
Software Requirements and Design Document

for

Veterinary Hospital and Shelter Management System

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1. Introduction

1.1 Purpose

The purpose of this system is to take the hassle out of managing veterinary hospitals and shelters. By offering an easy-to-use platform, it helps veterinarians, shelter staff, and even pet owners work together seamlessly. From tracking medical histories to scheduling appointments and overseeing shelter operations, this system is built to make things easier and more efficient.

1.2 Product Scope

This system is designed to handle all the essential tasks of veterinary hospitals and shelters. It helps veterinarians manage medical records, ensures appointments are scheduled without overlaps, and keeps track of animals in shelters. Additionally, the system provides features for generating travel certificates for pets, enabling online checkups, and allowing users to refer friends to the hospital or shelter. The goal is to provide a one-stop solution that everyone can rely on.

1.3 Title

Veterinary Hospital and Shelter Management System

1.4 Objectives

The system aims to simplify scheduling and record-keeping, making it easier for staff to manage daily operations efficiently. It helps shelters track animals and streamline adoption processes while enhancing communication between staff and pet owners. By providing tools to better organize resources and processes, the system ensures higher-quality care for animals and improves overall management.

1.5 Problem Statement

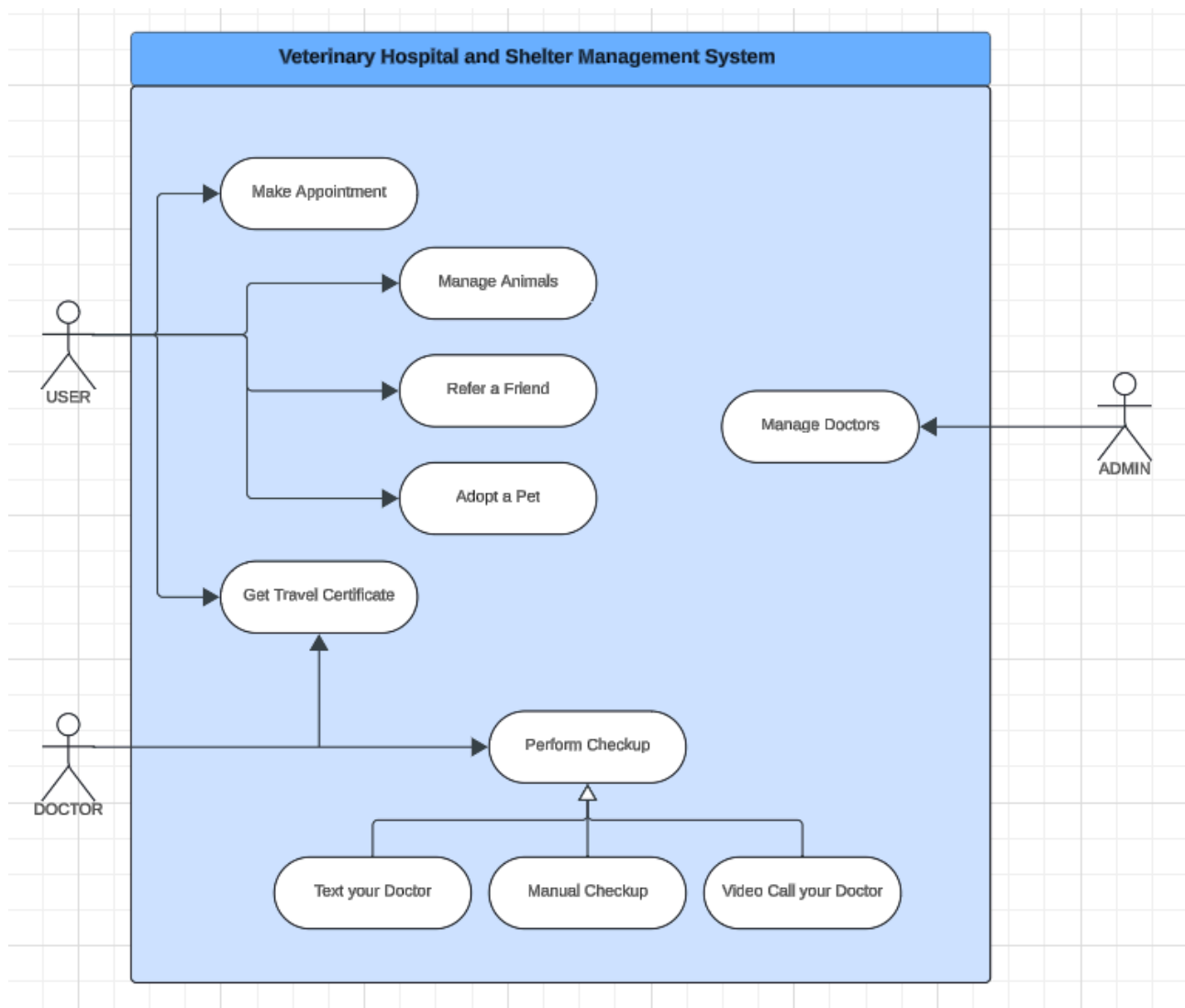
Running a veterinary hospital or a shelter can be chaotic when everything is done manually. It's easy to lose track of important details, whether it's a pet's medical history or a shelter animal's adoption status. This often results in unnecessary delays and poor service. By introducing a digital solution, we can simplify these operations, save time, and improve care for the animals who need it most.

2. Overall Description

2.1 List of Use Cases

- Manage Animals
- Adopt a Pet
- Book Appointment
- Refer a Friend
- Get a Travel Certificate
- Manage Animals
- Manage Doctors
- Get a Checkup

2.2 Use Case Diagram



3. Other Nonfunctional Requirements

3.1 Performance Requirements

The system must handle multiple users simultaneously, ensuring quick access to features like records and appointments with a response time of under 3 seconds. It should process large datasets efficiently, even during peak usage.

3.2 Safety Requirements

Data integrity and reliability are crucial, with backup mechanisms in place to prevent loss due to hardware failures or accidental deletions. The system must operate consistently without crashing.

3.3 Software Quality Attributes

The system will be user-friendly, reliable, and scalable to accommodate growth. It will also support maintainability, ensuring easy updates and minimal disruptions.

3.4 Business Rules

Appointments require mutual confirmation, travel certificates can only be issued by authorized staff, and shelter animals must pass health checks before adoption. Referral bonuses will be validated before application.

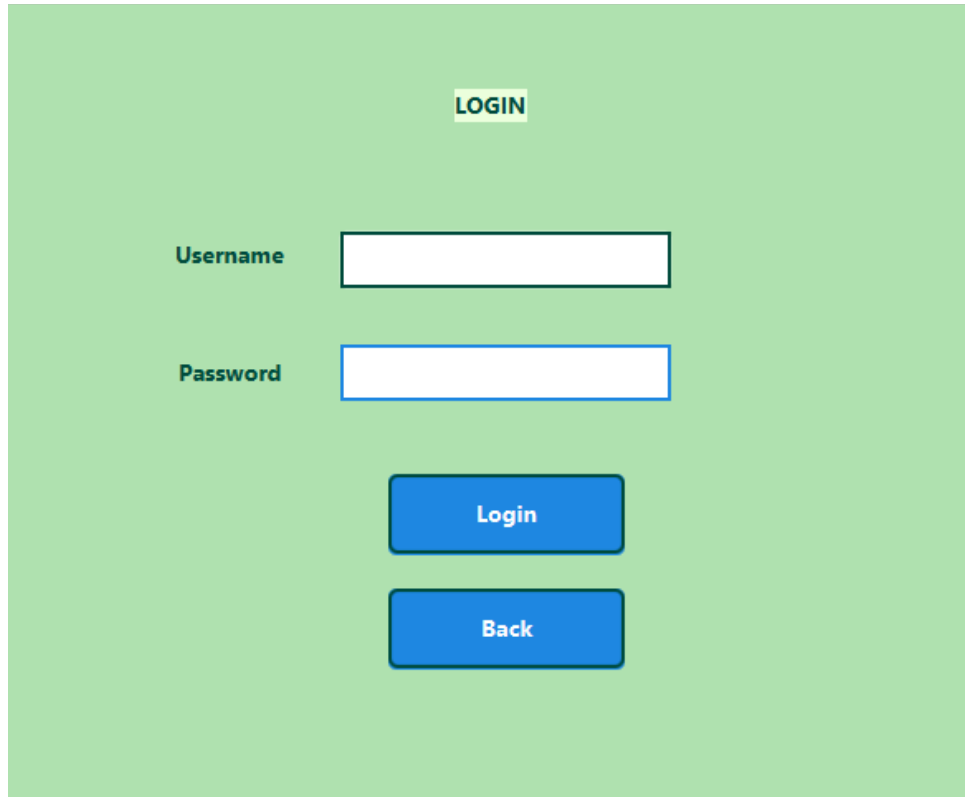
3.5 Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

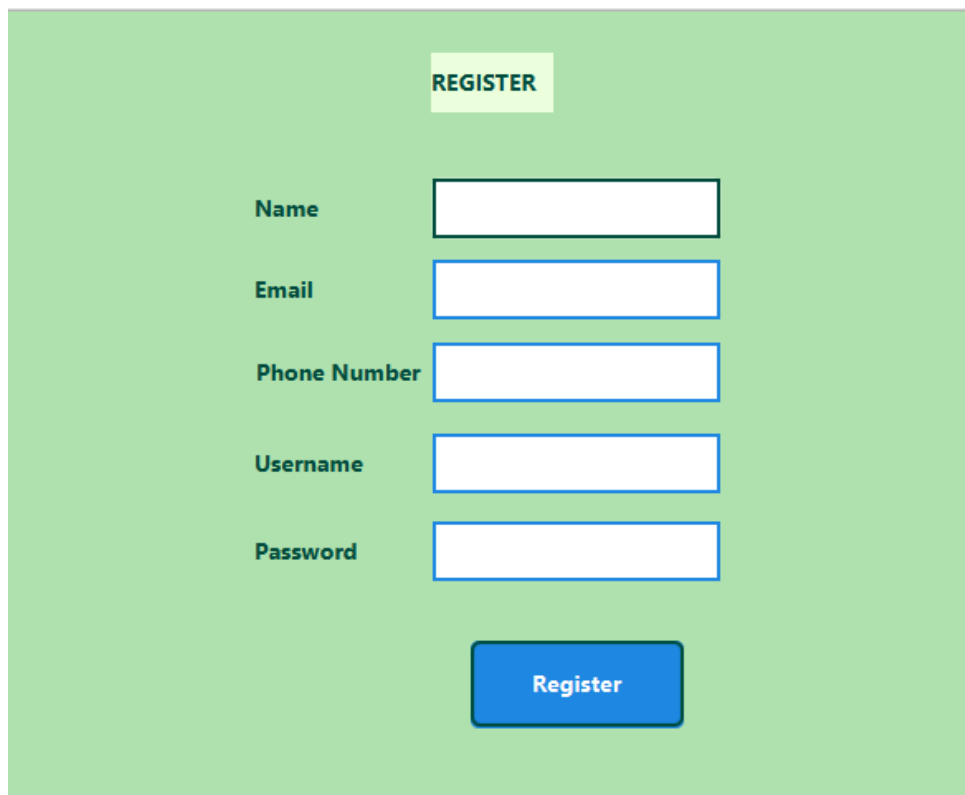
3.6 User Interfaces

The interfaces include Login/Register interface, User interface, Doctor interface, Admin Interface. User interface has book an appointment, request a travel certificate, adopt a pet and refer a friend interfaces. Doctor interface has checking its appointments, performing/approving checkup and approving travel certificates. Admin interface has adding the doctor.

i. Login and Register Interfaces



The Login interface is displayed on a light green background. At the top center, the word "LOGIN" is written in black capital letters inside a light yellow rectangular box. Below this, the label "Username" is positioned to the left of a white rectangular input field with a black border. Further down, the label "Password" is to the left of another white rectangular input field with a blue border. At the bottom of the form, there are two blue rectangular buttons with rounded corners and black borders. The top button is labeled "Login" in white text, and the bottom button is labeled "Back" in white text.



The Register interface is displayed on a light green background. At the top center, the word "REGISTER" is written in black capital letters inside a light yellow rectangular box. Below this, there are five labels stacked vertically, each followed by a white rectangular input field. The labels are "Name", "Email", "Phone Number", "Username", and "Password". The input fields for "Name", "Email", and "Phone Number" have black borders, while the fields for "Username" and "Password" have blue borders. At the bottom center of the form, there is a single blue rectangular button with rounded corners and a black border, labeled "Register" in white text.

ii. User Interface

a. Book an appointment

Appointment Tab : User

User Details

Checkup Mode

Pet Details

Pet Name

Pet Age

Gender

Type

[Attribute]

Allergies

TimeSlots Available

Doctor Name	Time Slot
Dr. John Smith	2024-12-23T09:00
Dr. John Smith	2024-12-24T10:00
Dr. Emily Johnson	2024-12-27T11:00
Dr. Michael Brown	2024-11-28T10:00
Dr. Michael Brown	2024-12-28T09:00
Dr. Sarah Davis	2024-12-29T11:00

Book Appointment

Back

Medication

b. Refer a Friend

Refer A Friend

Refer Us to A Friend

Friend Details

Name

Email

Refer Friend

Back

c. Adopt an animal

Adoption

Pet Name	Type	Age	Gender	Attribute
Max	Dog	3	Male	Golden Retriever
Bella	Cat	2	Female	Black
Luna	Dog	4	Female	Poodle
Oliver	Cat	5	Male	White
Milo	Dog	2	Male	Beagle
Daisy	Bird	3	Female	65.0
Simba	Cat	4	Male	Tabby
Coco	Bird	2	Female	112.0
Buddy	Dog	6	Male	German Shepherd

Adopt

Back

d. Get travel certificate

Menu

Get Travel Certificate for Pet

Choose Pet

In order to request a Travel Certificate for your pet, you must first schedule an appointment with your doctor for a Credibility check up.

Book a Credibility Appointment

Certificate Approval PENDING

Generate Certificate

Back

iii. Doctor Interface

a. Check appointments

Appointment : Doctor

Username	Animal Name	Date-Time	Type of Checkup
Alice Johnson	Luna	2024-11-24T09:00	Manual
Bob Smith	Bella	2024-11-25T14:30	Text your Doctor

BACK

Add your time slot

Date

Starting Time

ADD

b. Perform Checkups

Checkup : Doctor

Appointm...	Username	Animal Name	Type of Chec...	Checkup Stati
10	Alice Johnson	Luna	Manual	Performed
11	Bob Smith	Bella	Text your Doctor	Performed

BACK

Animal History

Allergies: Dust
Medications: Nasal spray

Hours taken for Checkup

CHECKUP DONE

c. Approve Travel certificate

▼ Travel Certificate : Doctor

Checkup#	Username	Animal Name	Checkup Status
8	Bob Smith	Bella	Checkup Performed
9	Charlie Brown	Bella	Checkup Not Performed
7	Alice Johnson	Luna	Checkup Performed

BACK APPROVE

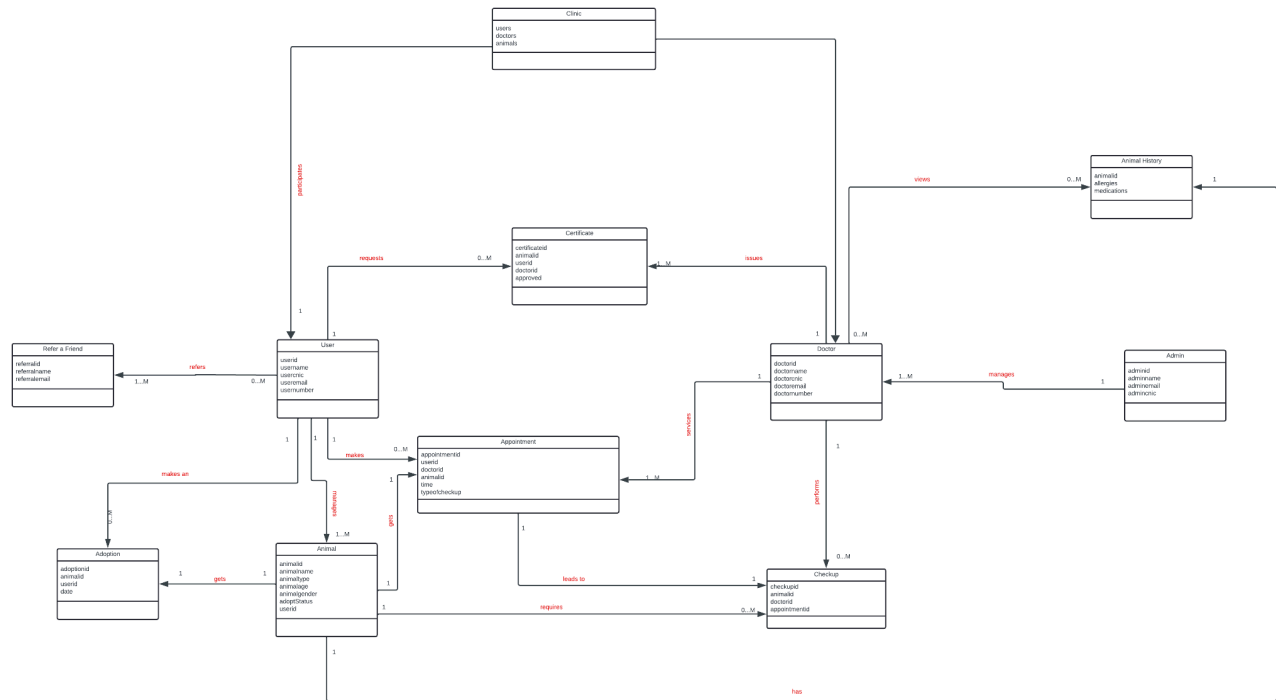
iv. Admin

▼ Add doctor

Name	<input type="text"/>
Email	<input type="text"/>
Contact Number	<input type="text"/>
Appointed Username	<input type="text"/>
Appointed Password	<input type="text"/>

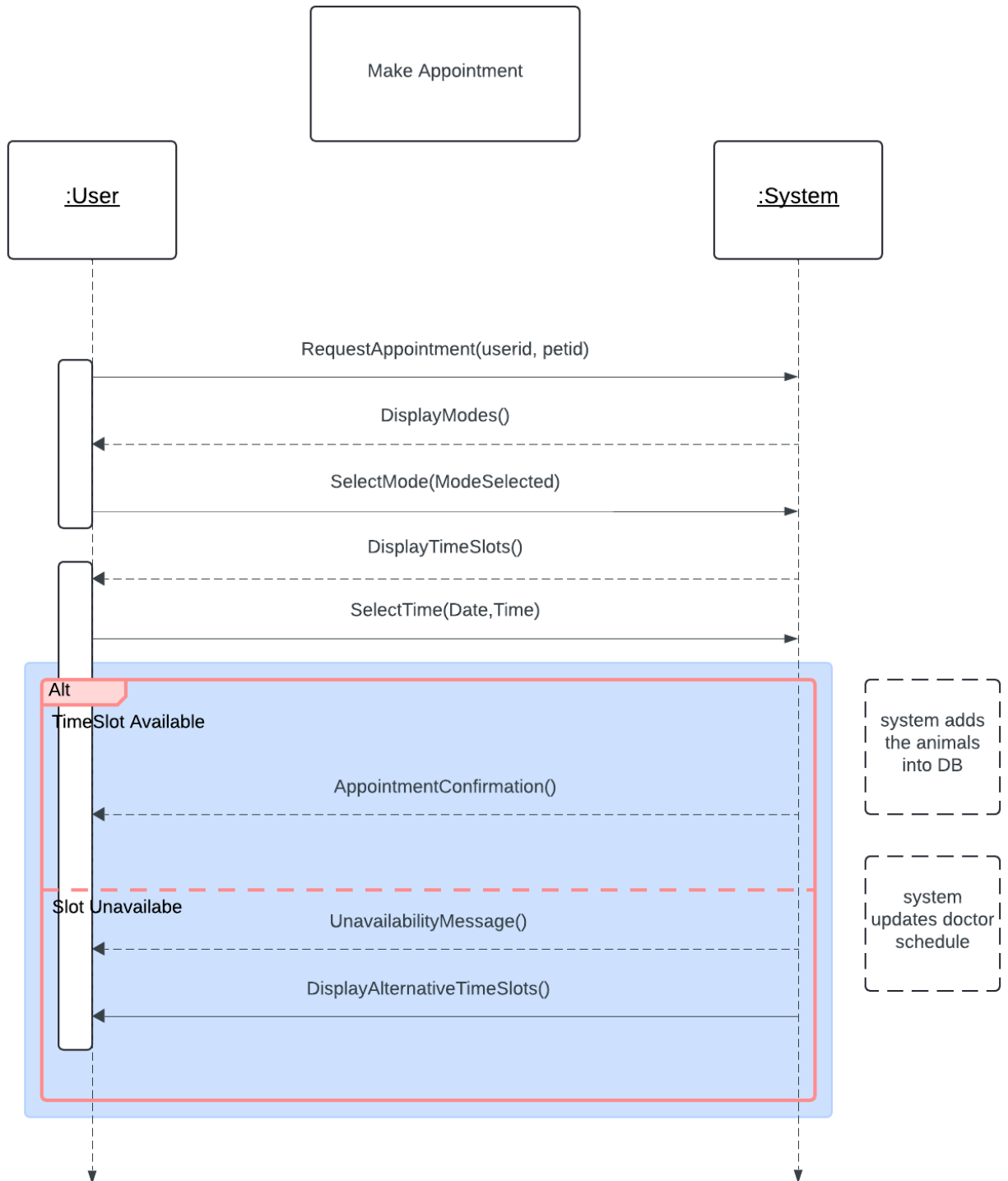
BACK ADD

4. Domain Model

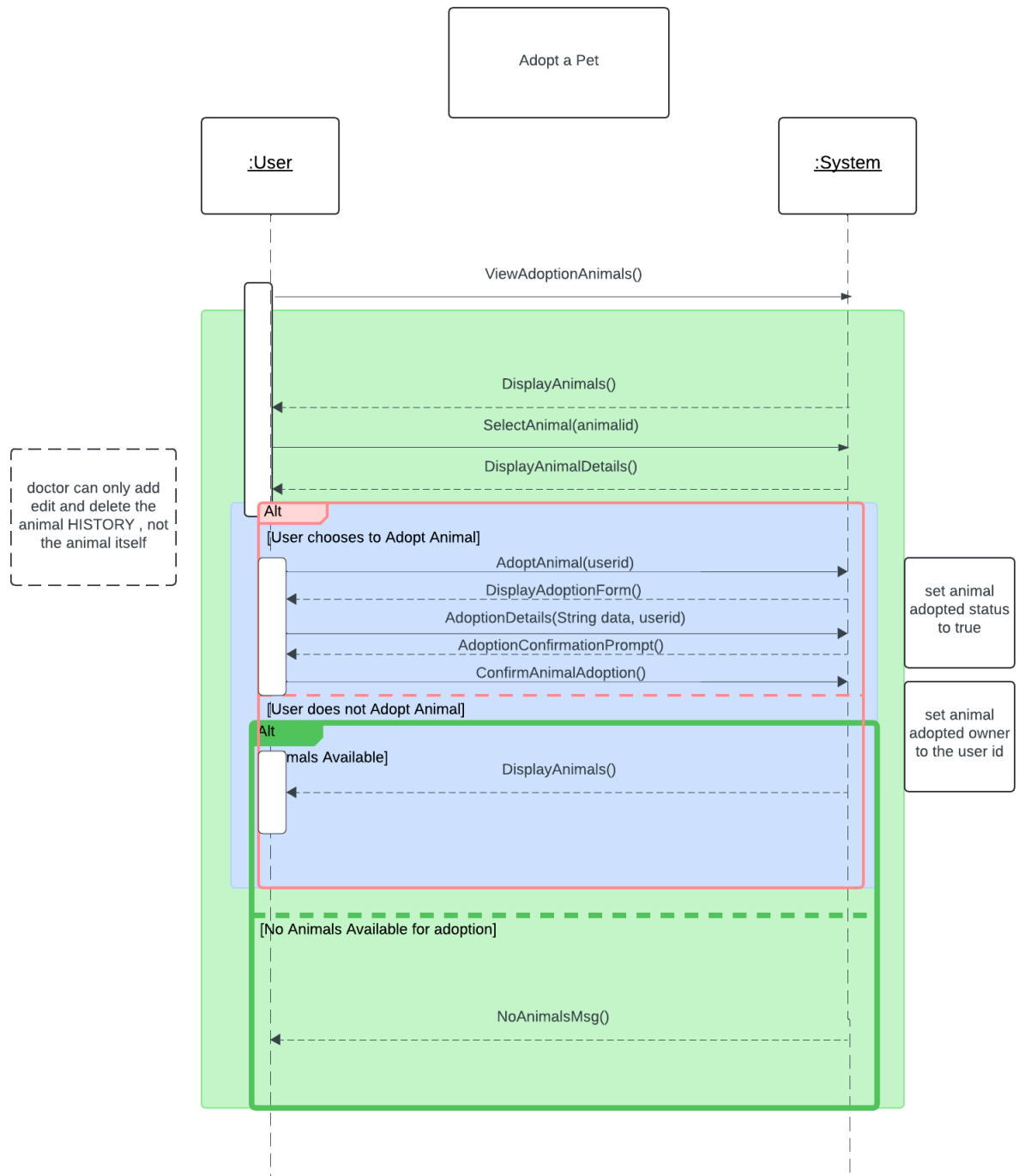


5. System Sequence Diagram

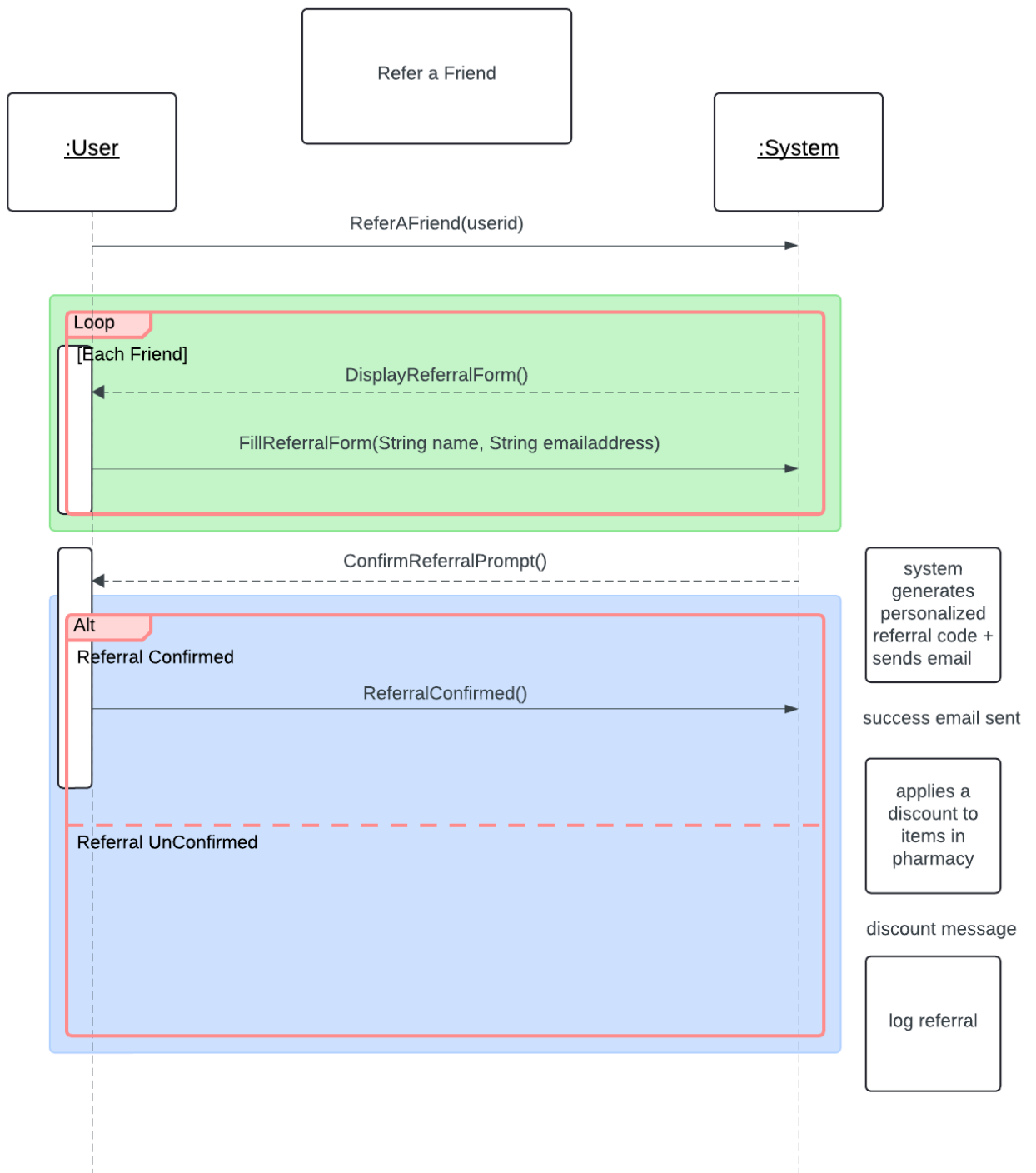
1. Make an appointment



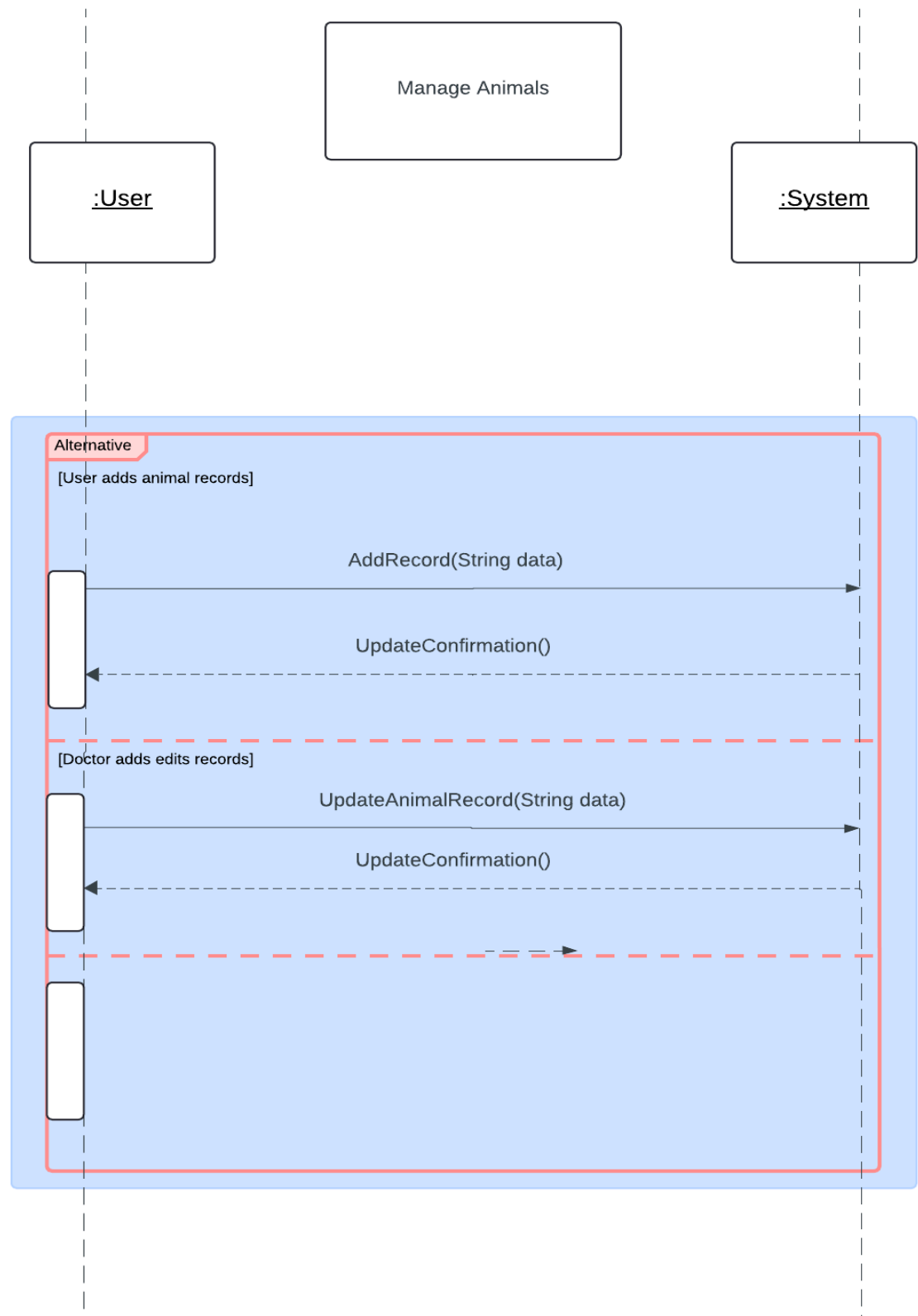
2. Adopt an animal



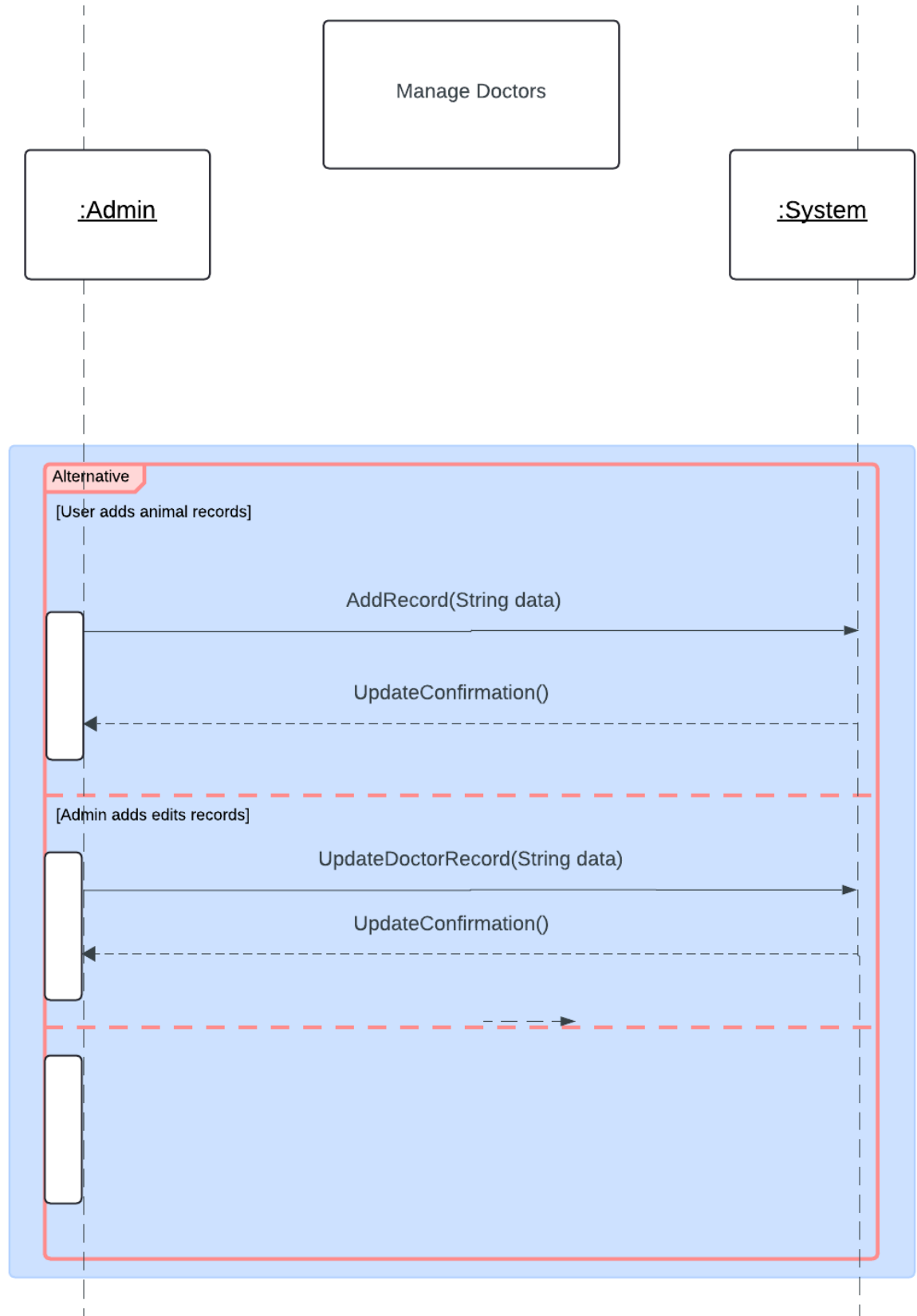
3. Refer a friend



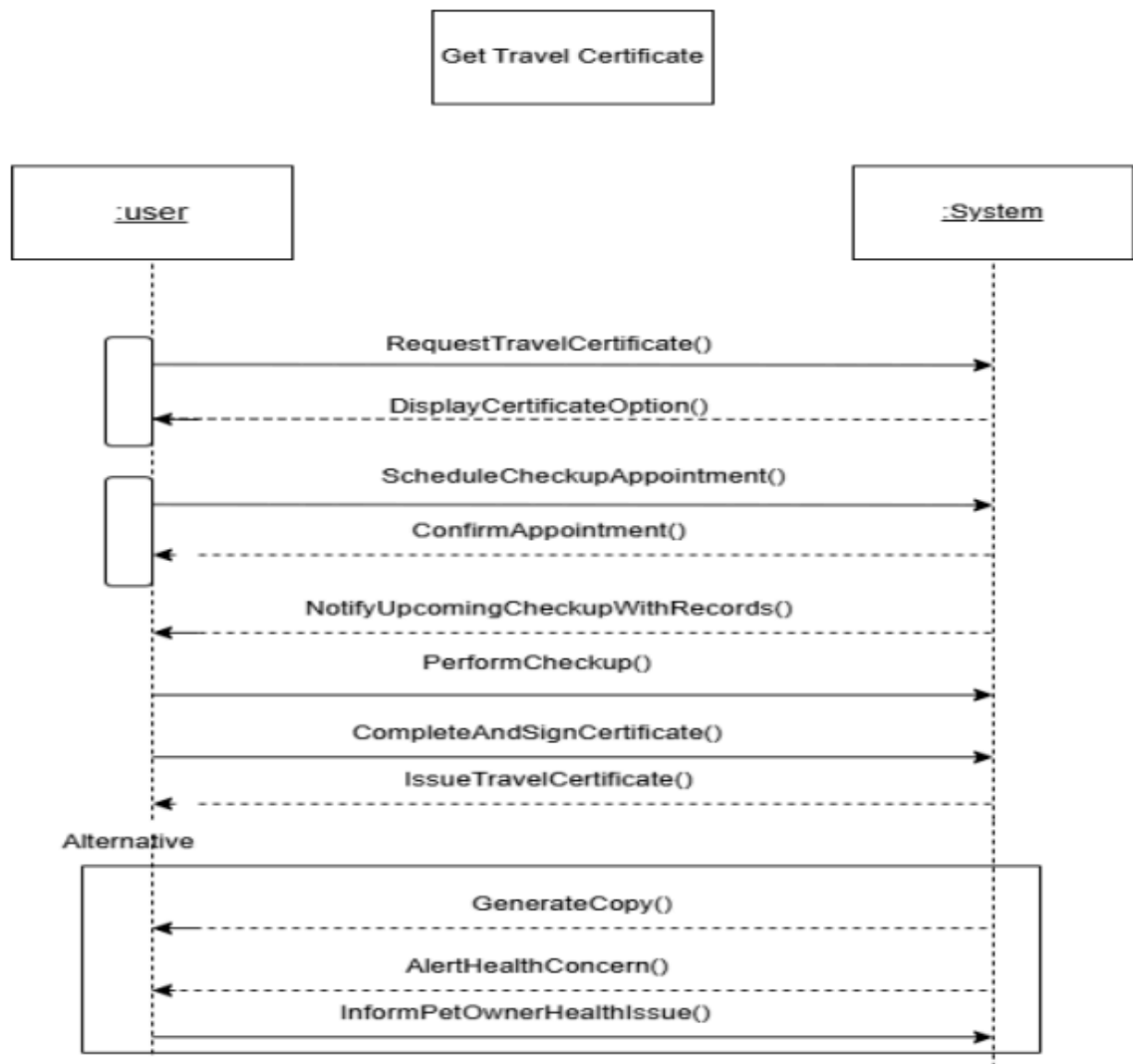
4. Manage Animals



5. Manage Doctor

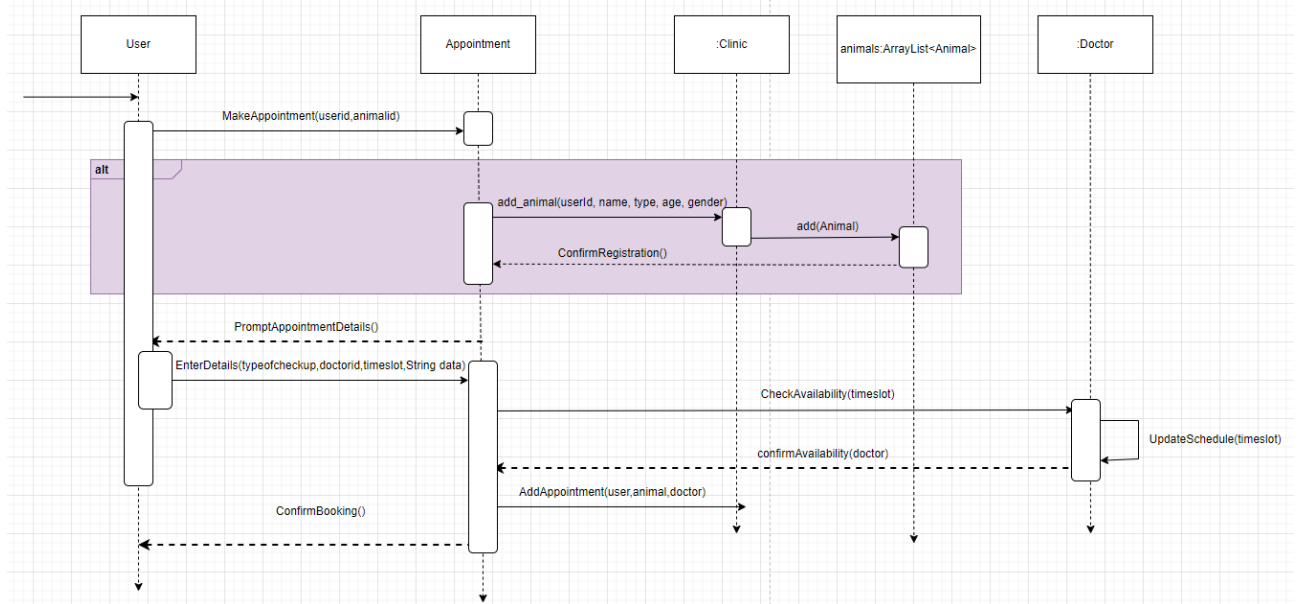


7. Travel Certificate

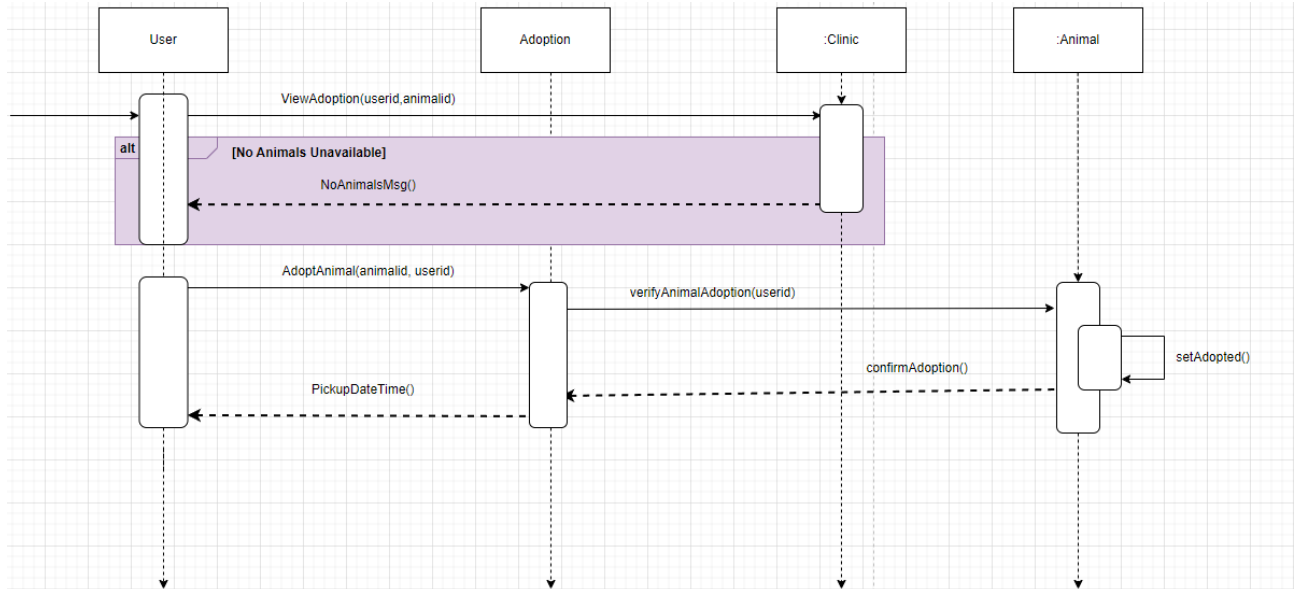


6. Sequence Diagram

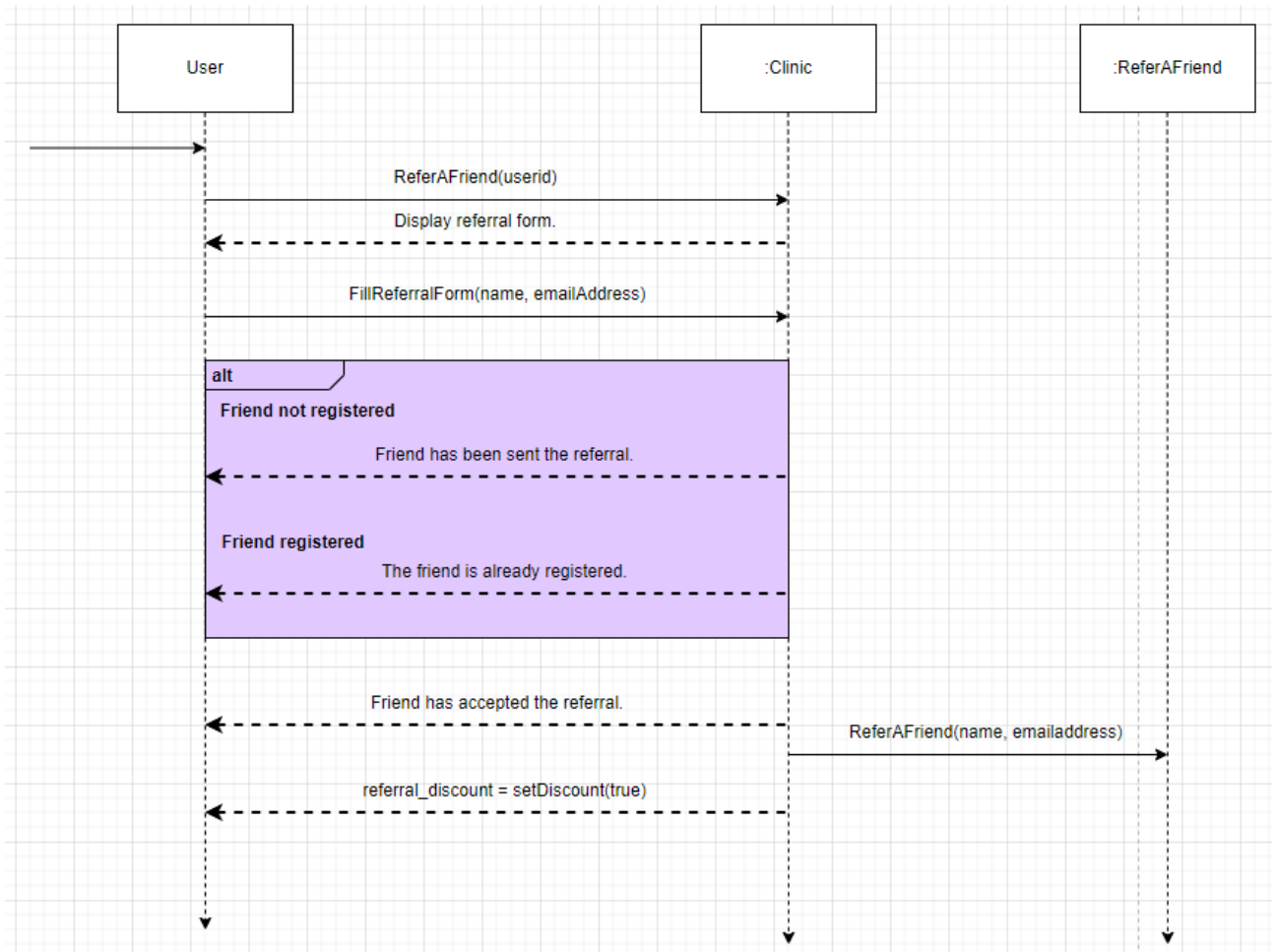
1. Book an Appointment



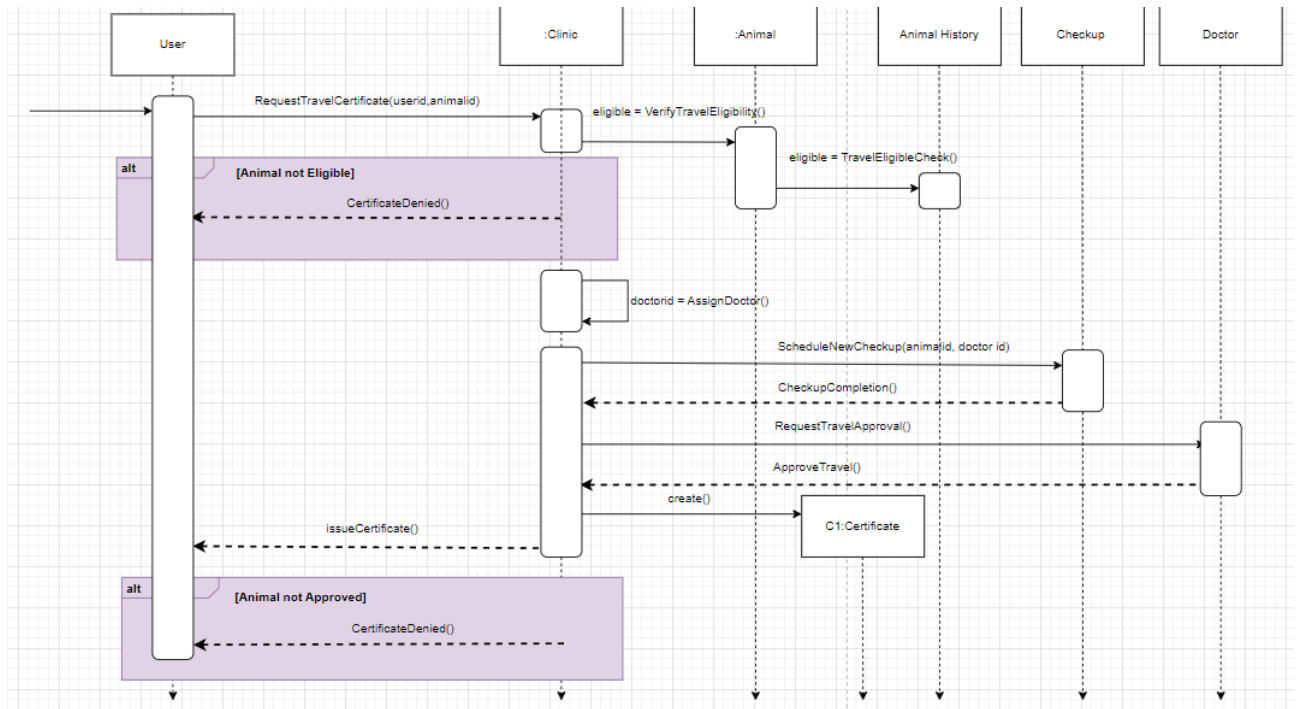
2. Adopt an Animal



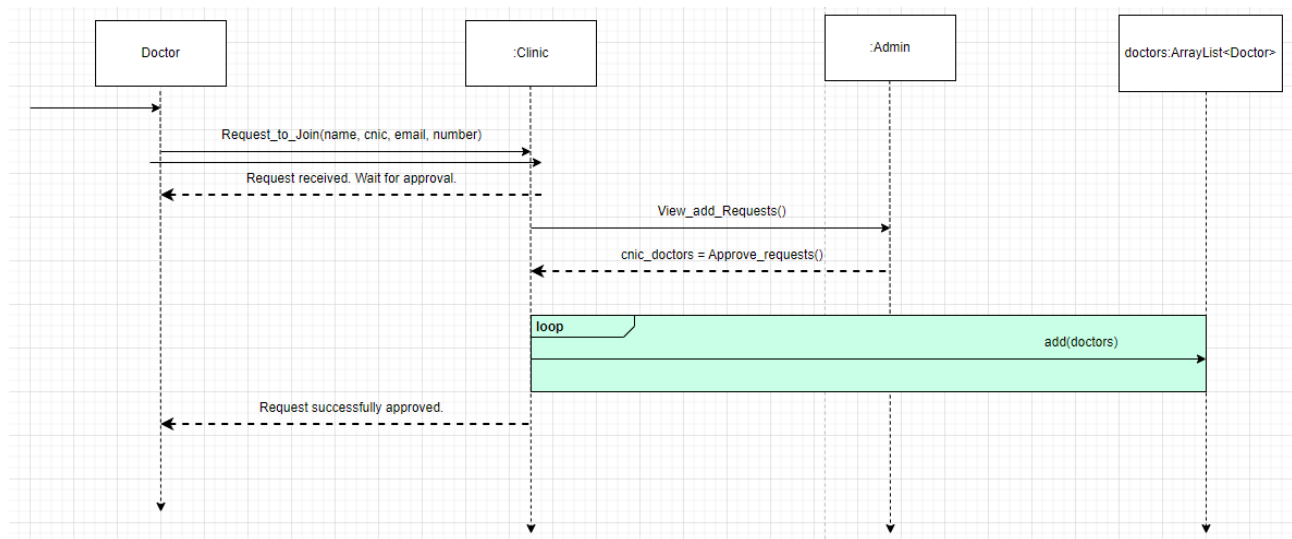
3. Refer a Friend



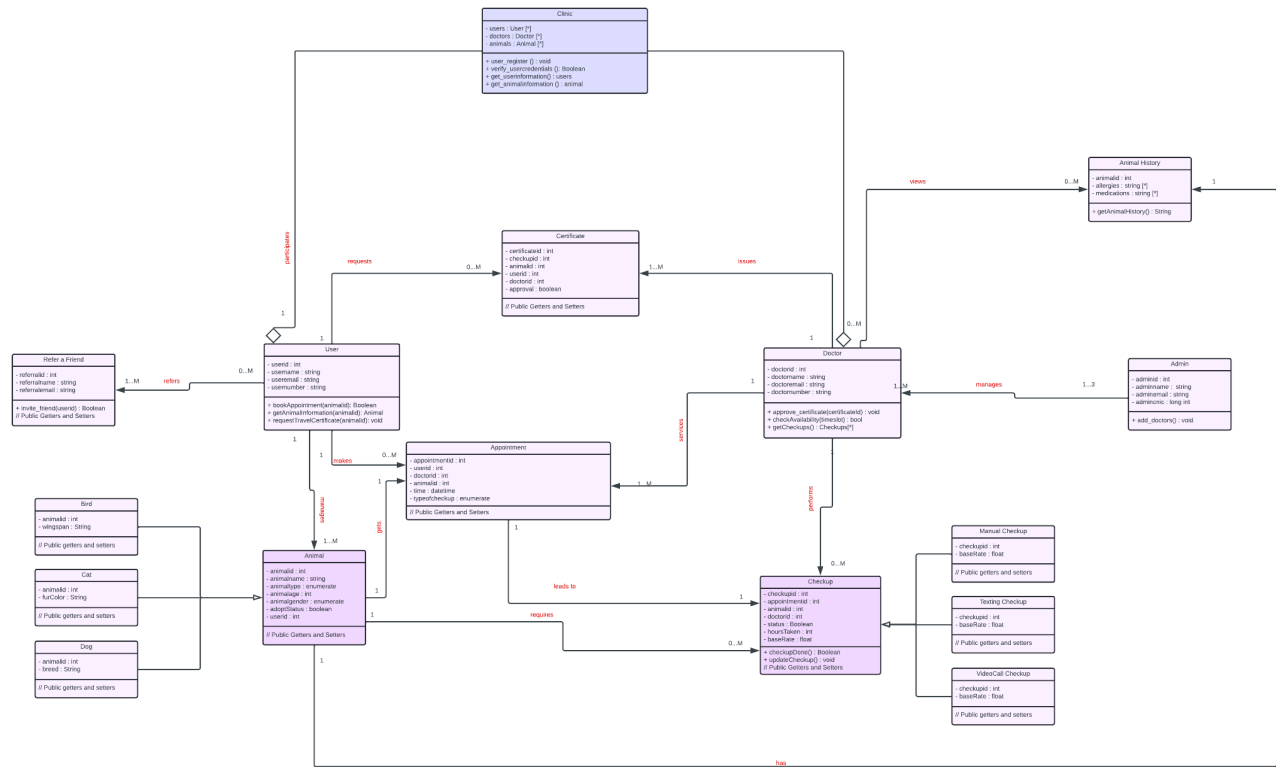
4. Travel Certificate



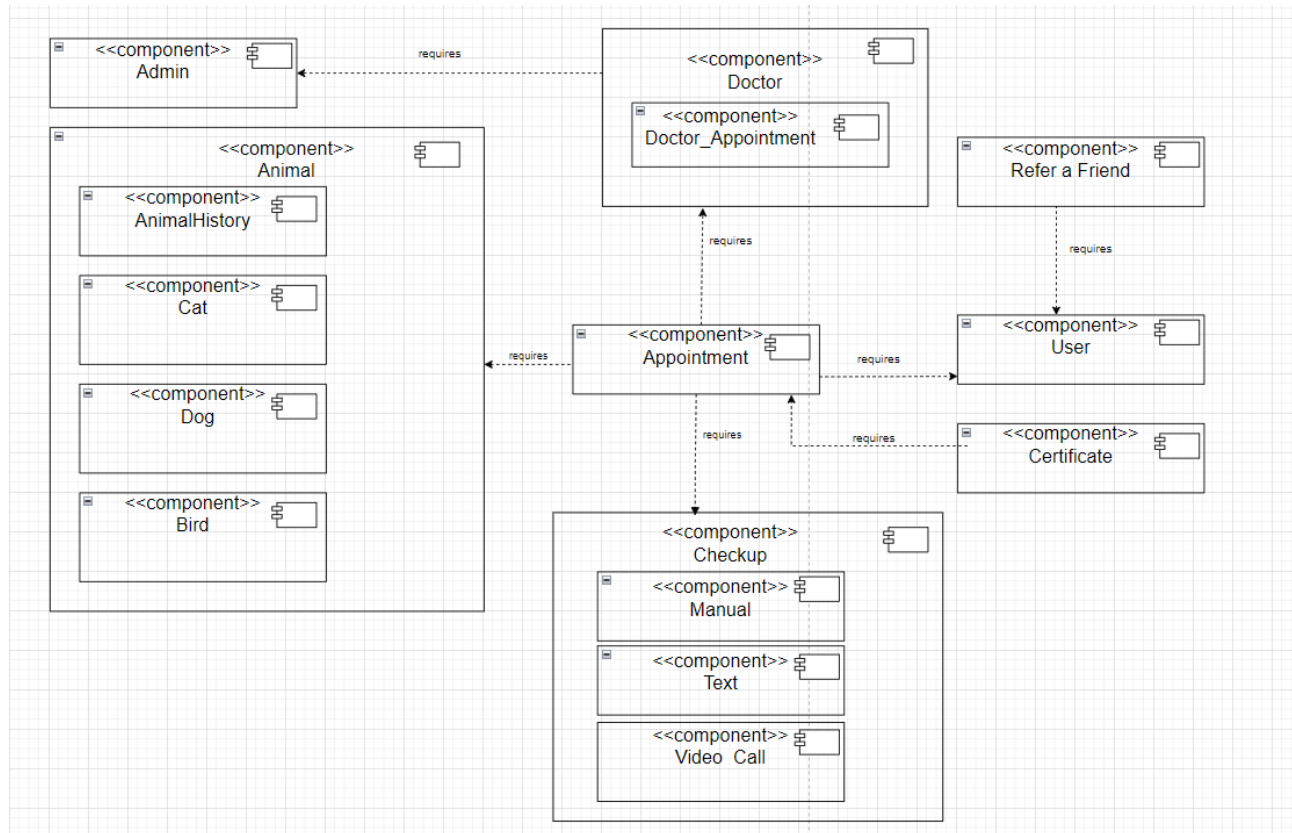
5. Add Doctors



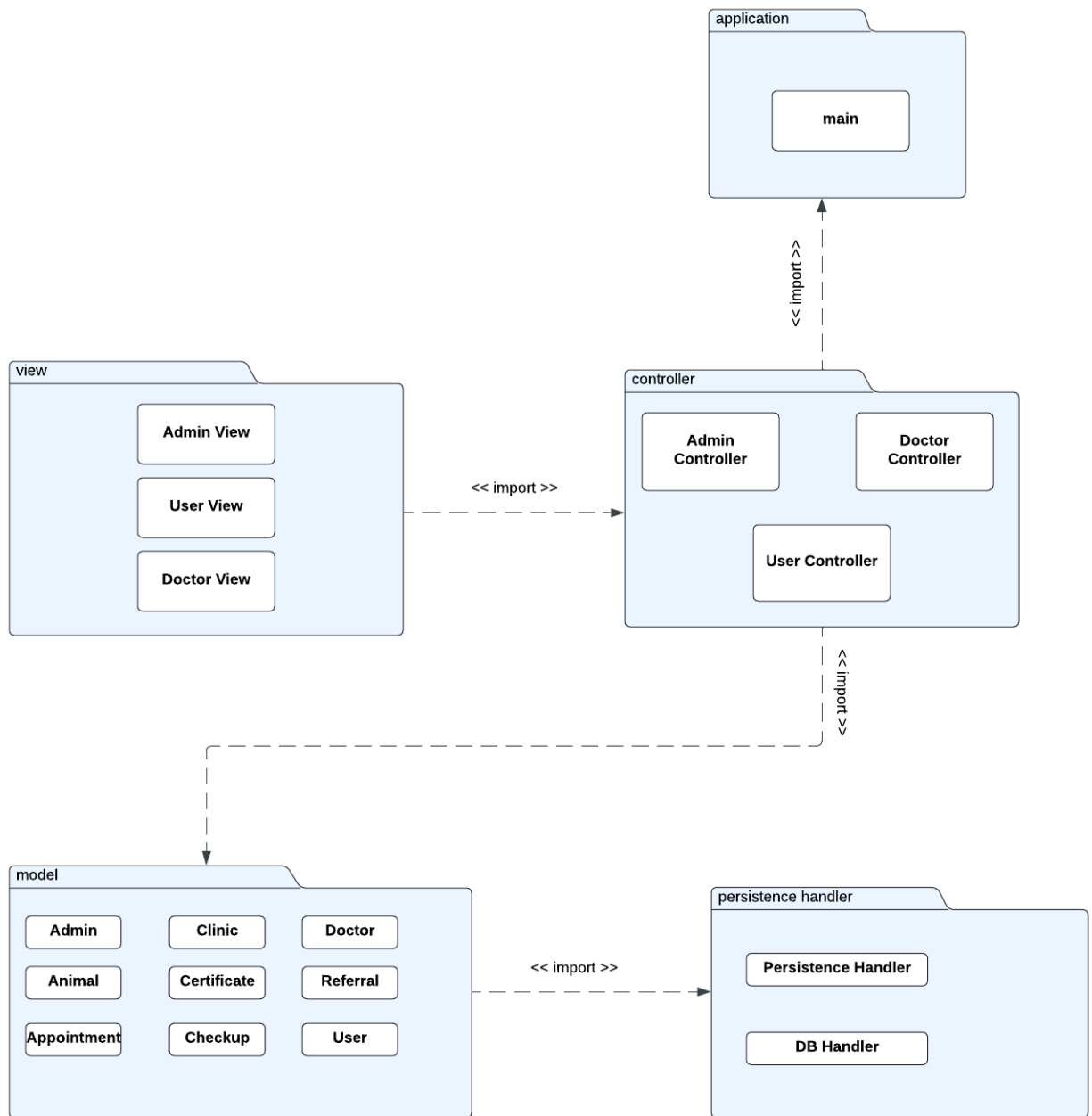
7. Class Diagram



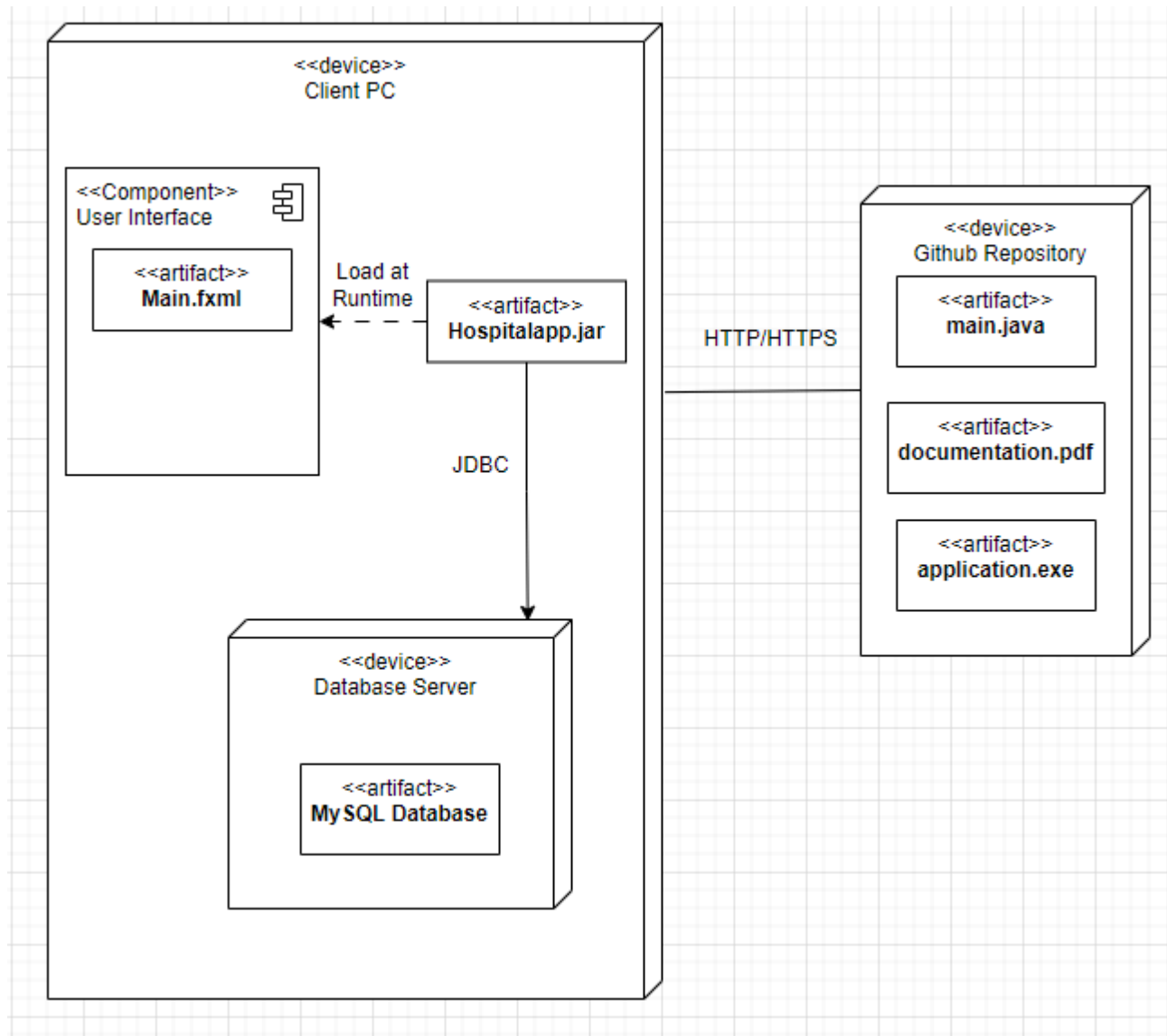
8. Component Diagram



9. Package Diagram



10. Deployment Diagram



LINKS FOR THE DIAGRAMS:

https://lucid.app/lucidchart/aad3a256-9972-48e4-a2d7-0fac9d19525c/edit?invitationId=inv_5bed9afa-8e1c-4f75-a6aa-0071278d5c06

<https://drive.google.com/file/d/1E5j6QBydA95ZMGi5p-TfgJebSTpBZVl/view?usp=sharing>