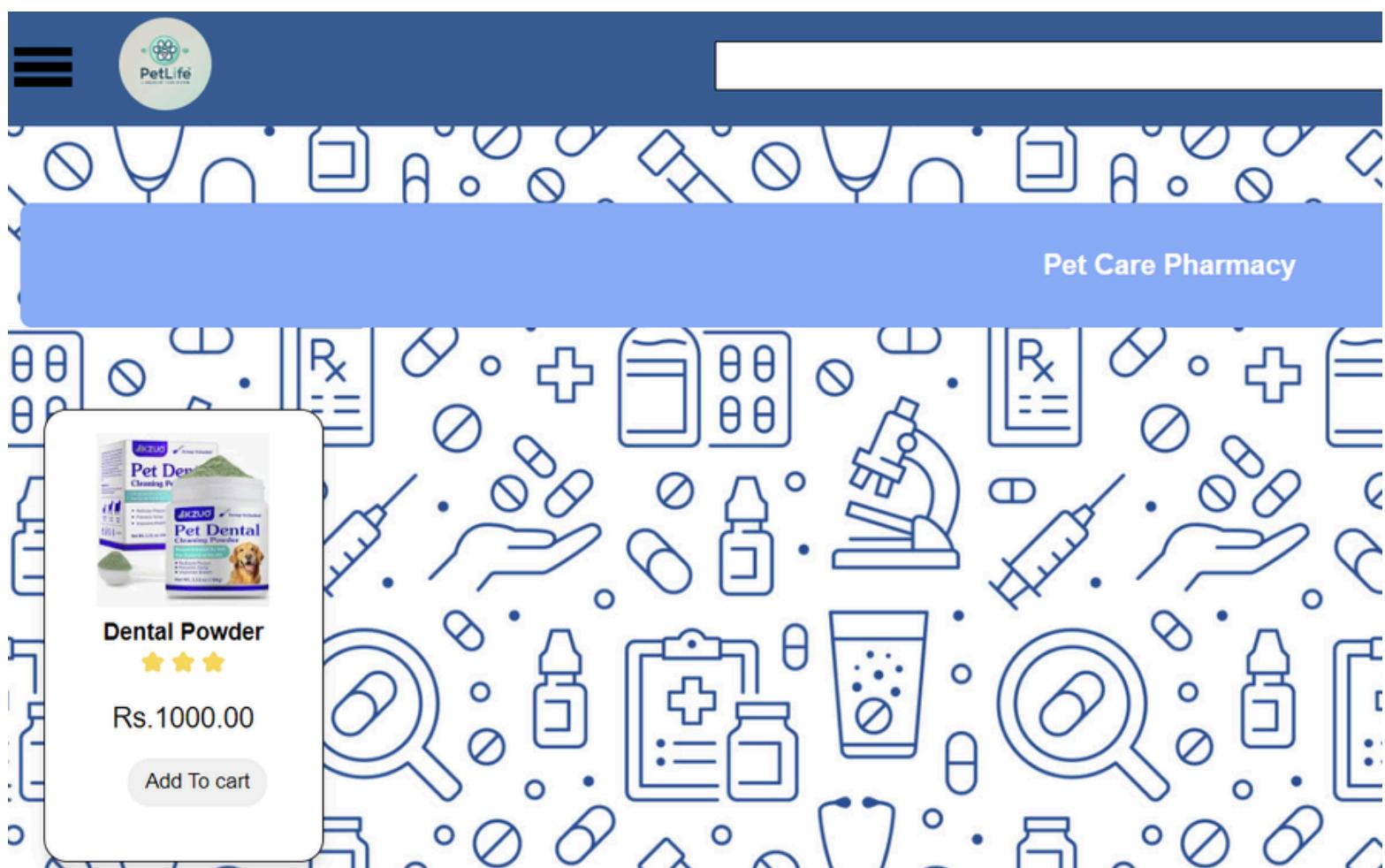
Select Pet: **baby**

**TODAY at 10:30**

**TODAY at 13:30**



A screenshot of a pet walking service booking interface. At the top, there's a search bar with the placeholder "Search". Below it, a banner shows a person walking several dogs on a path. On the left, a dropdown menu says "How often do you want the service?" with "One-time" selected. To the right, there are input fields for "bany", "10300", and a date "01/23/2025". A timestamp "12:40 PM" and a "Search" button are also present. A callout box displays a service provider's profile: "Dinithi Weerasekara" with "10 reviews\*\*" and "Rs. 1700/day", with a "Book" button.



A screenshot of a pet care pharmacy section. The header features the PetLife logo and a search bar. Below the header is a decorative background pattern of medical icons like syringes, pills, and microscopes. A blue banner at the top right reads "Pet Care Pharmacy". On the left, a product card for "Pet Dental Cleaning Powder" is shown, featuring an image of the product, a rating of 3 stars, and a price of "Rs.1000.00". A "Add To cart" button is at the bottom of the card.

New Year's Deal: 25% Off Large Bags of Dog/Cat Food [Learn More](#)

Clearance upto 50% off [Learn More](#)

Shop deals by the categories

Food

Pet Care

Treats

# HELP (FAQ)

Do you need help?

Greetings from our Help page! If you have any questions or concerns about our online pet care services, we are here to help. Our committed support staff is available to assist you with scheduling a veterinarian visit, navigating our pet store, or comprehending our grooming options. In order to get fast help, you can use our live chat tool to connect with us immediately or look up answers to frequently asked issues in our FAQ section. Please feel free to write us at support@example.com with more complicated questions, and we will respond as soon as we can. Our first focus is the welfare of your pet, and we're dedicated to giving you the finest assistance we can!



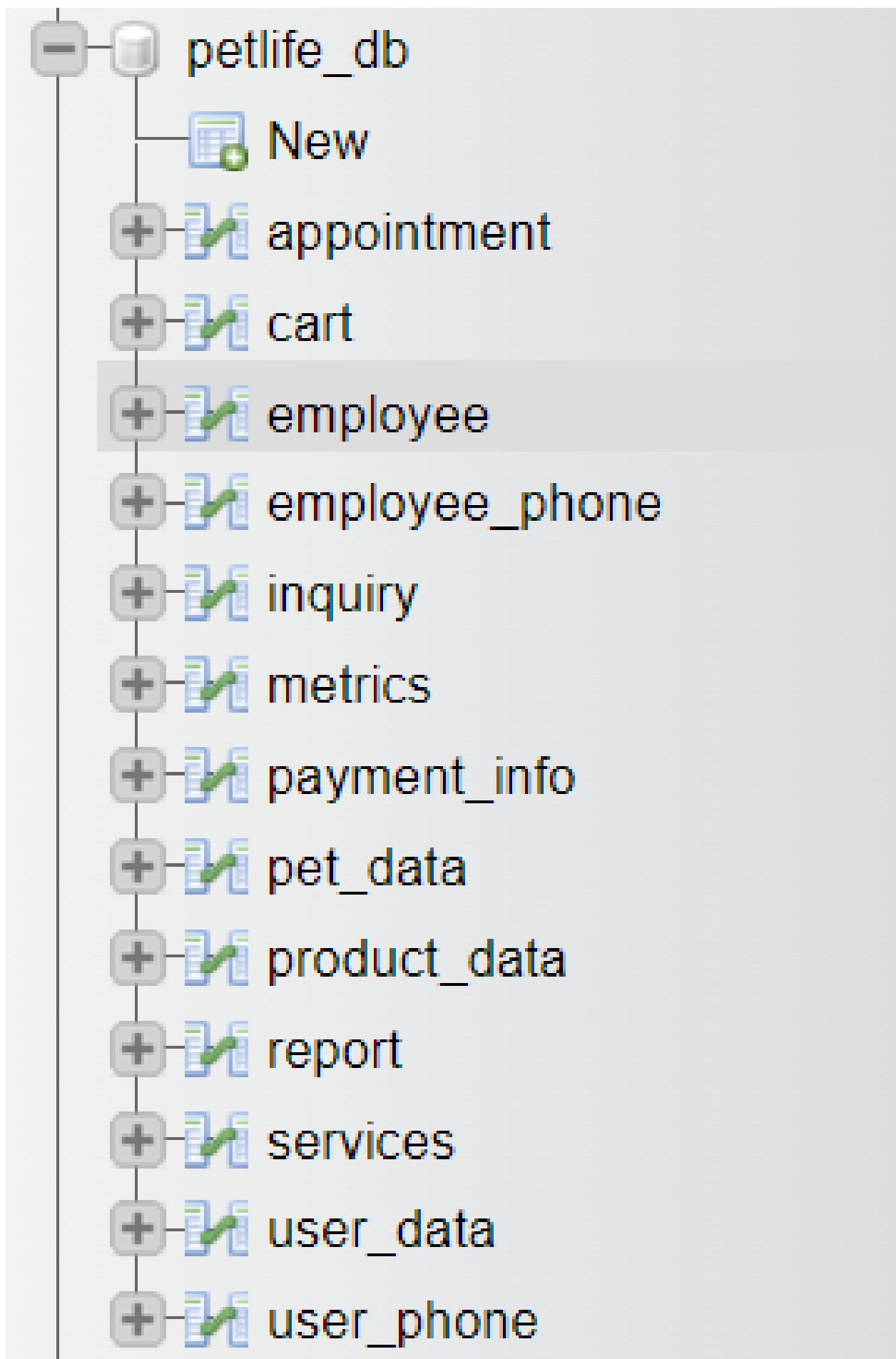
## FAQ

[General Questions](#)

[Order Process](#)

[Payment Information](#)

# DATA BASE



CASE STUDY NAME	Online Pet Care System
PROJECT ID	MLB_01.01_06

## Group Details:

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