

PET PLUS

GROUP NUMBER:16

Group Details:

SANGHAMITRA DASH (21BECE94), 28(A-2)

SIDDHARTH BIBHAR (21BCTC09), 33(A1)

SASWAT TULO (21BCTB37), 24(A1)

SATARUPA PADHY(21BCTG53), 32(A1)

BRANCH:COMPUTER SCIENCE AND TECHNOLOGY

SUBJECT:SOFTWARE ENGINEERING LAB

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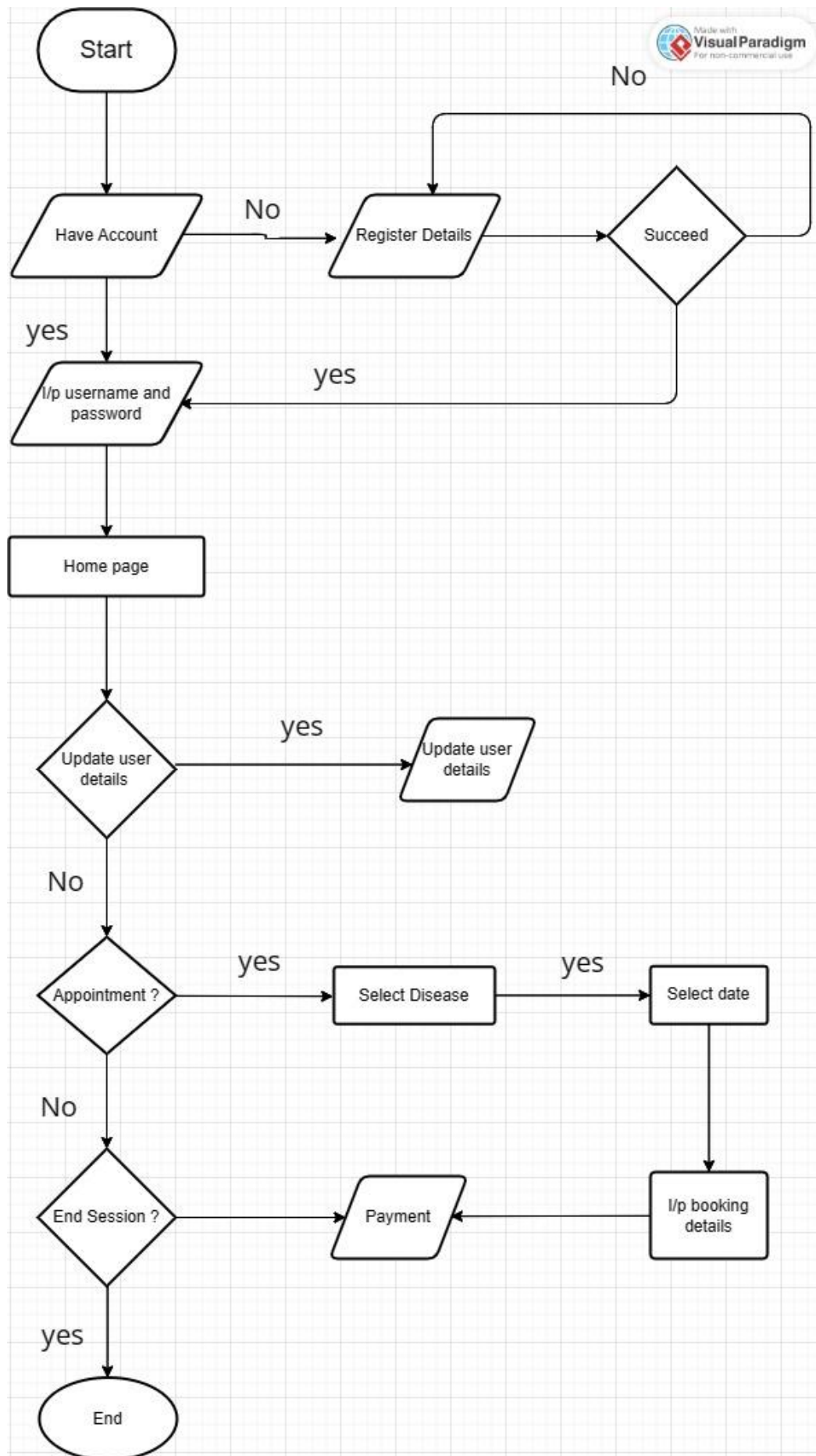
Silicon University

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FLOWCHART:



PROJECT DETAILS:

Problem

Traditional paper-based systems in veterinary clinics often lead to inefficiencies, data redundancy, and increased chances of errors. Managing patient records, appointments, and inventory manually can be time-consuming, prone to mistakes, and may hinder the overall productivity of the clinic. The need for a centralized and automated system to manage these aspects is evident.

Functionalities and features

1. Registration:

- **Input:** Name, address, E-mail, Mobile Number, Pet category, Set /Reset password
- **Process:** Insert the input data into the database.
- **Output:** Redirected to the login page.
- **Goal:** They would be required to provide their basic information like email and mobile number to register themselves for further use of the website.

2. Login:

- **Input:** Email ID or Mobile Number and Password.
- **Process:** Validation/ Verification from Database.
- **Output:** Redirected to Homepage.
- **Goal:** Users will have to log in themselves to access the portal.

3. Appointment Scheduling:

- **Input:** Date and Ailment/Illness
- **Process:** Search for vacant date and doctor for the respective concern from the database.
- **Output:** Displays the allotted date and respective available doctor in the form of a confirmation sheet with an option to pay now for booking.
- **Goal:** Manage appointments online, and send pet owners e-mail and Mobile reminders.

4. Checkout:

- **Input:** Conformation sheet with pay now option.
- **Process:** Generate invoices electronically, accept various payment methods, and manage accounts receivable and will register the appointment detail in the database
- **Output:** Acknowledgement containing the patient ID along with Doctor ID and Date.
- **Goal:** Acknowledgement generation after successful appointment booking which will contain the appointment details.

5. Doctor Window:

- **Input:** Data about the patient and prescribed medication.
- **Process:** Insert the input details into the database.
- **Output:** Prescription is generated.
- **Goal:** will maintain a history, doctors should be able to view comprehensive patient information, including medical history, current medications, allergies, lab results, and more
Doctors should be able to view their schedule, confirm appointments, and see patient visit history.

Non Functionalities

- ✓ **Performance:** Each page must load within 2 seconds. This ensures that users can navigate the site quickly and efficiently.
- ✓ **Security:** The website should adhere to best practices for security, especially if it handles sensitive information. For example, database security must meet HIPAA requirements.
- ✓ **Accessibility:** The system must meet Web Content Accessibility Guidelines (WCAG) 2.1. This ensures the website is accessible to all users, including those with disabilities.
- ✓ **Compatibility:** The website should be compatible with various devices and browsers. It should specify the minimum hardware requirements and the operating systems and their versions that must be supported.
- ✓ **Usability:** The website should be easy to use and provide a positive user experience.
- ✓ **Scalability:** The website should be able to handle increased traffic and data storage volume demands.
- ✓ **Maintainability and Manageability:** The website should be easy to maintain and manage.
- ✓ **Reliability and Availability:** The website should be reliable and available at all hours of every day.

Working Mechanism:

- ✓ **Authentication and User Access:**

Users log in with secure authentication, and role-based access control ensures that each user has appropriate access, maintaining data security.

- ✓ **User-Friendly Interface:**

The interface is designed for easy navigation, prioritizing accessibility to accommodate users with varying technical expertise.

- ✓ **Appointment Scheduling:**

The system allows clients to schedule appointments online or ensure efficient allocation of time slots.

- ✓ **Patient Records Management:**

It stores comprehensive records of each animal patient, including medical history, treatment plans, vaccination schedules, diagnostic test results, and billing information. This information is easily accessible to authorised staff members.

- ✓ **Billing and Invoicing:**

The system generates invoices for services rendered, tracks payments, and manages billing cycles. It may integrate with accounting software for seamless financial management.

- ✓ **Reporting and Analytics:**

PetPlus provides insights into clinic performance through comprehensive reporting and analytics features. Staff members can generate customizable reports to track key metrics, identify trends, and make informed decisions to optimize clinical operations.

- ✓ **Communication Suite:**

PetPlus includes a communication suite to facilitate seamless interaction between clinic staff and clients. Staff members can send appointment reminders, share medical reports, and communicate with clients via email directly from the application, enhancing customer service and satisfaction.

- ✓ **Proposed Solution:**

After creating a veterinary management system, the proposed solution would be to implement it effectively in veterinary clinics and hospitals. This can be achieved by providing proper training to the staff members and veterinarians so that they can efficiently use the system. The next step would be to ensure that all patient data, medical histories, and treatment plans are entered into the system accurately and comprehensively. This will help in providing better treatment to the animals and will also enable the veterinarians to track the progress of the treatment.

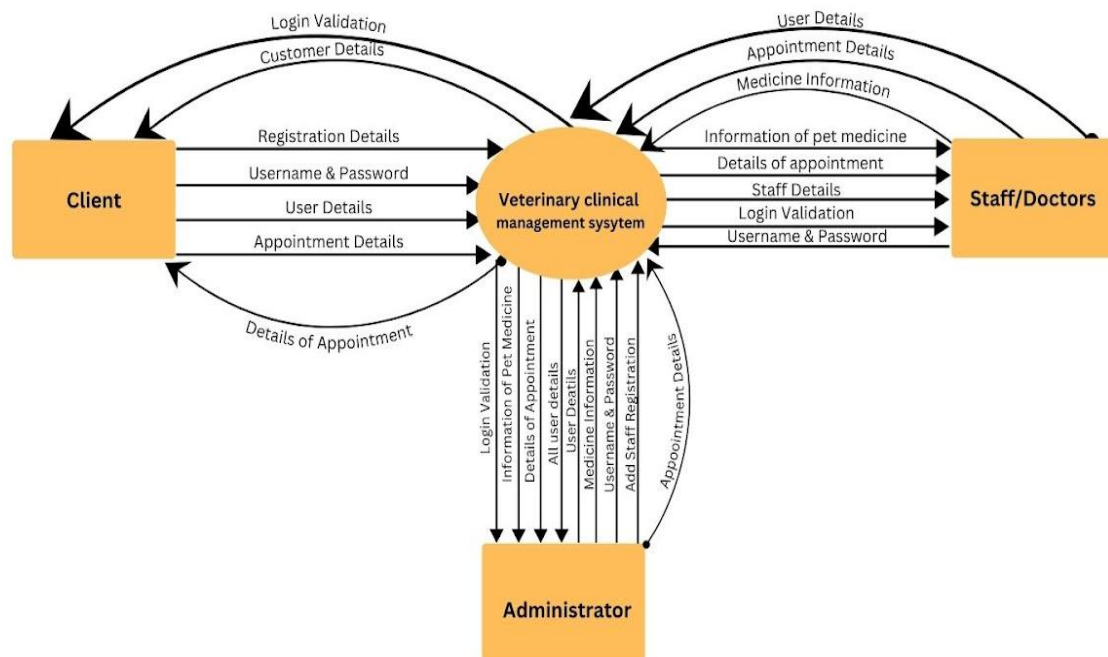
- ✓ **Centralized Data Management:** PetPlus centralizes patient records, appointments, and inventory management, eliminating data redundancy and ensuring information consistency.

- ✓ **Automation:** By automating tasks such as appointment scheduling, reminders, and invoicing, PetPlus reduces manual errors and streamlines clinic operations, thus enhancing overall productivity.

- ✓ **Efficient Record Keeping:** PetPlus stores electronic health records (EHRs) with detailed patient information, including medical history, treatment plans, and vaccination records. This ensures accurate and easily accessible data, reducing the risk of errors associated with manual record-keeping.

- ✓ **Time Savings:** Automating routine tasks and the streamlined data management processes save valuable time for clinic staff, allowing them to focus on providing quality care to patients.
- ✓ **Enhanced Communication:** PetPlus facilitates seamless communication between clinic staff and clients through email reminders, appointment notifications, and medical report sharing. This improves client engagement and reduces missed appointments, further increasing clinic efficiency.

DATA FLOW DIAGRAMS(DFD)



Context Diagram

Figure 1 : DFD Level 1

Figure 2 : DFD Level 2

Figure 3 : DFD Level 3

USER STORY

USER ID	USER STORY	PRIORITY	RISK	STORY POINTS
1	As a client, I want to be able to schedule an appointment for my pet, so that my pet can receive medical care.	Must do	Low	1
2	As a client, I want to be able to view my pet's medical history, so that I can stay informed about their health.	Must do	Low	2
3	As a client, I want to be able to update my contact information, so that the clinic can reach me with important updates.	Should do	Low	4
4	As a client, I want to be able to request medication refills for my pet, so that I can ensure they have the necessary medication.	Must do	Medium	5
5	As a client, I want to be able to request medication refills for my pet, so that I can ensure they have the necessary medication.	Should do	Low	3
6	As a client, I want to register my self in the portal to use the application.	must do	medium	5
7	As a client, I want to be able to receive appointment reminders, so that I don't forget about scheduled visits.	Should do	Low	3
8	As a client, I want to be able to rate and provide feedback on the services received, so that the clinic can improve their offerings.	Could do	Low	2
9	As a client, I want to be able to access educational resources about pet care, so that I can better understand how to care for my pet.	Could do	Low	2
10	As a client, I want to be able to securely access and manage my account information, so that my personal data remains protected.	Must do	Medium	5
11	As a client, I want to be able to make online payments for services rendered, so that I can conveniently settle my bills.	Must do	Medium	6
12	As a vet, I want to login and register in the application further use	Must do	medium	5
13	As a vet, I want to be able to access and update patient records, so that I can provide accurate and informed care.	Must do	Medium	6
14	As a vet, I want to be able to schedule follow-up appointments for patients, so that I can monitor their progress and provide ongoing care.	Must do	Low	4
15	As a vet, I want to be able to manage the clinic's schedule, so that appointments can be efficiently coordinated.	Must do	Medium	6
16	As a vet, I want to be able to prescribe medication and generate prescriptions, so that patients can receive the necessary treatment.	Must do	Medium	4
17	As a vet, I want to be able to track inventory levels of supplies and medication, so that we can reorder items when needed.	Should do	Low	3
18	As a vet, I want to be able to access and share educational resources with clients, so that they can better understand their pet's health and care needs.	Could do	Low	2
19	As a vet, I want to be able to generate reports on clinic metrics and performance, so that we can analyze and improve our operations.	Should do	Low	3
20	As a vet, I want to be able to securely communicate with other vets and clients, so that we can collaborate effectively on patient care.	Should do	Medium	3
21	As a vet, I want to be able to manage client accounts and billing, so that we can accurately track and collect payments.	Must do	Medium	5
22	As a vet, I want to be able to access and review laboratory test results, so that I can make informed decisions about patient care.	Must do	Medium	5
23	As an admin, I want to be able to manage user accounts and permissions, so that I can control access to the system.	Must do	High	7
24	As an admin, I want to be able to configure system settings and preferences, so that I can customize the software to meet the clinic's needs.	Should do	Medium	7
25	As an admin, I want to be able to generate comprehensive reports on clinic operations and financials, so that I can analyze and make informed decisions.	Must do	Medium	8

26	As an admin, I want to be able to manage and update the clinic's inventory and pricing information, so that the system reflects accurate data.	Should do	Low	8
27	As an admin, I want to be able to set up and manage integrations with third-party systems (e.g., laboratory services, payment gateways), so that the clinic can leverage external resources.	Should do	High	7
28	As an admin, I want to be able to monitor system usage and activity logs, so that I can identify and address any potential issues or security concerns.	Must do	Medium	5
29	As an admin, I want to be able to create and manage templates for documents, forms, and reports, so that we can maintain a consistent and professional appearance.	Could do	Low	8
30	As an admin, I want to be able to schedule and manage system backups and data recovery procedures, so that we can protect against data loss.	Must do	High	7
31	As an admin, I want to be able to configure and manage the clinic's website and online presence, so that we can effectively promote our services and engage with clients.	Should do	Low	7
32	As an admin, I want to be able to receive and manage support requests from users, so that I can address any issues or inquiries in a timely manner.	Should do	Low	8

SPRINT:

User ID	Sprint	User Story	Story Points	Priority	Risk	User ID on which dependent
1	1	As a client, I want to be able to schedule an appointment for my pet, so that my pet can receive medical care.	1	Must Do	Low	
4	1	As a client, I want to be able to request medication refills for my pet, so that I can ensure they have the necessary medication.	5	Must Do	Medium	
6	1	As a client, I want to register myself in the portal to use the application.	5	Must Do	Medium	1
9	1	As a client, I want to be able to access educational resources about pet care, so that I can better understand how to care for my pet.	2	Could Do	Low	

12	1	.As a vet, I want to log in and register in the application to further use	5	Must Do	Medium	
14	1	As a vet, I want to be able to manage the clinic's schedule, so that appointments can be efficiently coordinated.	4	Must Do	Low	
<p style="text-align: center;">Sprint 1 Total Story Points 22</p>						
2	2	As a client, I want to be able to view my pet's medical history, so that I can stay informed about their health.	2	Must Do	Low	1
5	2	As a client, I want to be able to update my contact information, so that the clinic can reach me with important updates.	3	Should Do	Low	2
7	2	As a client, I want to view upcoming appointments, so that I can plan accordingly.	3	Should Do	Low	1
10	2	As a client, I want to make online payments for services rendered, so that I can conveniently settle my bills.	5	Must Do	Medium	
15	2	As a vet, I want to be able to prescribe medication and generate prescriptions, so that patients can receive the necessary treatment	6	Must Do	Medium	
<p style="text-align: center;">Sprint 2 Total Story Points 19</p>						
8	3	As a client, I want to be able to receive appointment reminders, so that I don't forget about scheduled visits..	2	Could Do	Low	
11	3	As a client, I want to be able to rate and provide feedback on the services received, so that the clinic can improve their offerings.	6	Must Do	Medium	
16	3	As a vet, I want to be able to track inventory levels of supplies and medication, so that we can reorder items when needed.	4	Must Do	Medium	

18	3	As a vet, I want to be able to securely communicate with other vets and clients, so that we can collaborate effectively on patient care.	2	Could Do	Low	12
19	3	As a vet, I want to be able to access and review laboratory test results, so that I can make informed decisions about patient care	3	Should Do	Low	15

Sprint 3 Total Story Points 17

DEPENDENCY TABLE:

Serial No	User ID	Dependant
1	6	1
2	2	1
3	5	2
4	7	1
5	18	12
6	19	15

UML DIAGRAMS:

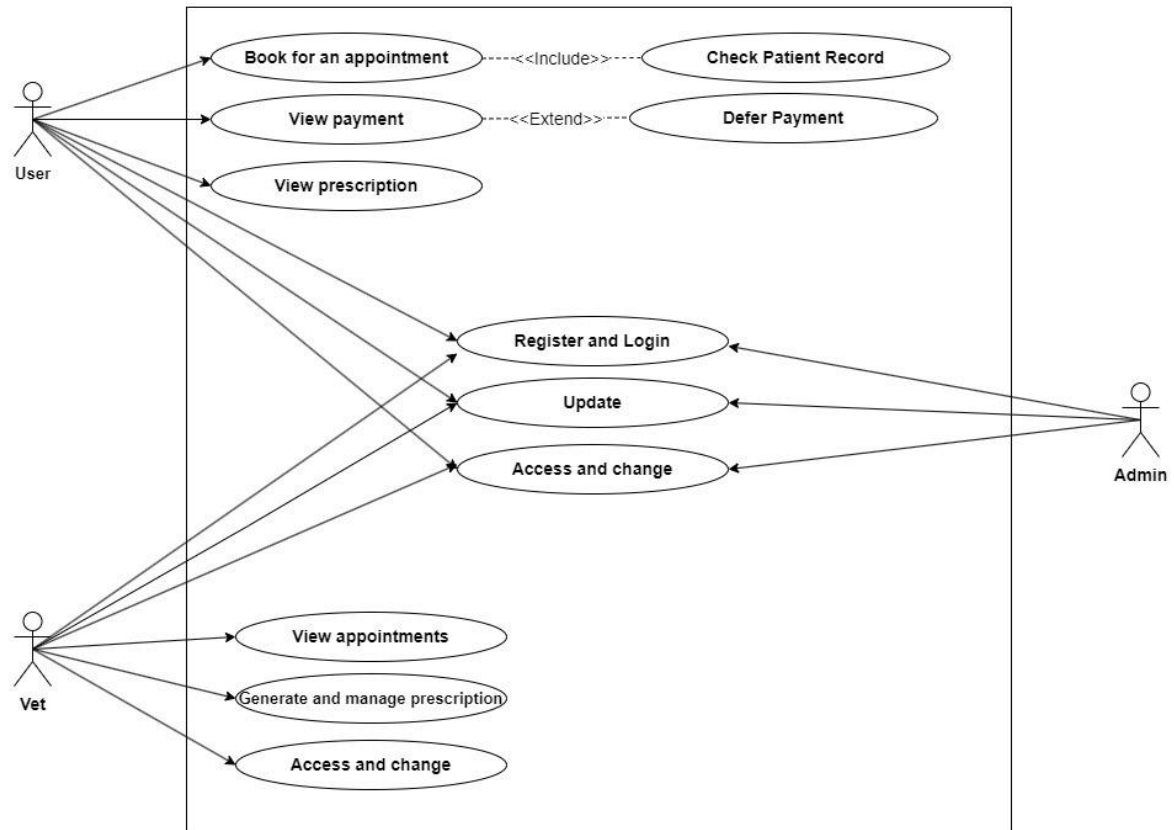


Figure 4 : USER CASE DIAGRAM

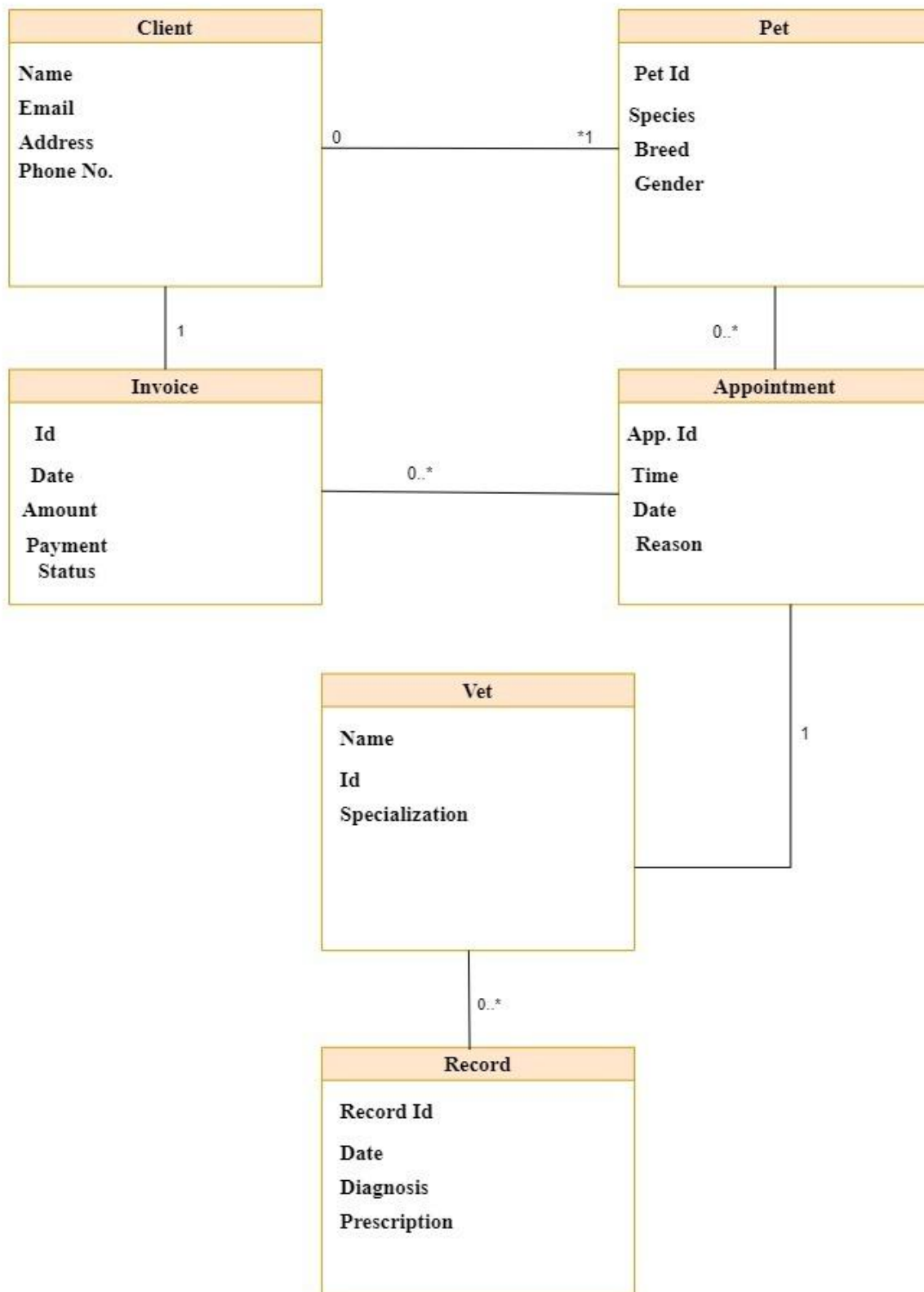


Figure 5 : CLASS DIAGRAM

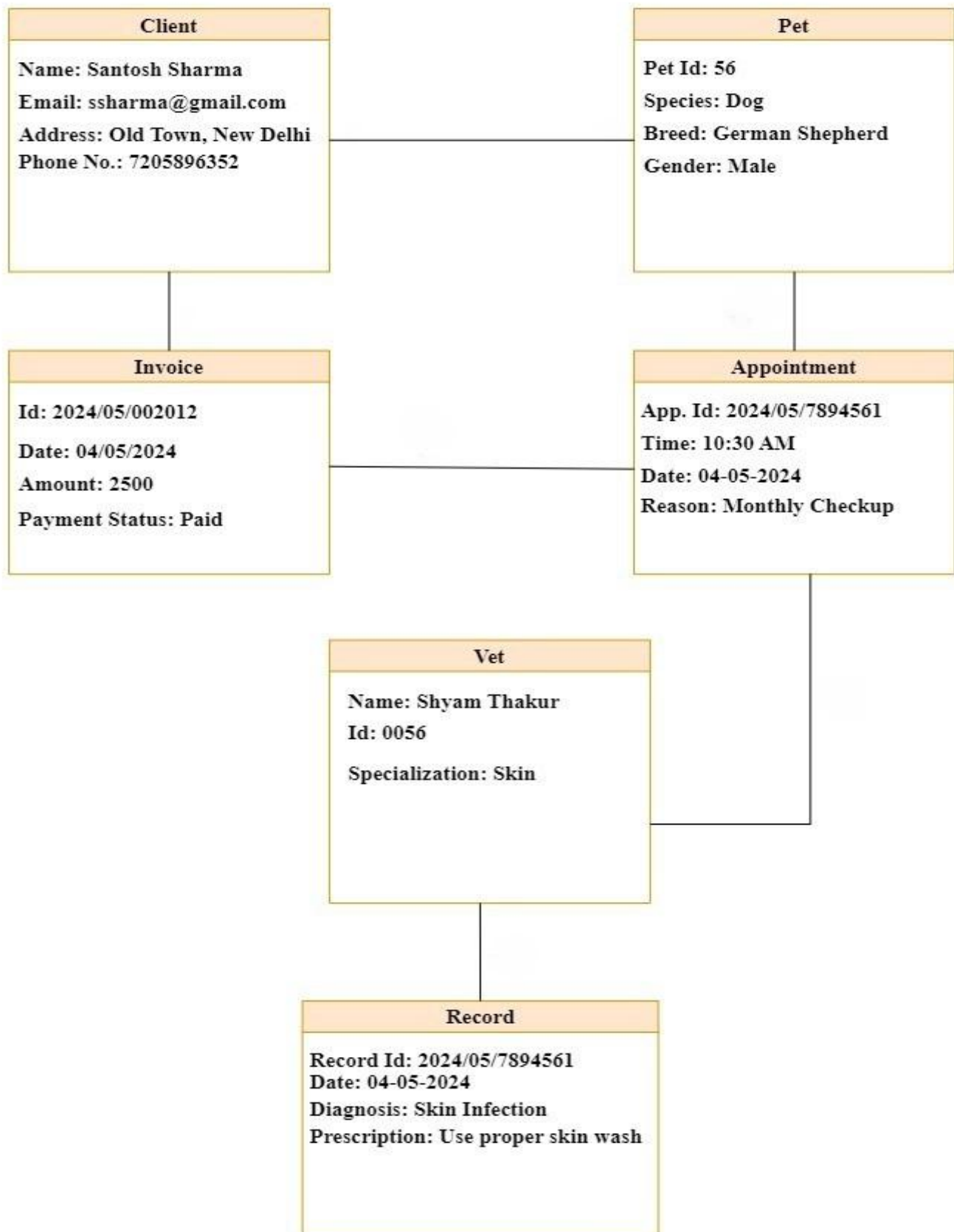


Figure 6 : OBJECT DIAGRAM

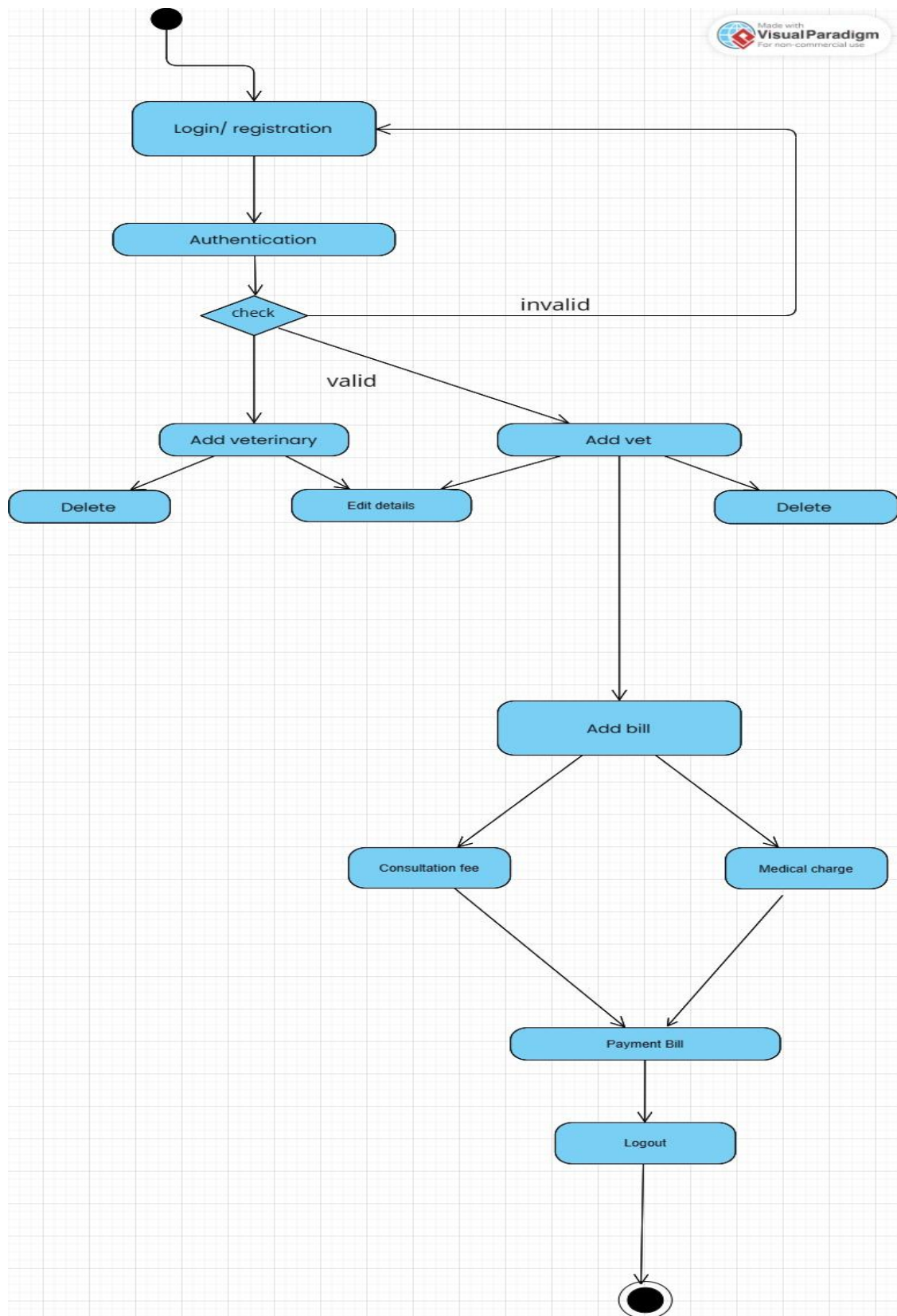


Figure 7 : ACTIVITY DIAGRAM

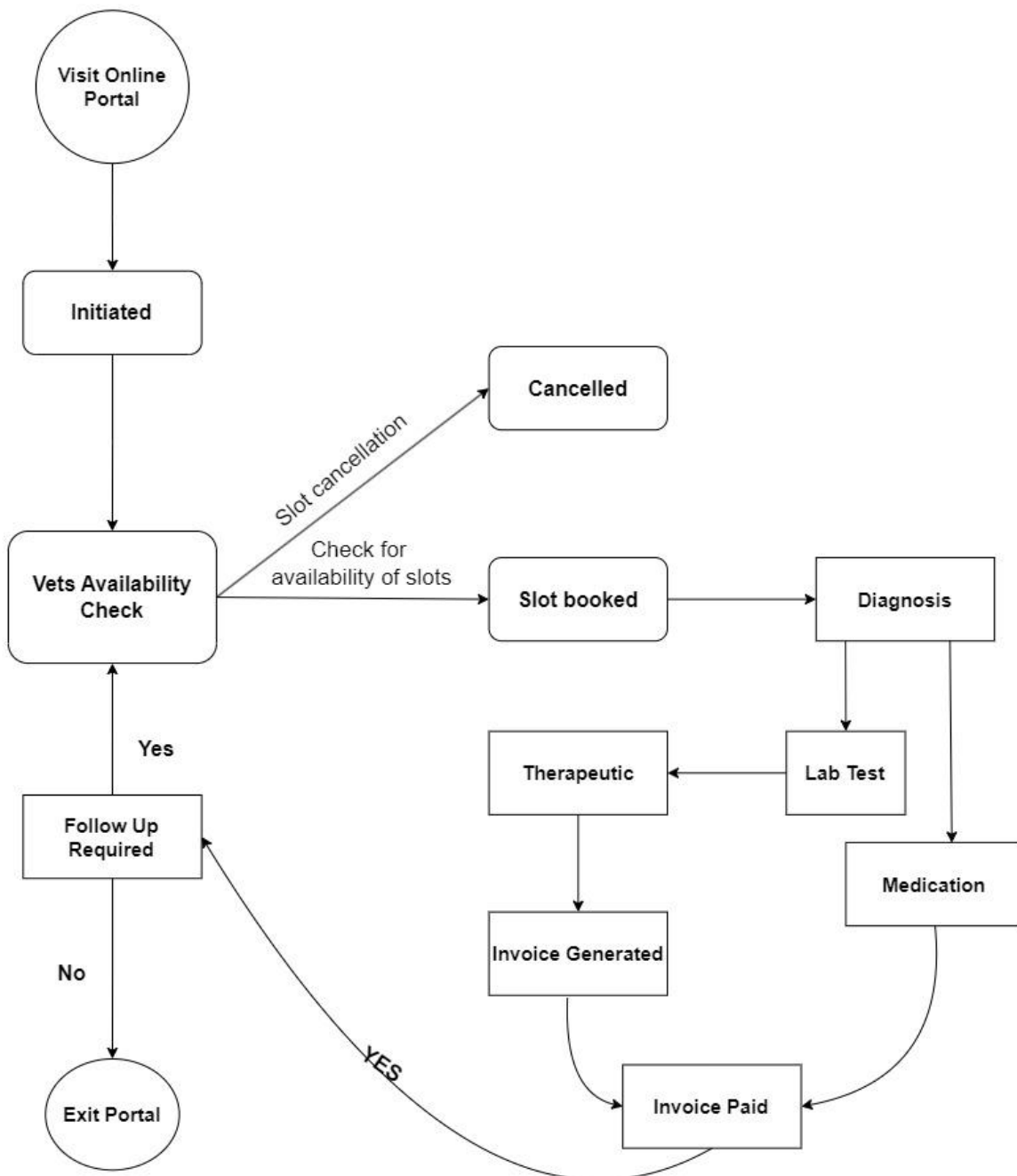


Figure 8 : STATE-CHART DIAGRAM

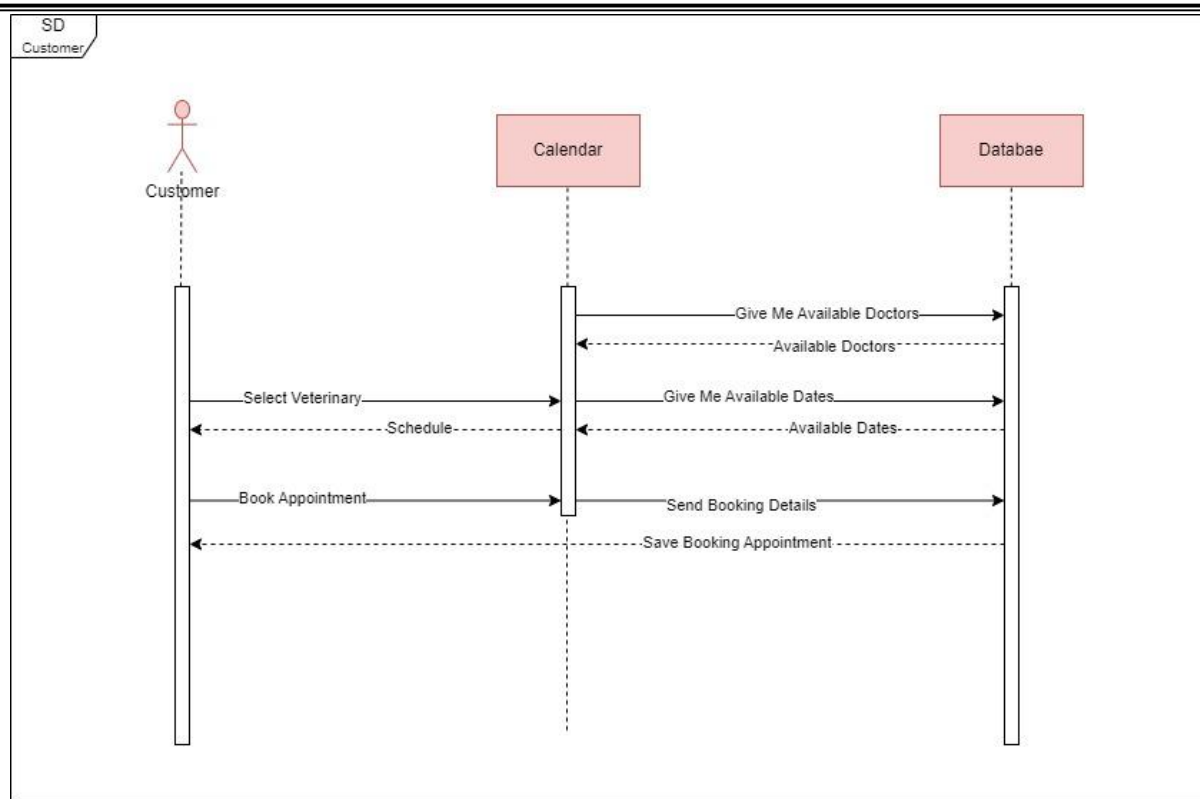


Figure 9 : SEQUENCE DIAGRAM FOR CLIENT

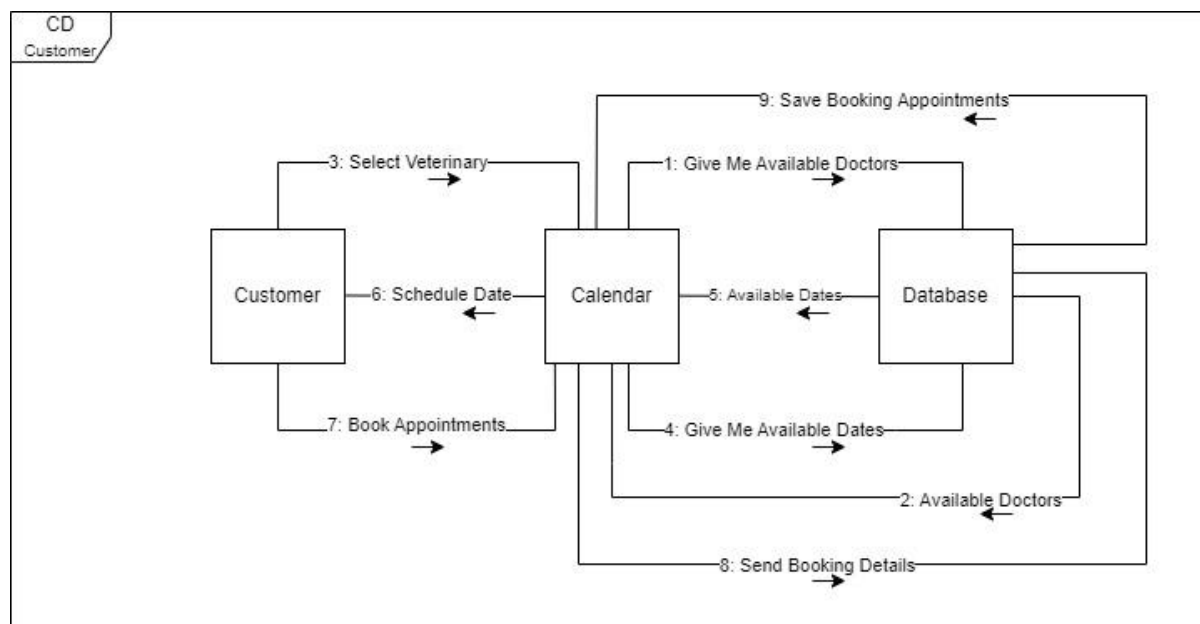


Figure 10 : COLLABORATION DIAGRAM FOR CLIENT

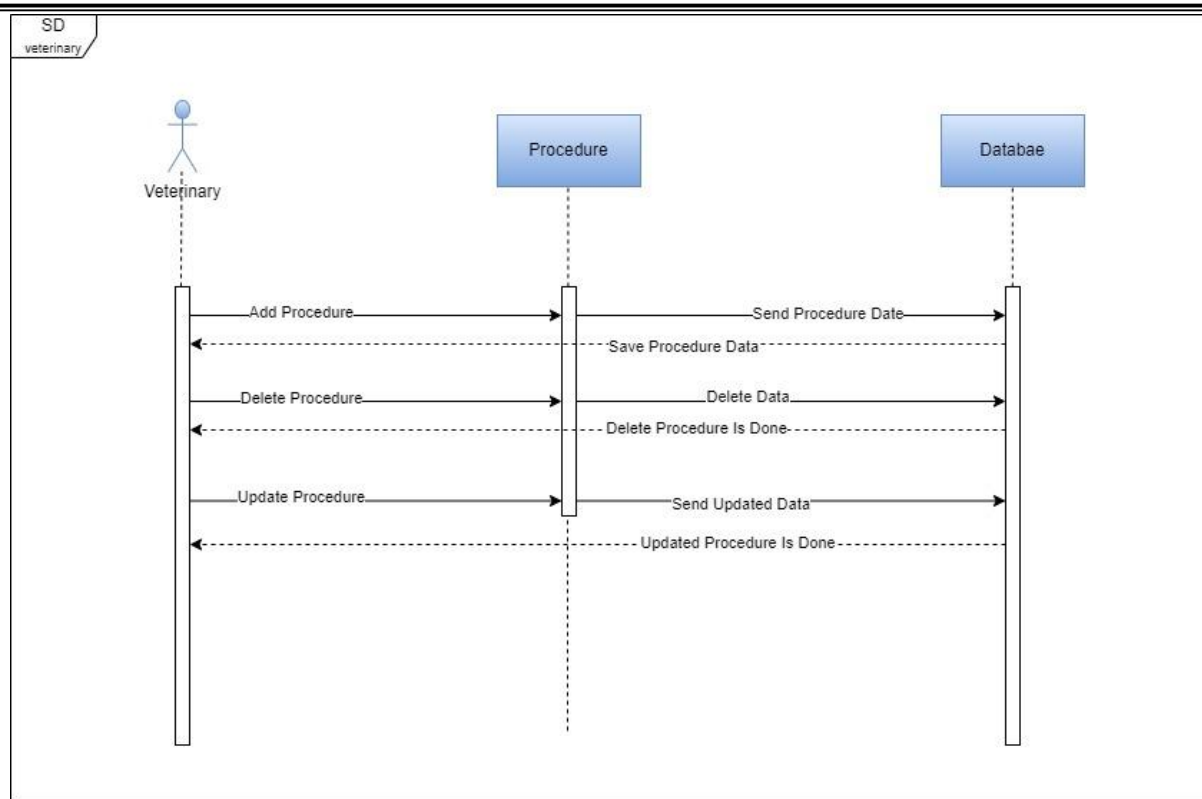


Figure 11 : SEQUENCE DIAGRAM FOR VETERINARY

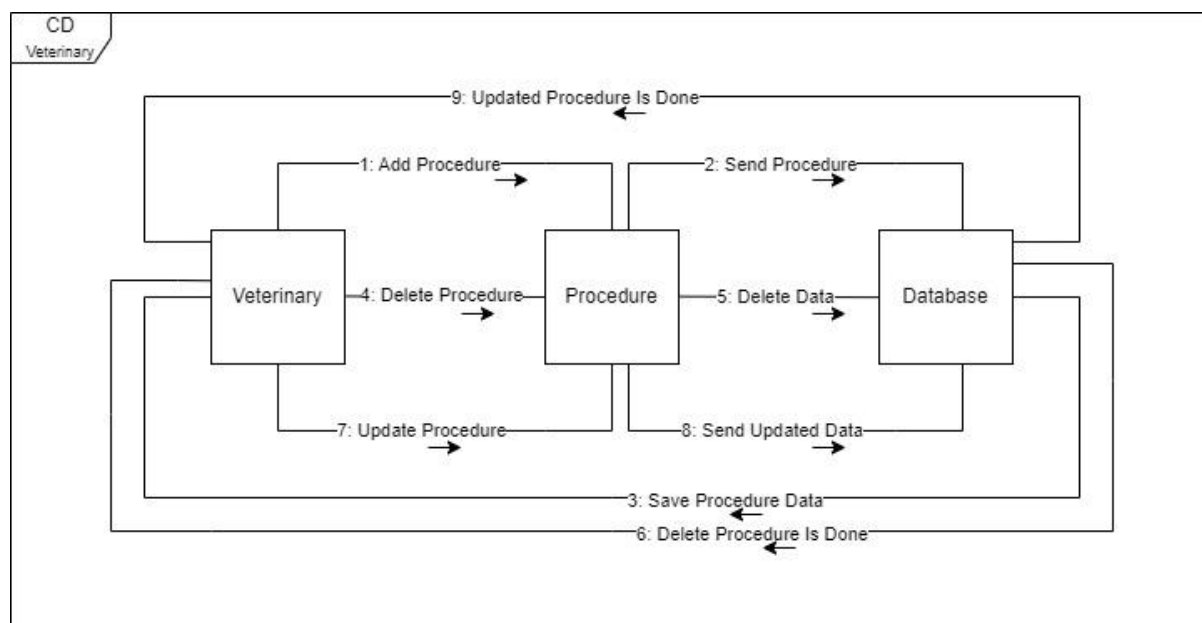


Figure 12 : COLLABORATION DIAGRAM FOR VETERINARY