

# Software Requirements Specification

## AniHome

(Safe Home for Stray Animals)



**Submitted to  
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Batch – Sept22**

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## **ABSTRACT**

This project focuses on creating a safe and comfortable home for stray animals. The goal is to provide a secure environment for abandoned and homeless pets, where they can receive proper care and attention from trained professionals. This platform also dedicated to promoting the welfare and protection of stray animals. The website aims to provide information and resources for individuals who wish to help stray animals in their community, including resources for adopting, fostering, and volunteering. The aim is to create a sustainable and self-sufficient ecosystem for the animals, where they can thrive and receive the love and care they deserve. The website provides information on various volunteer opportunities, including animal care and rehabilitation, fundraising, and community outreach. The project will also work towards educating the community on the importance of animal welfare and responsible pet ownership. Also, this project will help many municipal corporations to deal with the stray animals.

## **INTRODUCTION**

Stray animals face numerous challenges on a daily basis, including hunger, illness, and a lack of proper care and attention. In many cases, they are left to fend for themselves on the streets, which can lead to further suffering and even death. This project aims to address this issue by providing a safe and comfortable home for stray animals. This is a platform dedicated to connecting volunteers and animal lovers with organizations working to rescue and care for stray animals. Our mission is to promote the welfare of stray animals and provide resources for those who want to get involved in making a difference. Stray animals face many challenges in our communities, from lack of food and shelter to neglect and abuse. It is our belief that every animal deserves a loving home and a chance at a better life. That's why we have created this platform to connect individuals with organizations that are working tirelessly to rescue and care for stray animals. On the other hand our website also help those people who do not want stray animals in their societies, they can take help of us to transfer the animals to a safe hands. We encourage you to explore our website and get involved in any way you can. Whether you're interested in volunteering, adopting, or supporting a local rescue organization, there is a role for everyone in the effort to improve the lives of stray animals.

## **SYSTEM ANALYSIS**

The proposed AniHome website system has the following analysis –

- ❖ Registered User can search for animals to adopt them.
- ❖ Registered User can complaint about stray animals of his society for transfer the animal.
- ❖ Registered Volunteer can give appointment to any complaints for rescue the animal.
- ❖ Registered Volunteer can also the add the rescued animals for adoption.
- ❖ Registered Volunteer can process any adoption order placed by User.
- ❖ Admin can deactivate or activate any User and Volunteer.
- ❖ Registered User can give feedback in the system.
- ❖ Registered User can track the complaint and order history.

# **Purpose of the Documentation**

The purpose of this documentation is to define and document the software requirements and specifications for our AniHome website system. This is a written document that outlines what the software should do, the constraints and limitations under which it should operate, and the characteristics that it must possess. It is a contract between the stakeholders (e.g., the client, the development team, and the end-users) that defines what the software should deliver and what is expected of it.

This documentation serves several important functions, including:

1. Communication: This document provides a clear and concise description of the software requirements that serves as a common point of reference for all stakeholders. This helps to ensure that everyone has a shared understanding of what the software should do.
2. Planning: This document provides a basis for planning the software development effort, including the development timeline, resource allocation, and project budget.
3. Requirements Traceability: This document provides a record of the requirements that can be used to track changes and ensure that all requirements are addressed during the development process.
4. Quality Assurance: This document provides a basis for testing and quality assurance activities, allowing the development team to verify that the software meets the specified requirements.

In summary, the purpose of this documentation is to provide a clear, complete, and well-defined description of the software requirements that serves as a basis for planning, development, testing, and quality assurance activities.

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# **SYSTEM REQUIREMENT SPECIFICATION**

## **Overview:**

In our website we provide the user to adopt any stray animals they wish to have using location based search facility. Also a user can complaints about the stray animals of his/her societies for transfer if society not like to have stray animals. This website provide voluntary opportunity if anyone volunteer the stray animal rescue process and want to give a safe home to the stray animals.

## **Study of the System:**

To give a smooth experience to any type of users we design the system such a way that it can give a flexible user interface for operating the system and also create some authentication features that can meet the security of the user.

The top level of the system is categorized as –

1. User Interface Design
2. Role Based Interface Design
3. Security Features Implementation
4. Database Interface Design

The role based interface provides the user partition capabilities means which type of user can access which type of portion in the system. User interface provides a flexible communication between the system and the user.

## **User of the system:**

1. Administrator
2. Volunteer
3. User

### **Administrator:**

1. View details of volunteers and users.
2. Can activate and deactivate accounts.
3. Can check the feedbacks and delete it.
4. View the messages from ContactUs page.

### **Volunteer:**

1. Can see complaints and give appointments for rescue.
2. Can add animals for adoption.
3. Can see orders and process the orders.
4. Can make the order and complaint status completed

### **User:**

1. Can search the animals for adoption.
2. Can order the animals.
3. Can register a complaint for transfer of animal.
4. Can give feedback for the system.
5. Can contact to Administrator.

## **Security & Authentication:**

1. Role based Users login and logout.
2. Provide authentication and authorization using JWT.
3. Change passwords through email.
4. Forgot password features.
5. Password hashing.
6. Provide different validations.

## **Unique Features:**

1. Location based form fill up for complaints:  
Provide better flexibility to volunteer to find the exact location for rescue operation.
2. Helping chatbot:  
Provide the user solution for operating the website more easily and also give a quick solution for the users.
3. Voice Search:  
Give a more better user interface to use the searching facility.

# **Software Requirement and Hardware Requirement**

## **Software Requirements:**

Technology: J2SE and J2EE, Hibernate, Spring Boot

Web-Technologies: ReactJS, CSS, JavaScript, Bootstrap, NodeJS

Web Server: Tomcat 9.0

Java Version: JAVA Version 8

Backend Database: MySQL 8.0

IDE: Eclipse IDE for Java EE Developers

Code Editor: VSCode

## **Hardware Requirements (Minimum):**

RAM: 4 GB

Graphics Card: NVIDIA GeForce GTX 680

CPU: Intel Core i5-3570

Hard Disk Drive: 320 GB

OS: Windows 10

# **SYSTEM DESIGN**

## **1. UML DIAGRAMS:**

UML (Unified Modelling Language) is a standardized visual language used to model and represent software systems. It provides a graphical notation and guidelines for modelling object-oriented software systems, including classes, objects, relationships, and behaviour. There are several types of UML diagrams, including class diagrams, sequence diagrams, flow diagrams, and activity diagrams etc.

### **1.1 USE CASE DIAGRAMS:**

#### **1.1.1 Anonymous:**

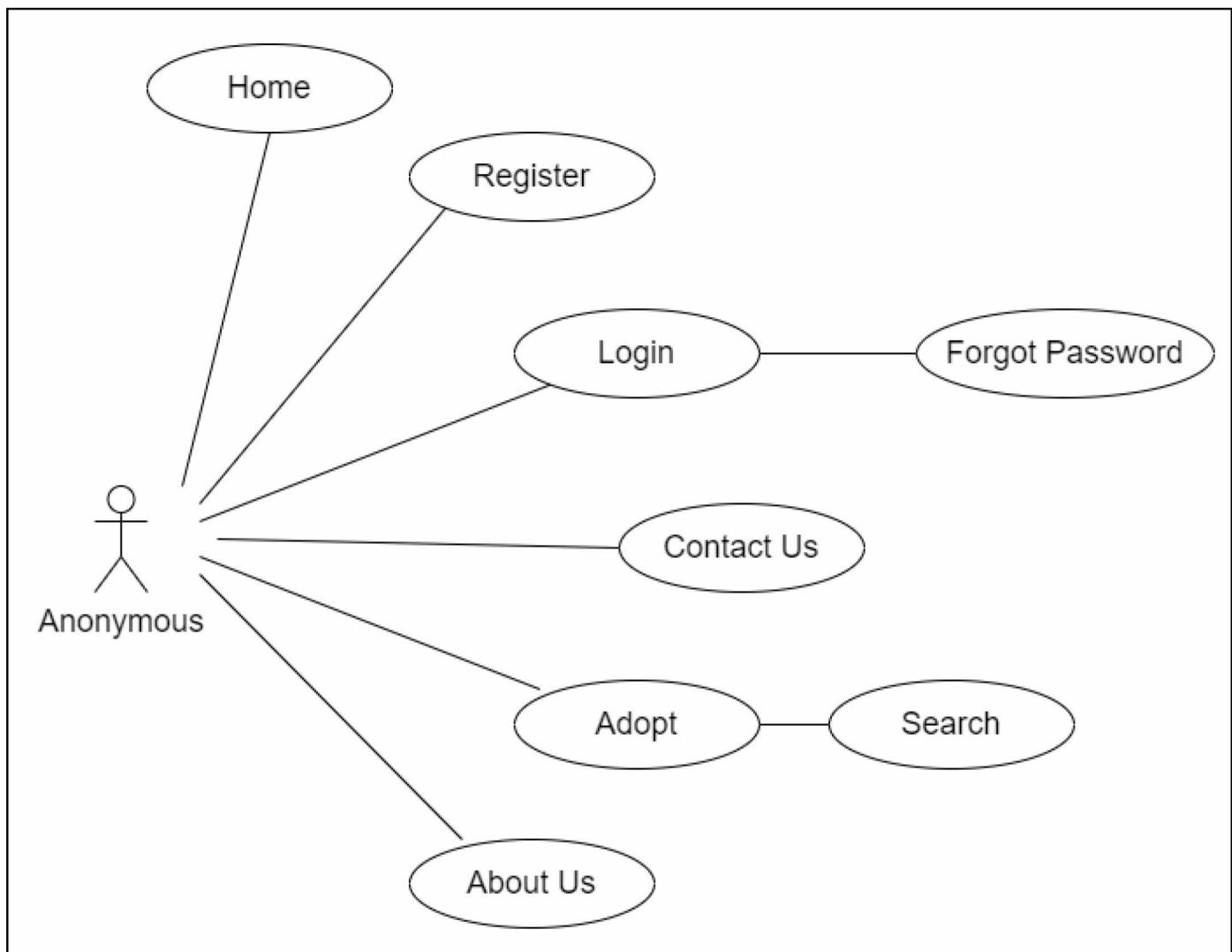


Figure 1.1.1 Anonymous Use Case Diagram

### **1.1.2 User:**

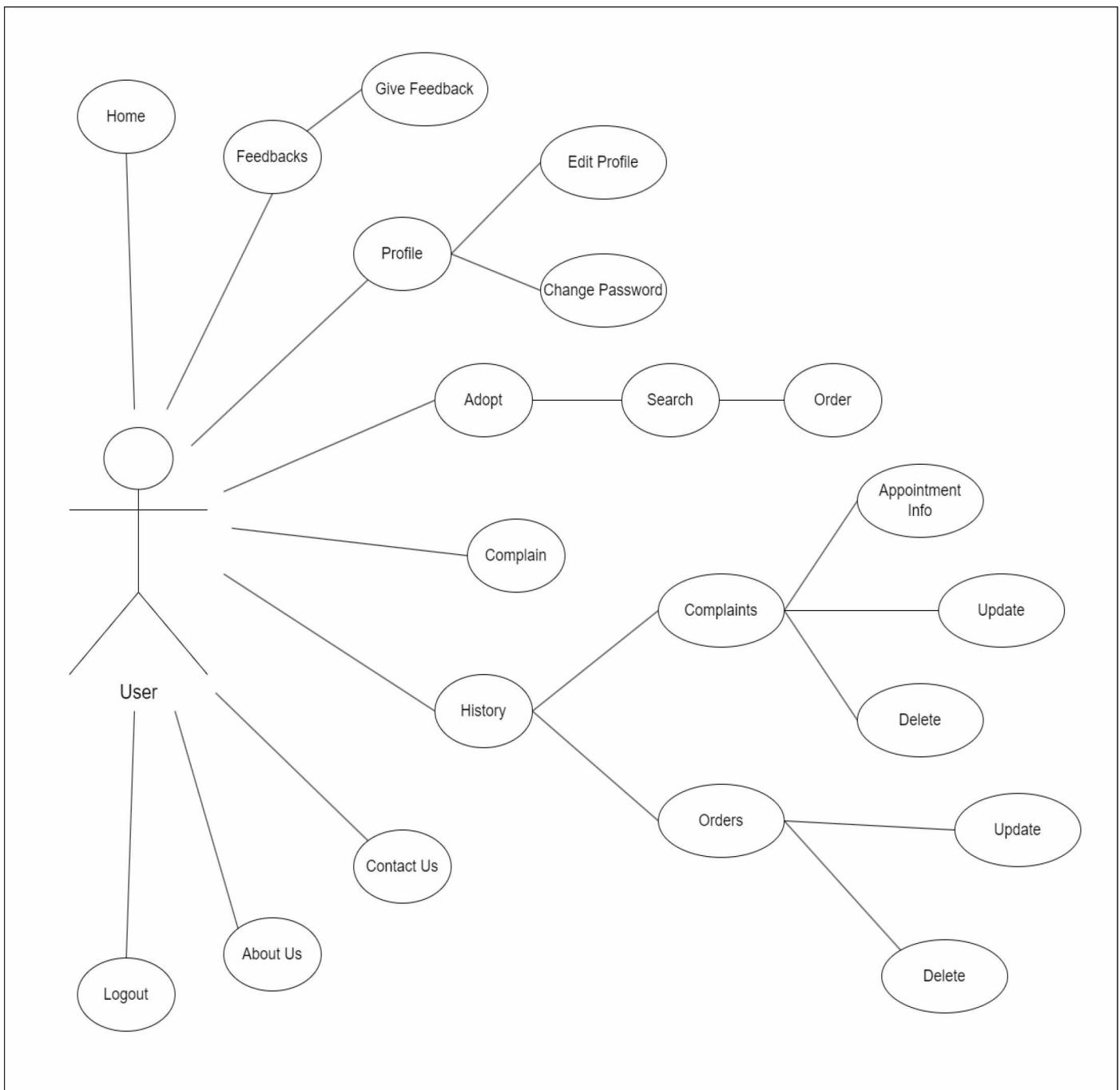


Figure 2.1.2 User Use Case Diagram

### **1.1.3 Volunteer:**



Figure 3.1.3 Volunteer Use Case Diagram

#### **1.1.4 Admin:**

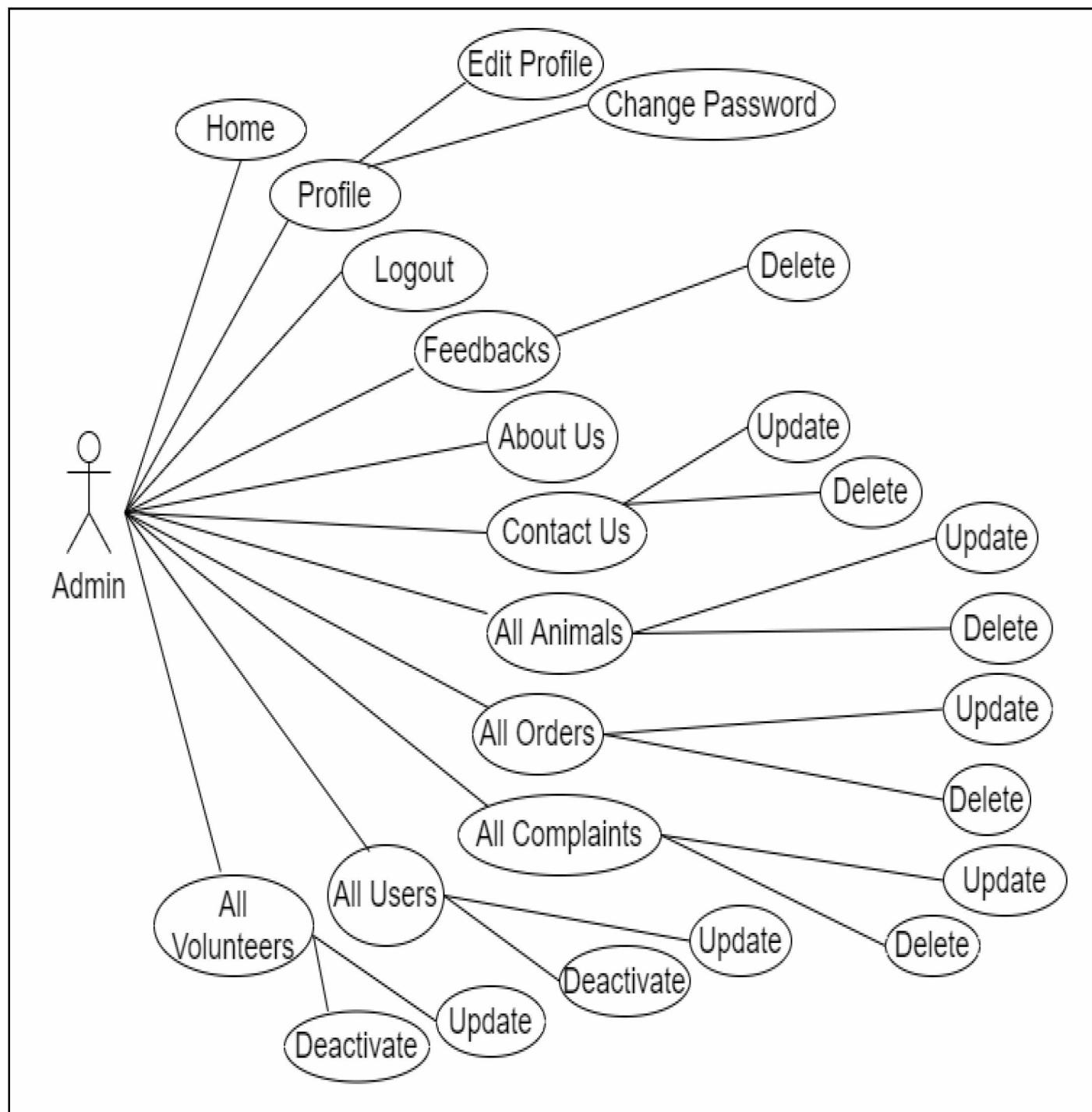


Figure 4.1.4 Admin Use Case Diagram

## 1.2 SEQUENCE DIAGRAM

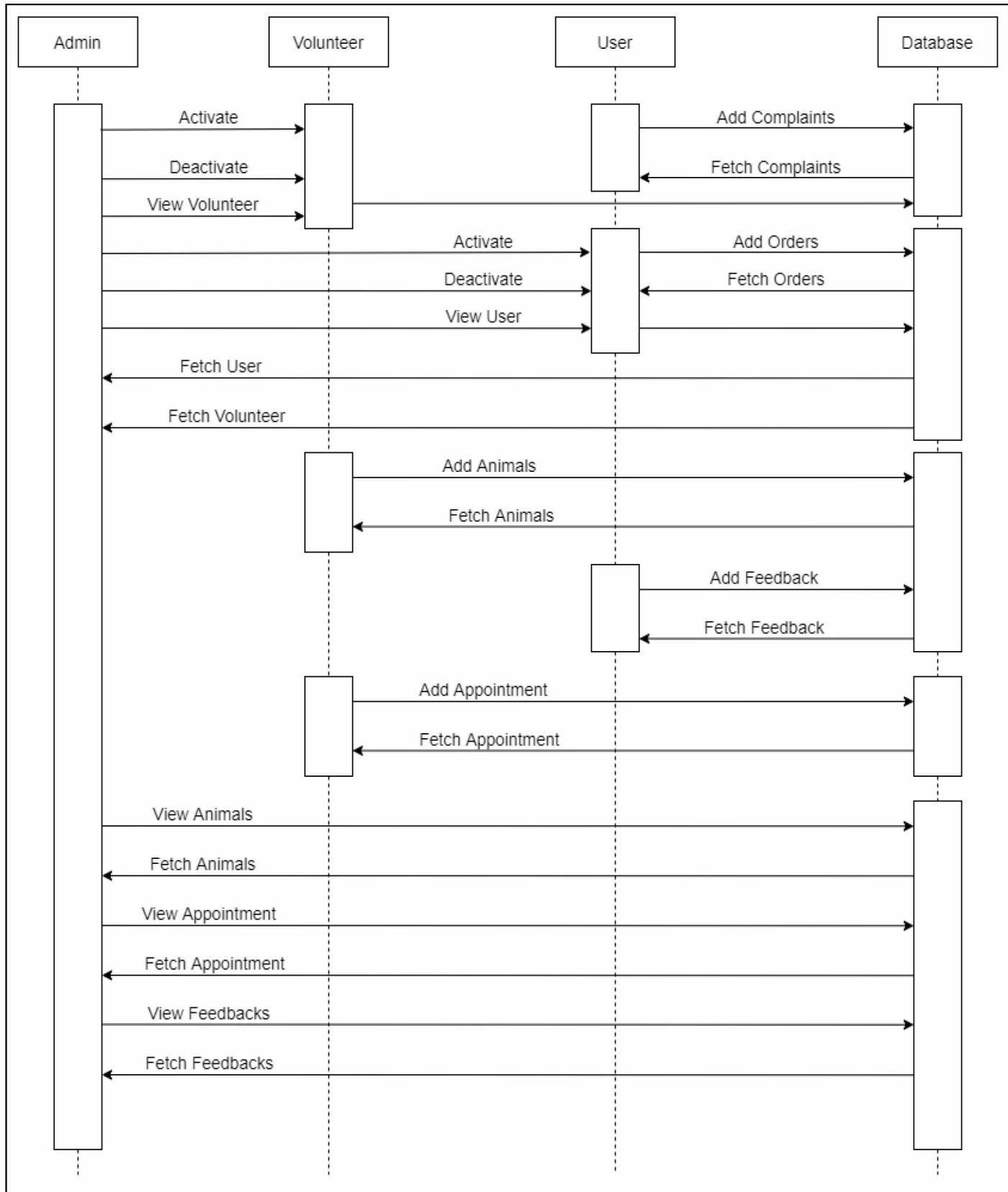


Figure 1.2 Sequence Diagram

## 1.3 DATA FLOW DIAGRAMS

### 1.3.1 User:

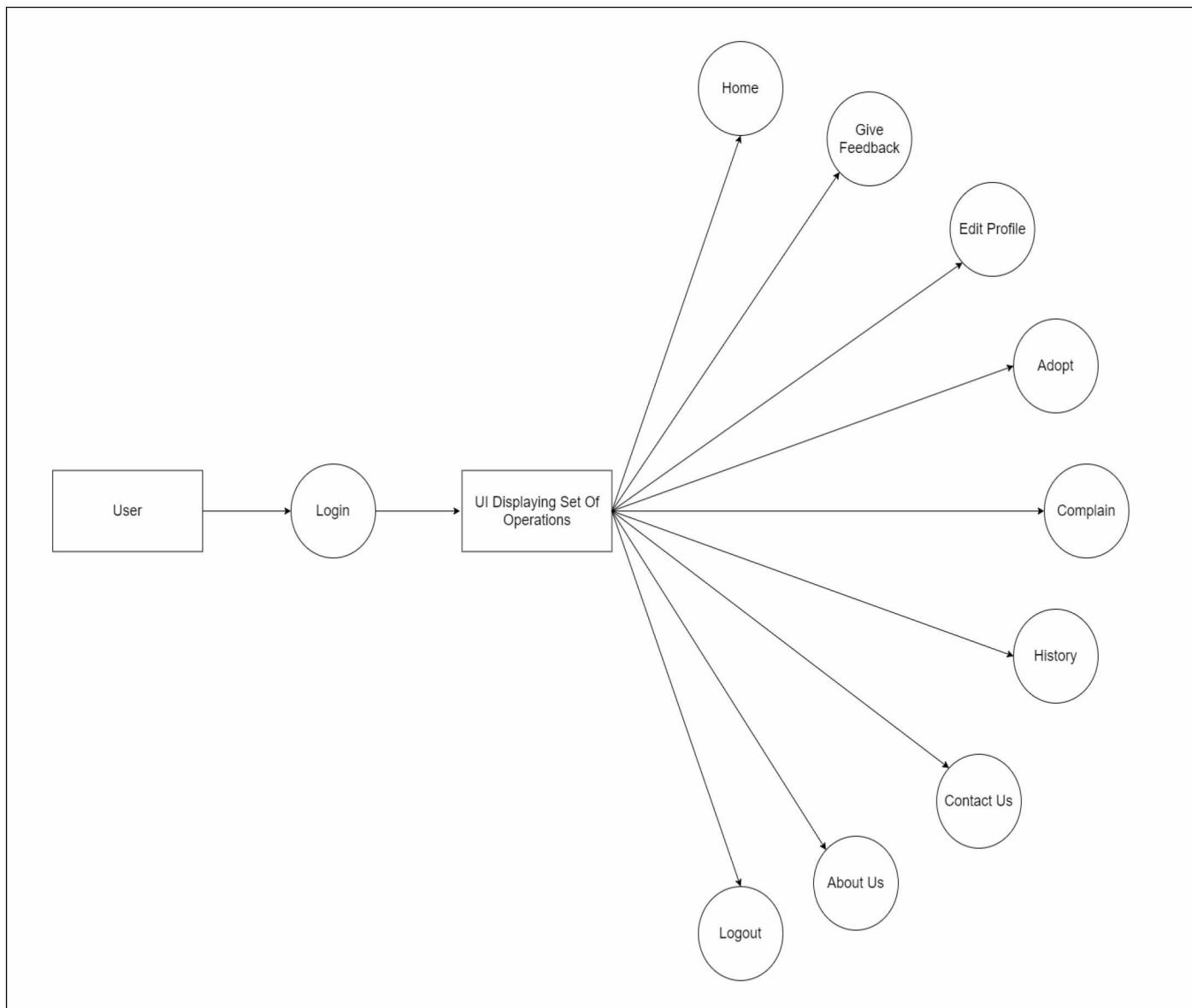


Figure 1.3.1 User Data Flow Diagram

### **1.3.2 Volunteer:**

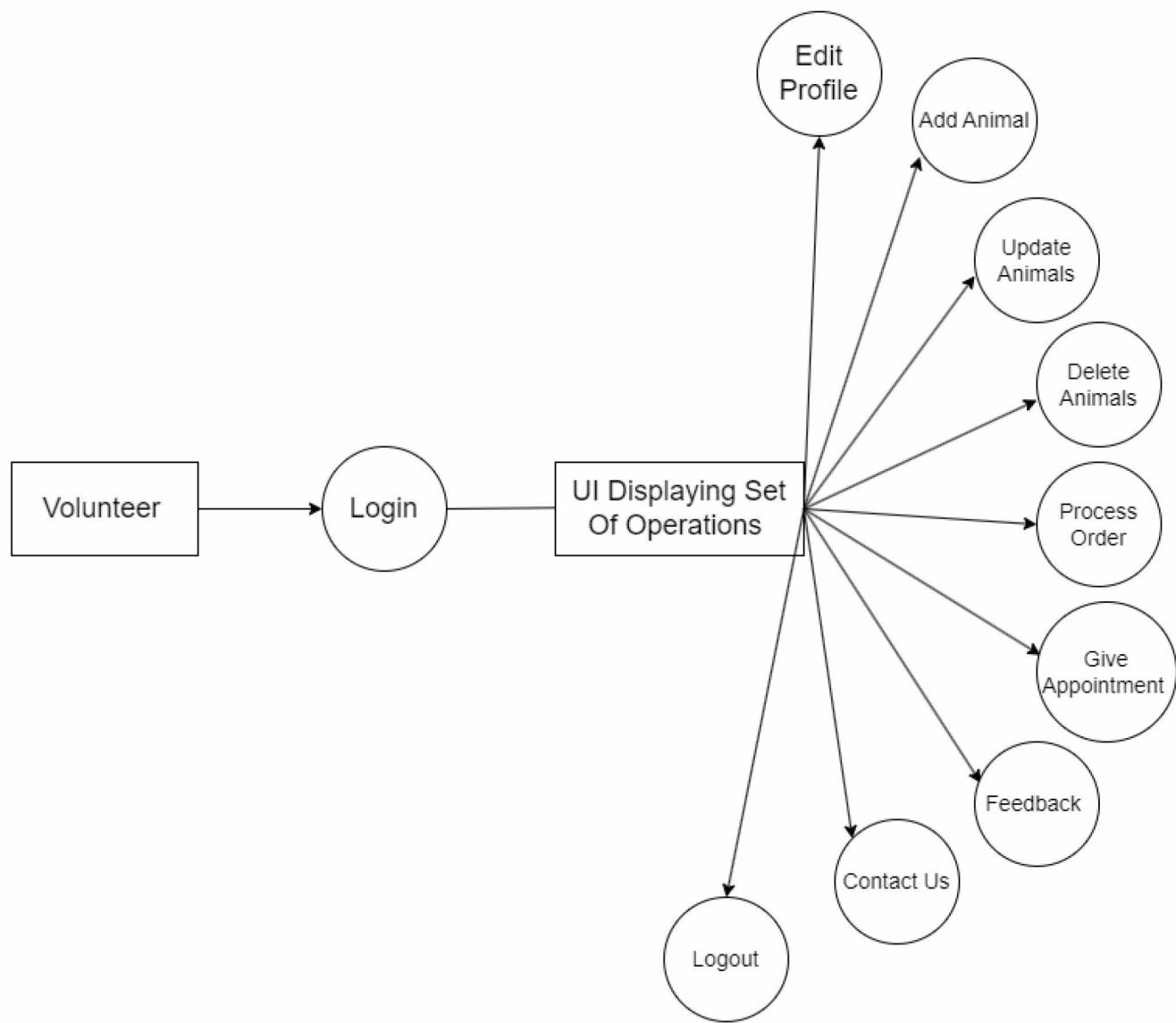


Figure 1.3.2 Volunteer Data Flow Diagram

### **1.3.3 Admin:**

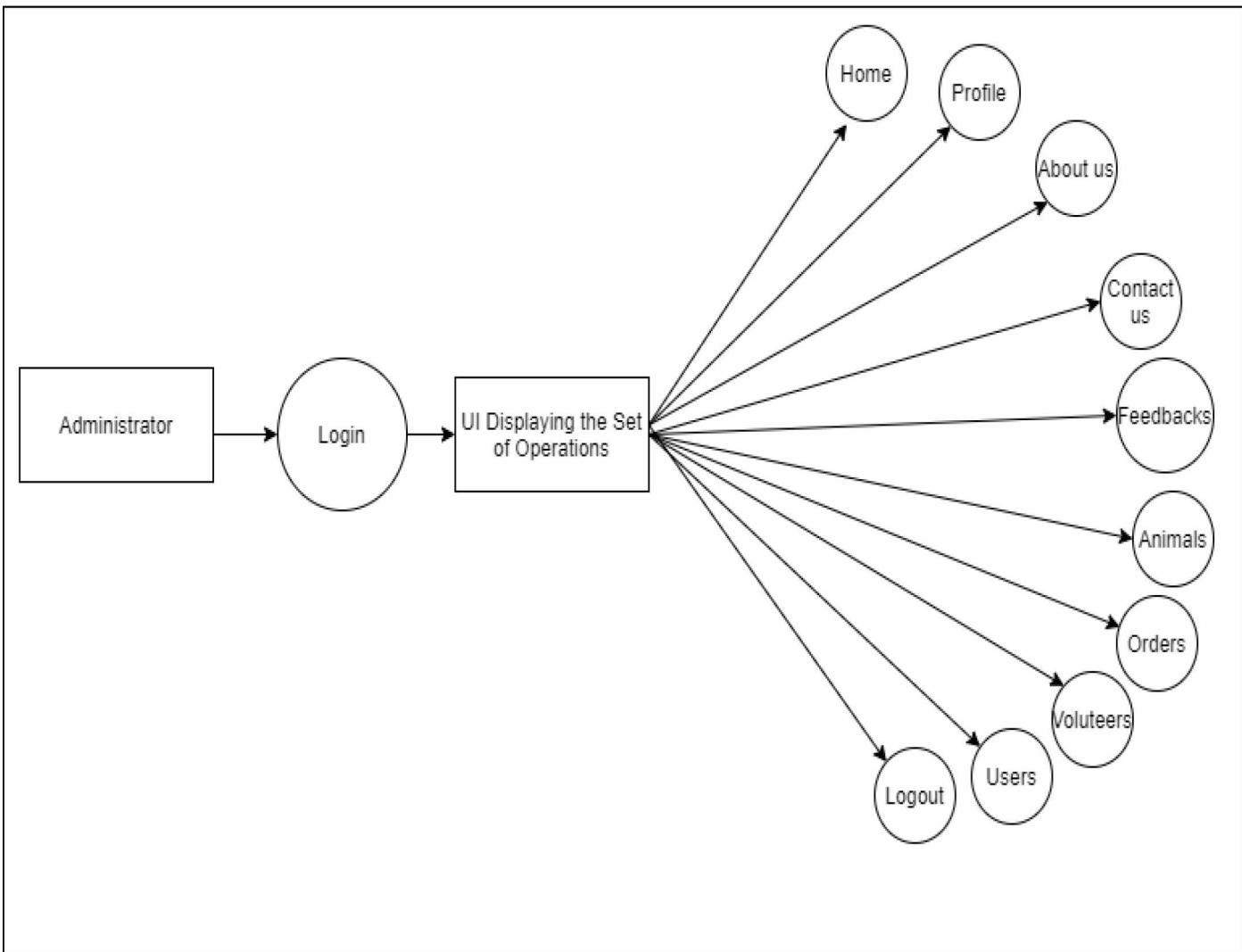


Figure 1.3.3 Admin Data Flow Diagram

## **1.4 ACTIVITY DIAGRAMS**

### **1.4.1 Main Activity Diagram:**

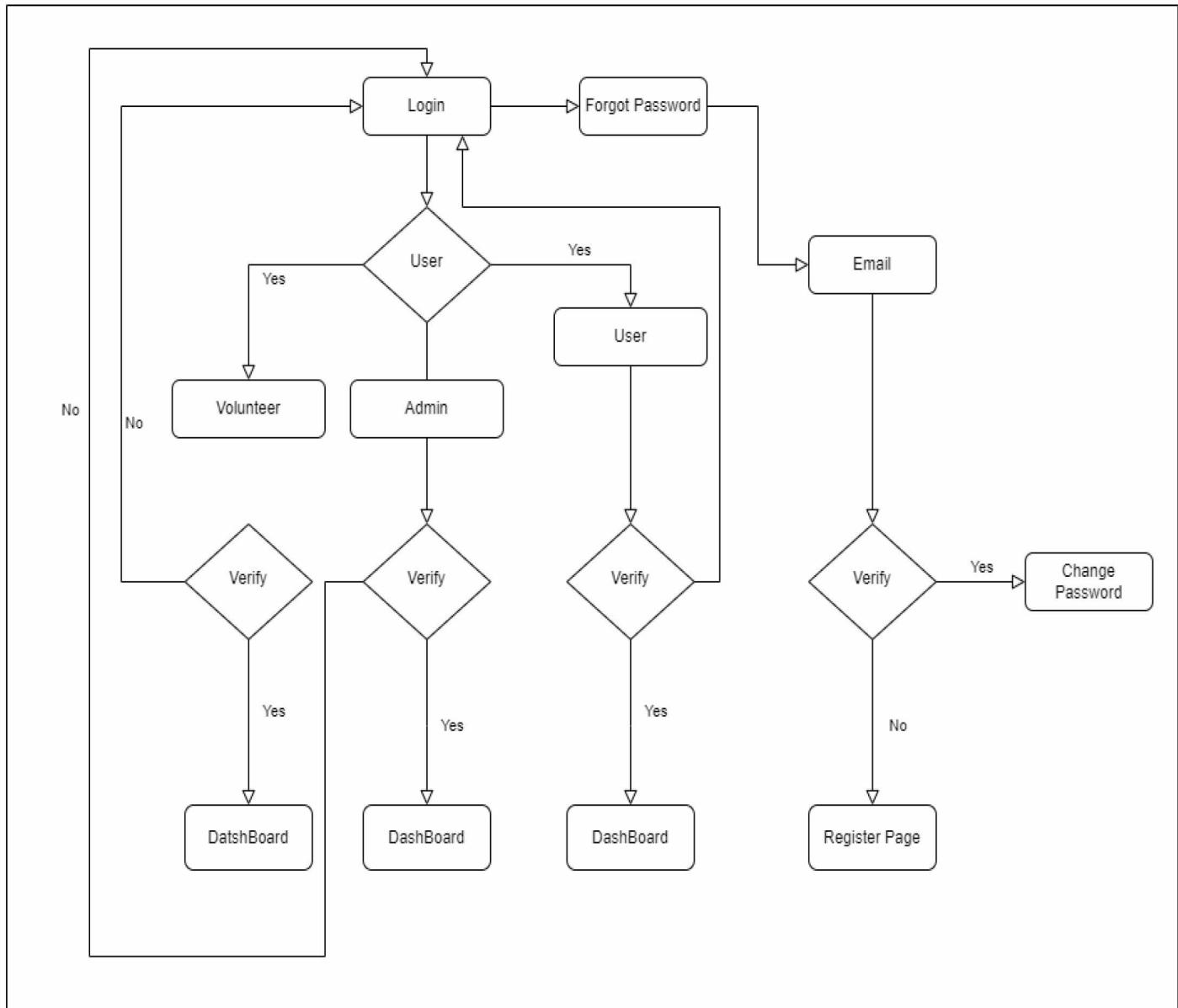


Figure 1.4.1 Main Activity Diagram

## 1.4.2 User Activity Diagram:

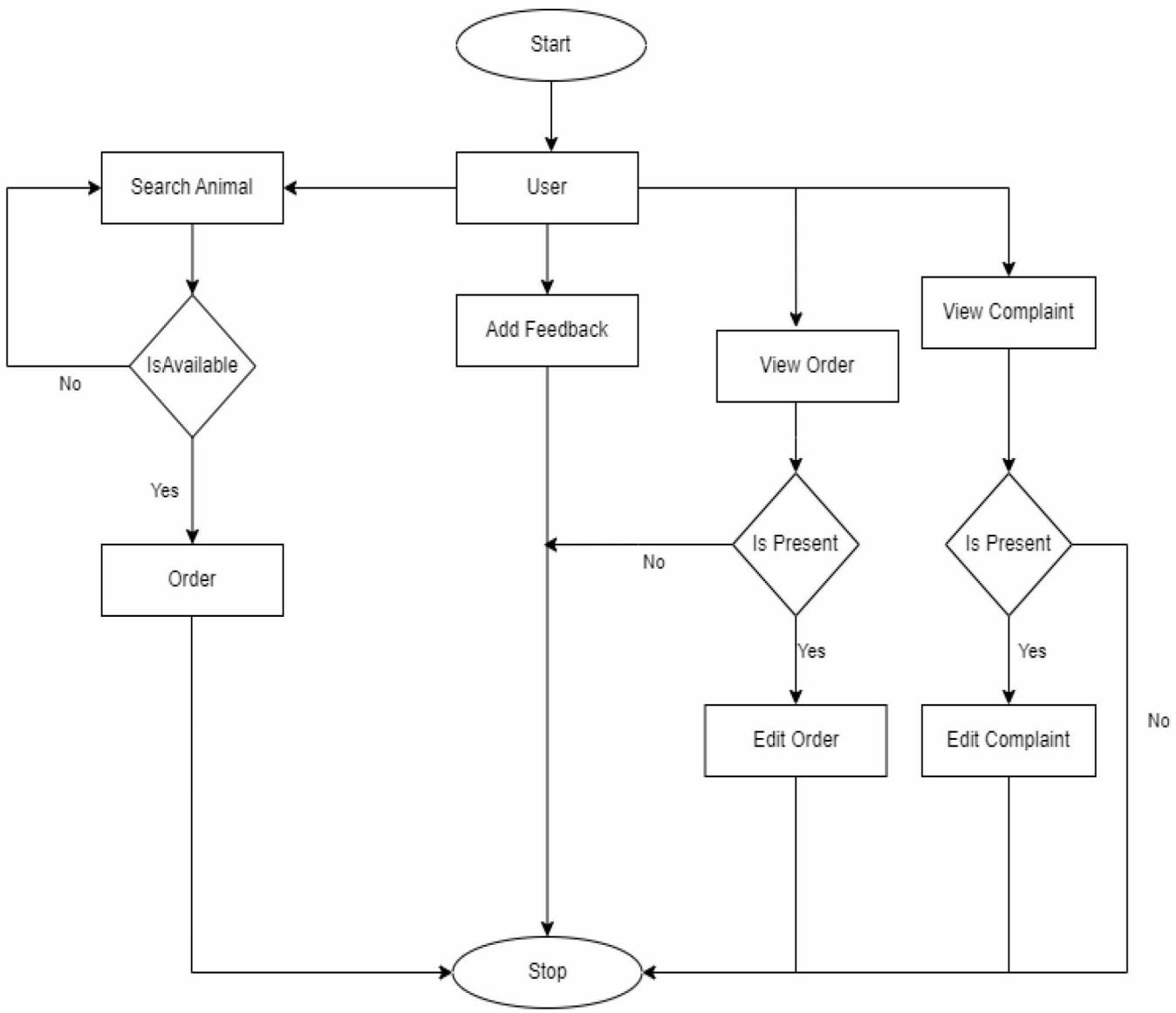


Figure 1.4.2 User Activity Diagram

### 1.4.3 Volunteer Activity Diagram:

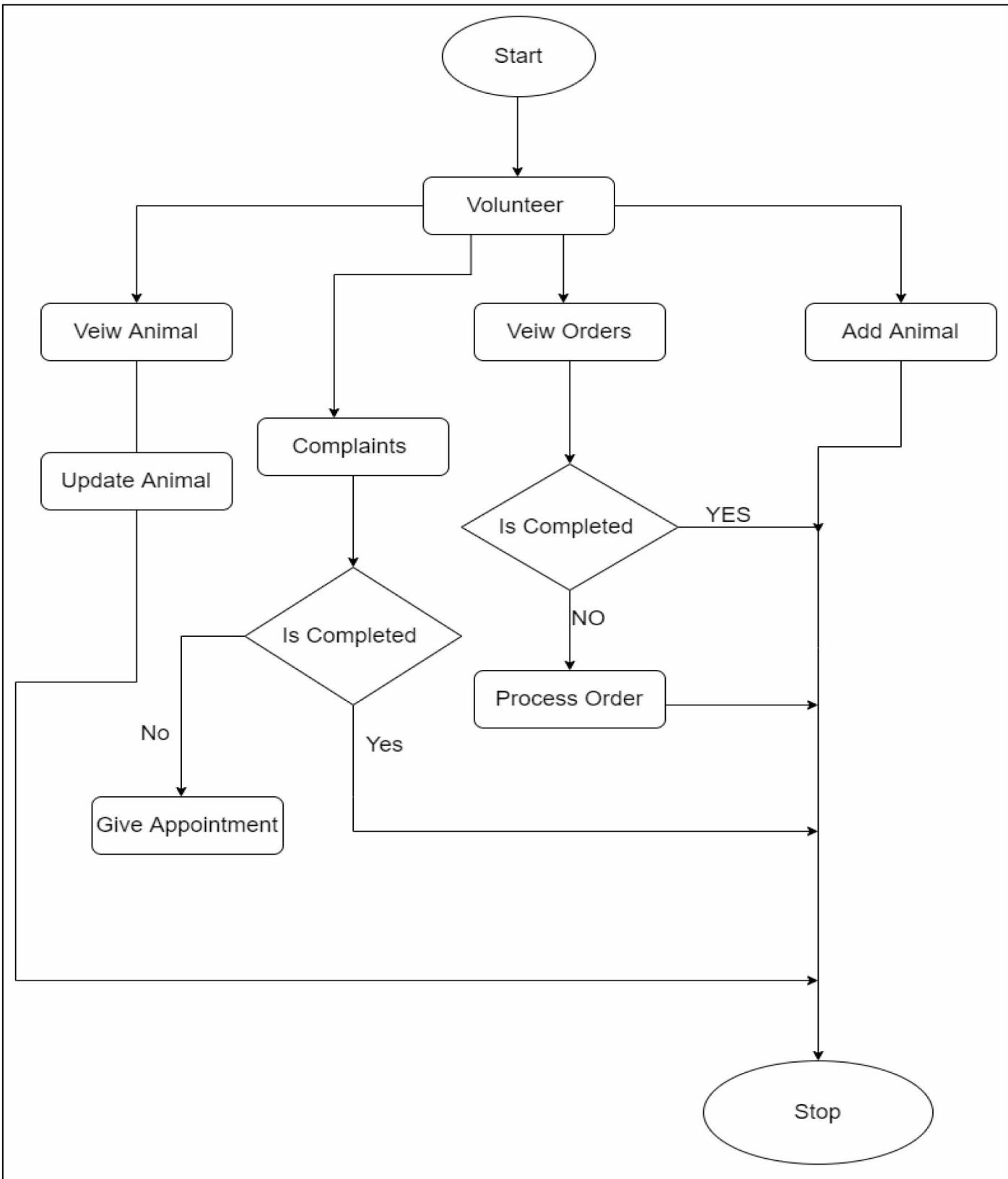


Figure 1.4.3 Volunteer Activity Diagram

#### **1.4.4 Admin Activity Diagram:**

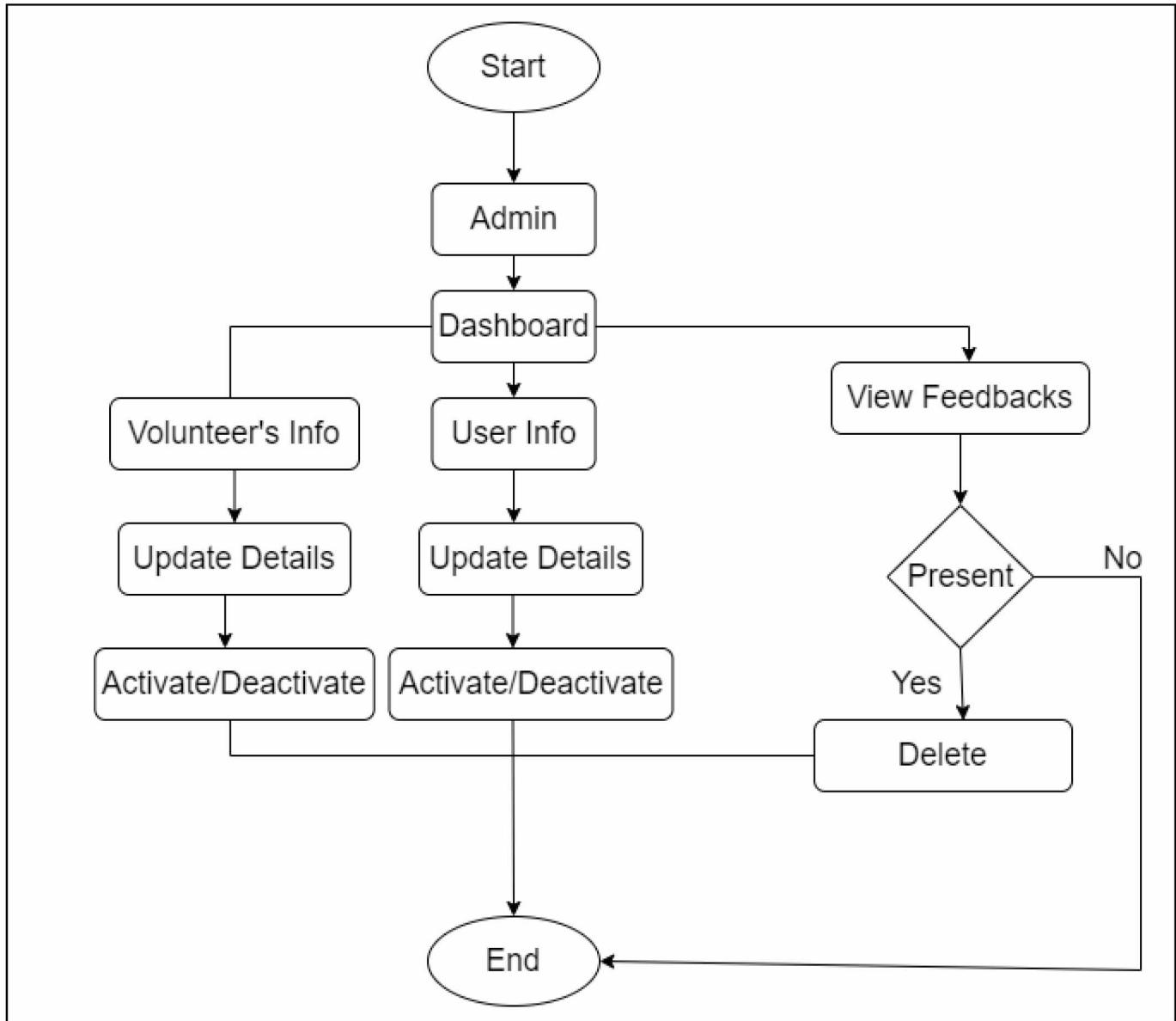


Figure 1.4.4 Admin Activity Diagram

## 1.5 CLASS DIAGRAM

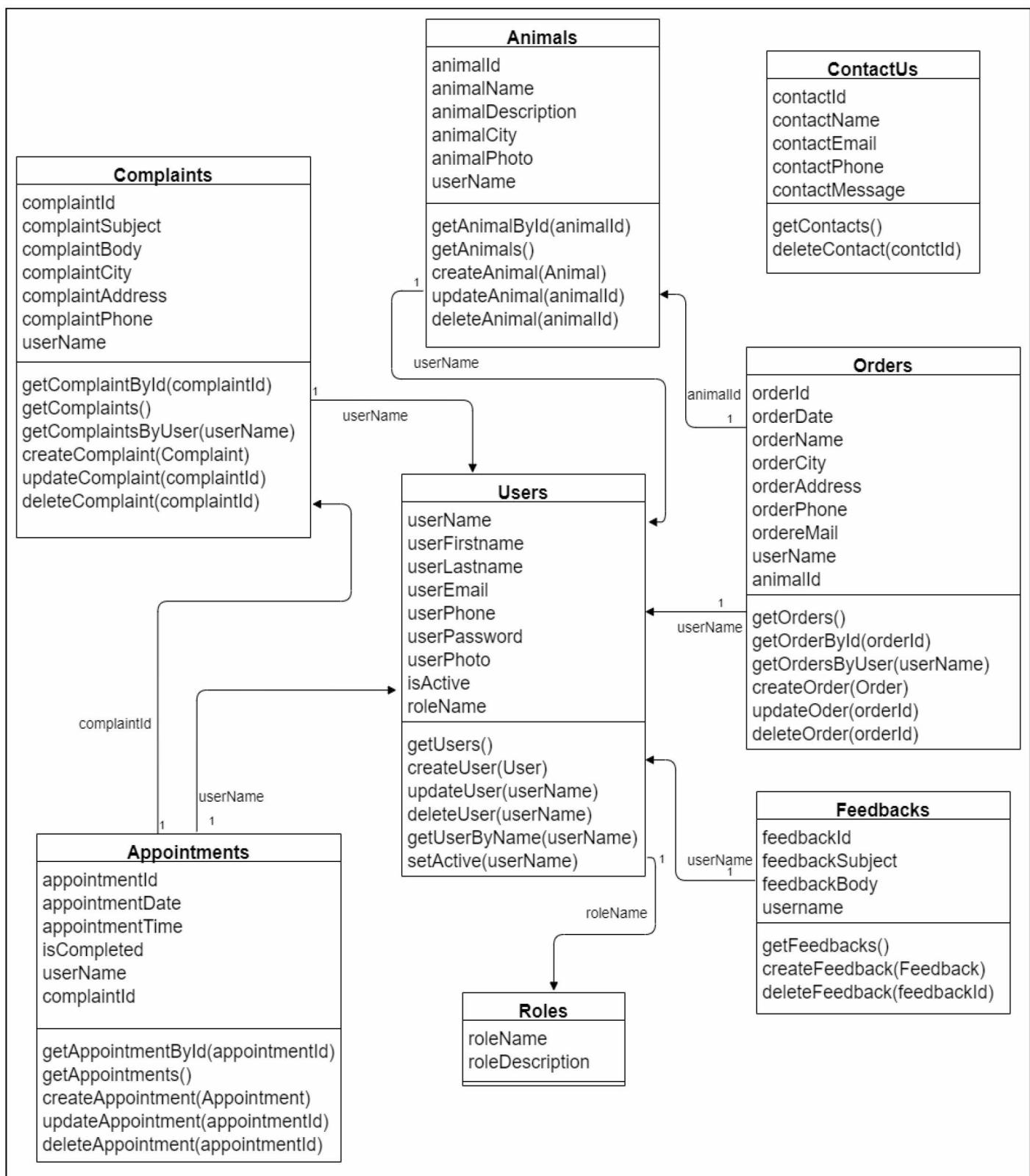


Figure 1.5 Class Diagram

## 2. Entity-Relationship Diagram:

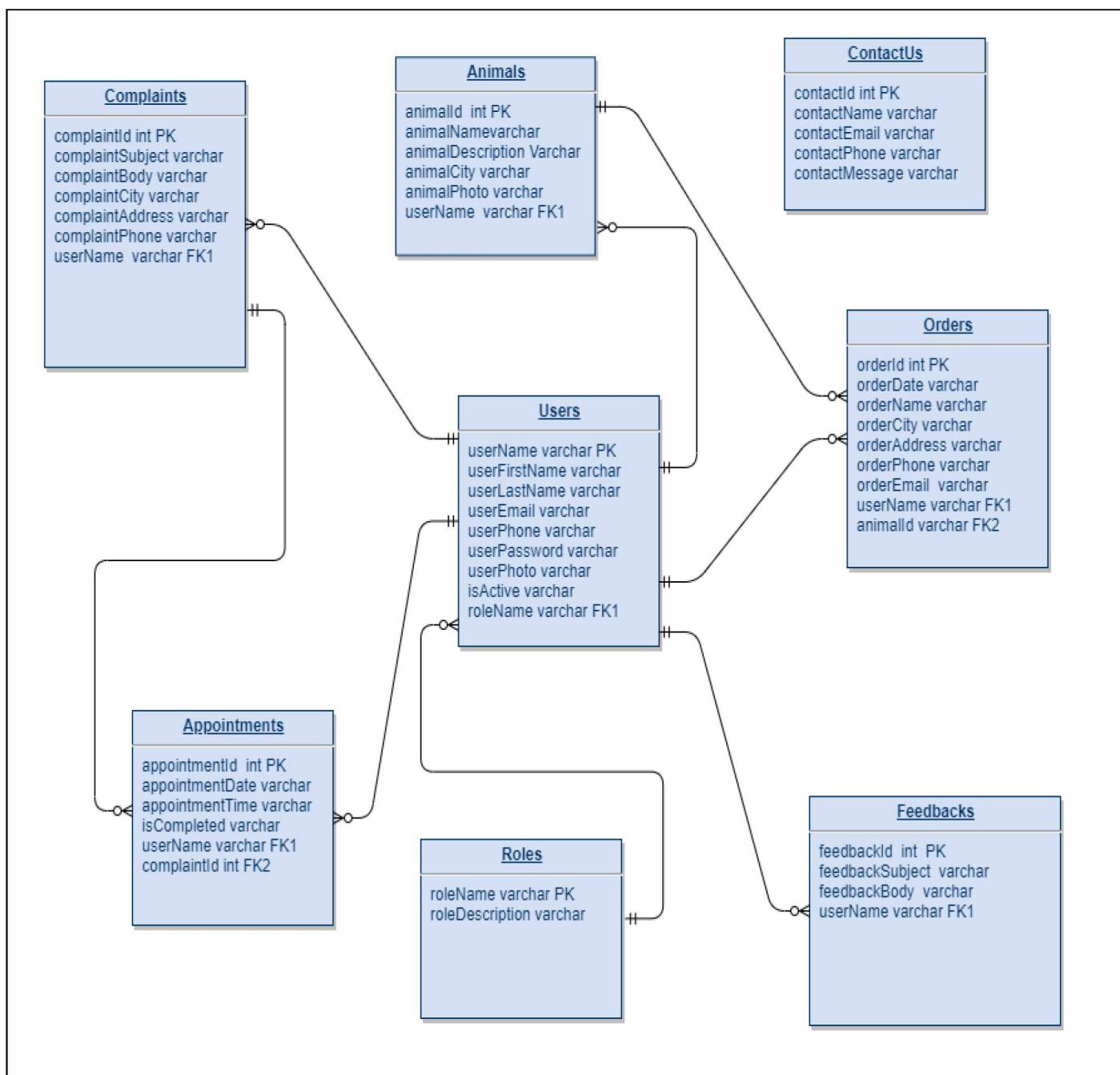


Figure 2.1 Entity-Relationship Diagram

## **TESTING OF SYSTEM**

Testing of a stray animal protection and adoption website is an essential step in the development process, as it helps to identify and fix any issues before the website goes live. Here are some key testing areas for a stray animal protection and adoption website:

**Functionality Testing:** This involves testing the various features of the website, such as registration, login, searching for animals, and adoption processes to ensure that they are working as expected.

**Usability Testing:** This involves testing the user interface of the website to ensure that it is easy to navigate and use. This includes testing the website's response time, page load time, and overall user experience.

**Security Testing:** This involves testing the website's security features, such as user validations, password hashing and user authentication, to ensure that sensitive information is protected.

**Database Testing:** This involves testing the database to ensure that it is able to store, retrieve and manage data effectively.

**Performance Testing:** This involves testing the website's performance under different conditions, such as high traffic, to ensure that it can handle the expected load.

**User Acceptance Testing:** This involves testing the website with real users to ensure that it meets their needs and requirements. Feedback from users can be used to make improvements and fix any remaining issues.

In conclusion, thorough testing is critical to the success of a stray animal protection and adoption website project. By testing various aspects of the website, we can identify and fix any issues and ensure that the website is efficient, user-friendly, secure, and able to meet the needs of all stakeholders involved.

## **FUTURE SCOPE**

The future scope of AniHome website is likely to be very promising, as there is a growing awareness of the importance of animal welfare and a growing trend towards animal adoption. Here are some of the ways in which these websites could evolve:

**Improved Technology:** As technology advances, these websites could become more user-friendly, interactive and efficient in matching adopters with animals. Features such as virtual meet-and-greet, online adoption applications, and real-time updates could be added.

**Increased Collaboration:** Collaboration between animal shelters, rescue organizations, and individuals could become more widespread and integrated through these websites, resulting in better animal welfare outcomes.

**Big Data Analytics:** Big data analytics could be used to better understand the needs of animals and match them with suitable adopters.

**Virtual Adoption:** The use of virtual reality could enable people to experience interacting with animals before making a decision to adopt, leading to better matches and reduced returns.

**Greater Public Awareness:** These websites could play an important role in raising public awareness about animal welfare, encouraging more people to adopt and support animal protection organizations.

## **CONCLUSION**

In conclusion, the development of AniHome website can have a positive impact on animal welfare. By providing a centralized platform for individuals, organizations, and shelters to connect, this website can make the adoption process more efficient and accessible. Additionally, by utilizing technology such as big data analytics and virtual reality, the website can improve the match-making process and increase public awareness about animal welfare. However, it is important to ensure that the website is user-friendly and that the necessary precautions are taken to ensure the welfare and safety of the animals involved. Ultimately, the success of this project will depend on the commitment and cooperation of all stakeholders involved in promoting animal welfare and responsible adoption.

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