

Veterinary Clinic Management System

For College of science Al Zulfi
Department of Computer Science and Information

Graduation Project

Submitted in partial fulfillment of the requirements for the
award of
Bachelor degree of the Majmaah University
(Semester 2, 2020)

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Acknowledgements

Thank anyone who helped you in your work such as your supervisor, technical staff, fellow students, external organization, etc. Acknowledge the source of any work that is not your own here and in the references.

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We are heartily thankful to our supervisor, whose encouragement, guidance and support from the initial to the final level enabled me to develop this project with clear direction and ensure that it is completed on time.

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Abstract

A prerequisite to the development of an efficient animal health, food safety and traceability management system in the animal food production chain is the implementation of an integrated veterinary informational management system (VIMS) capable for the capture, storage, analysis and retrieval of data and providing the opportunity for the cumulative gathering of the knowledge and capability for its competent interpretation. Such a system will enable collecting appropriate data, including quality management and inspection controls, from all establishments and commodities in the farm to food production chain (farms, holdings, slaughterhouses, laboratories, traders etc.) in a structured, predefined format, and facilitate competent analyses and reporting of such data, as well as the improvement of the existing programs and strategies.

The role of information system in animal disease diagnosis, surveillance and notification, control of national and international trade of commodities, food safety management, investigation of diseases, predictive microbiology and quantitative risk assessment is of great importance for the quality of veterinary service. Integral part of the VIMS is animal disease notification system designed according to and in compliance with international requirements, standards and recommendation and able to exchange relevant information with similar information systems. The aim of this contribution is to describe national animal disease notification system.

A system for management of a veterinary clinic. To make easier the administration of clients, employees, consultation (animal care), services and products. Providing the following basic features: animals, owners and employees registration, services and products maintenance also management of the consults.

**MAJMAAH UNIVERSITY,
COLLEGE OF SCIENCE AL ZULFI,
DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION**

(CERTIFICATE BY STUDENT)

This is to certify that the project titled “**Veterinary Clinic System**” submitted by me
(**Name of the student, Student ID**) under the supervision of **Dr. Name** for award of
Bachelor degree of the Majmaah University carried out during the Semester 1, 2020
embodies my original work.

Signature in full: -----

Name in block letters:

Student ID:

Date:

Introduction:

The goal of the system is to create a tool for managing the workflow of a veterinarian. There was a need for a light weight application that would keep track of patients, appointments, procedures and medication. All these vets need a web application to manage their work, clients, patients, medication, timetables, receipts.

In the second chapter we go through the methods, tools and techniques that were used developing the system.

The third chapter lists all the main features of the application and explains their functionality in more detail.

Fourth chapter tells about the planning of the project and includes diagrams, use case scenarios and lists that help the reader to get a better understanding of how the application works.

1.1 Problem definition:

Veterinary clinic is a web application that helps to store and manage information and procedures that vets have to deal with every day and keep track of the patients. The pages are made by HTML, the database is handled by MySQL, the application logic is controlled by PHP.

1.2 Some of problems:

- How to develop a module that will securely store all the information?
- How to develop a module that will easily search pet's information?
- How to develop a module that will update patient information?

1.3 1.1.2 Our goals:

- Provide convenient way of appointment reservation.
- Computerized patient's information and treatment review.
- Give clinic staff easy way in doing information maintenance and updates.
- Upgrade performance.
- Easy access to system options.

1.4 The importance of the project:

Veterinary clinic system had been established with the objective to help animals with a health problem or physically injured, giving a medical care to the pets, our project saves effort and time to serve the category of livestock owners.

1.5 Scope of study:

In order to complete this system, several scopes of study is in need to achieve The major scopes are discussed as follows:

1. To get information and proper procedure on handling animal health clinic database.

- There will be a research towards the current existing system.
- The procedure should be covering all possible aspects inclusive of update, add and delete.

2. HTML as the development platform.

- HTML will be used as the main development platform.
- There will be a study being done in connecting HTML with PHP.

3. Design of the interface to the user.

- The good user interface should be considered in this system.
- we will use HTML as the interface to connect the user and the clinic management staff.

1.6 Previous studies:

Website medical group DR SULAIMAN ALHABIB but we found some small problems

Problems:

One of the problems that we see is that the booking appointment is not organized for the client and the appearance of ads annoying and obscure the vision on the client, we need to go beyond all the above.

Goals:

- Booking appointments via the website.
- Result of tests via website.
- Raise awareness.

Result:

- Time Management.
- Increasing of demands.
- Booking speed.

Chapter 2

2.1 Feasibility study:

- a) Technical Feasibility The system was currently developed by using:
 - Language: PHP, HTML, CSS , javascript.
 - Web Browser: Internet Explorer, Mozilla Firefox, Opera, Google Chrome.

- b) Schedule Feasibility The development of the system is probably going to be completed within the allowed time frame, which is 2 semesters.

- c) Operational Feasibility After the system has been fully developed and tested, it will be hosted on the free web server for the testing purposes. If the system meets the requirement and needs of the animal health clinic, it can be proposed to be used at the animal health clinic.

How will the customer benefit from your products?

clients can avoid wasting their time, energy and money.

2.2 Product / service market:

Who is the target group?

Individuals (veterinary, pet's owner).

Who are the future competitors?

Websites and applications that follow the same approach.

2.3 Marketing Strategy:

What marketing methods will you use?

Social marketing and support from our university platforms.

Are the methods used to suit the target group?

Yes, because everyone uses computers and smartphone.

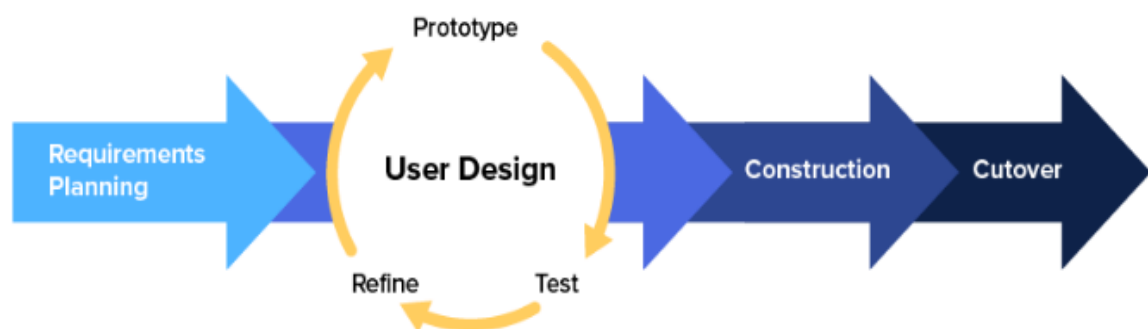
How will you stand out from your competitors?

Excellence in price and user-friendly designs is our goal.

Chapter 3

3.1 Rapid application development (RAD):

Rapid Application Development (RAD) is a form of agile software development methodology that prioritizes rapid prototype releases and iterations. Unlike the Waterfall method, RAD emphasizes the use of software and user feedback over strict planning and requirements recording.



3.2 Steps in Rapid Application Development:

- Define the requirements
- Prototype
- Receive Feedback
- Finalize Software

Advantages:

- ✓ More productivity with fewer people
- ✓ Development time is drastically reduced
- ✓ Reviews are quick

Disadvantages:

- ✓ Only suitable for projects which have a small development time
- ✓ Needs user requirement throughout the life cycle of the product
- ✓ Needs highly skilled developers

3.3 Functional requirements:

- ✓ Adding customer: the veterinary clinic system enables the staff to include new customers to the system.
- ✓ Record customer's basic data.
- ✓ Registration of pet details.
- ✓ search for a pet.
- ✓ Book a time for an appointment.
- ✓ View visit details.
- ✓ Remove medication or procedure from the application.
- ✓ Add medication or a procedure to application.
- ✓ update medication or procedure from the application.
- ✓ track the detailed information of pet, booking, appointment, medicine.
- ✓ doctors can view their patients' treatment records and details easily.

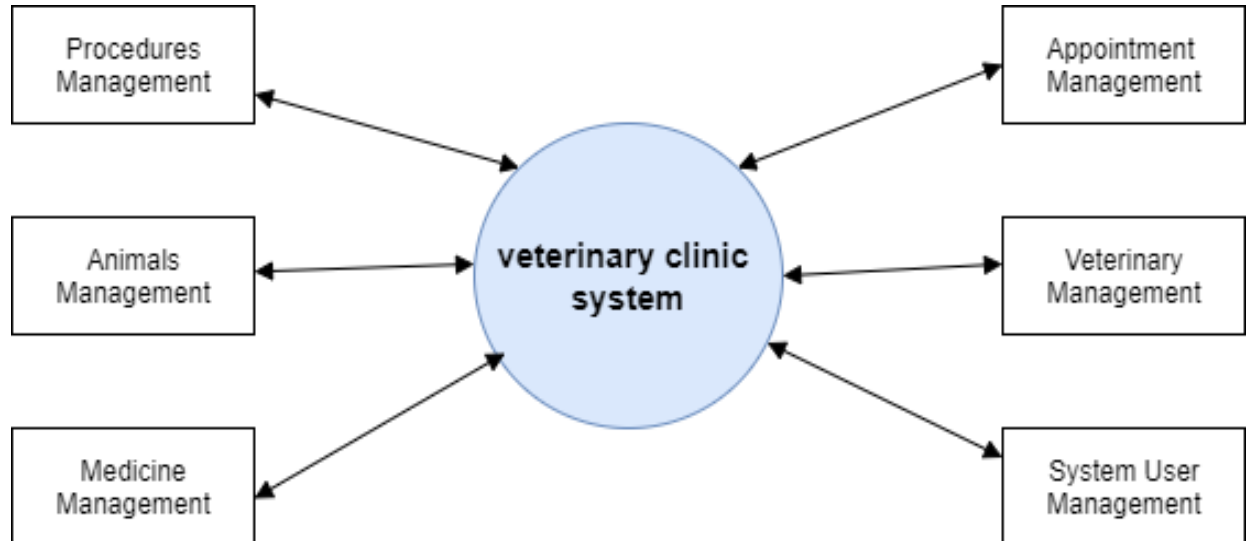
3.2 Non-functional requirements include:

- ✓ **Flexibility:** The system is convenient and flexible to be used.
- ✓ **Availability:** The system is available all the time.
- ✓ **Usability:** the system is easy to use by Staff.
- ✓ **Maintainability:** the system is easy to modify and maintain.

Chapter 4

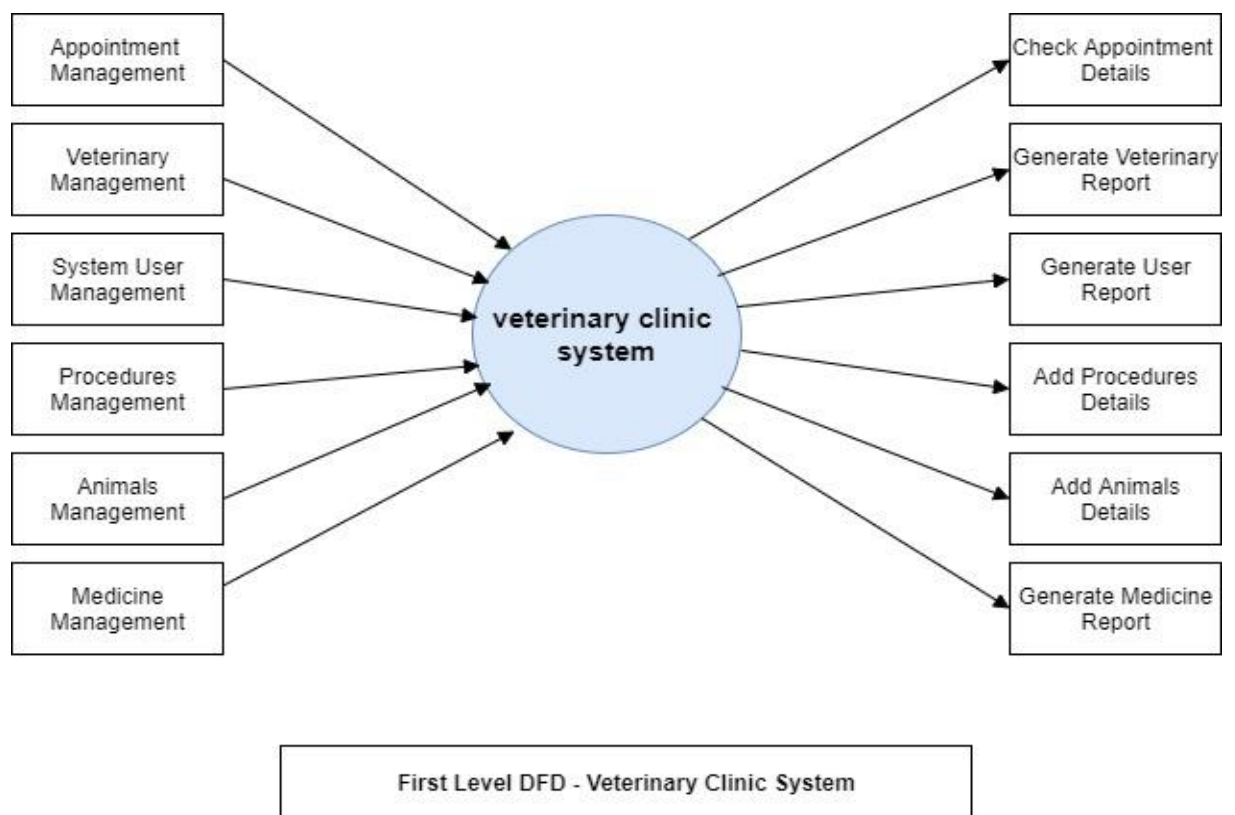
4.1 Data-flow diagram (DFD):

Level Zero

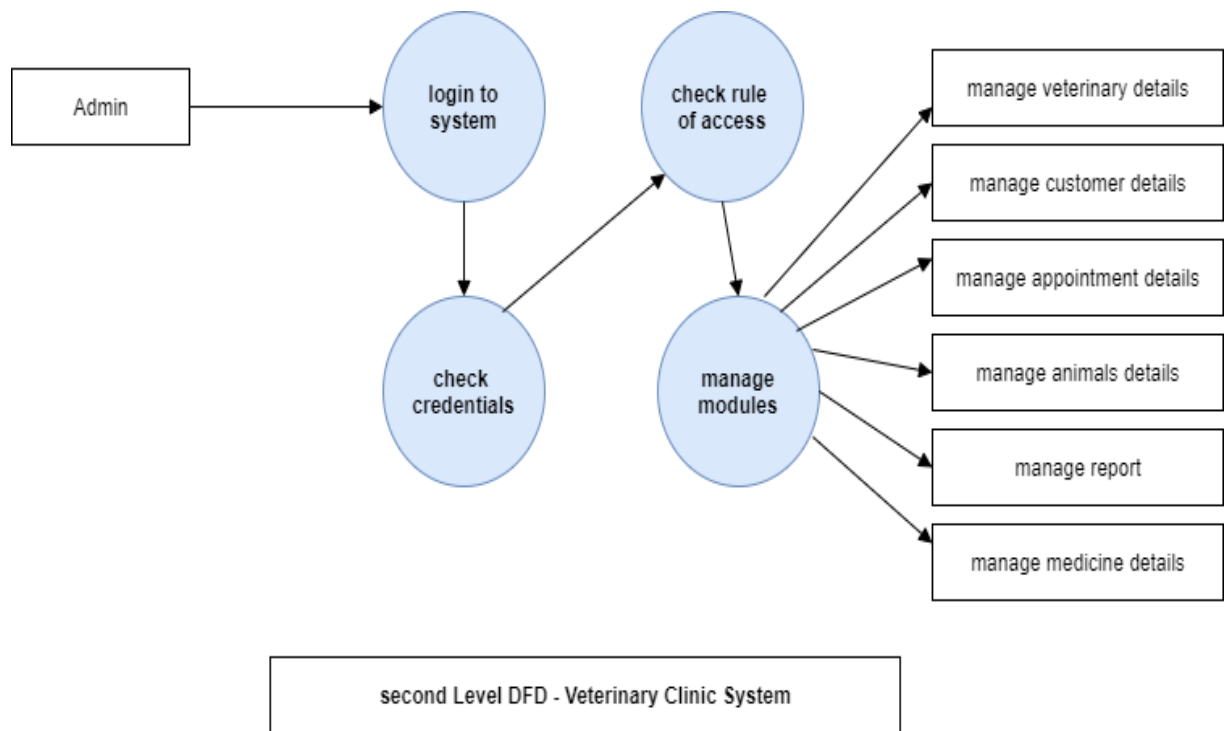


Zero Level DFD - Veterinary Clinic System

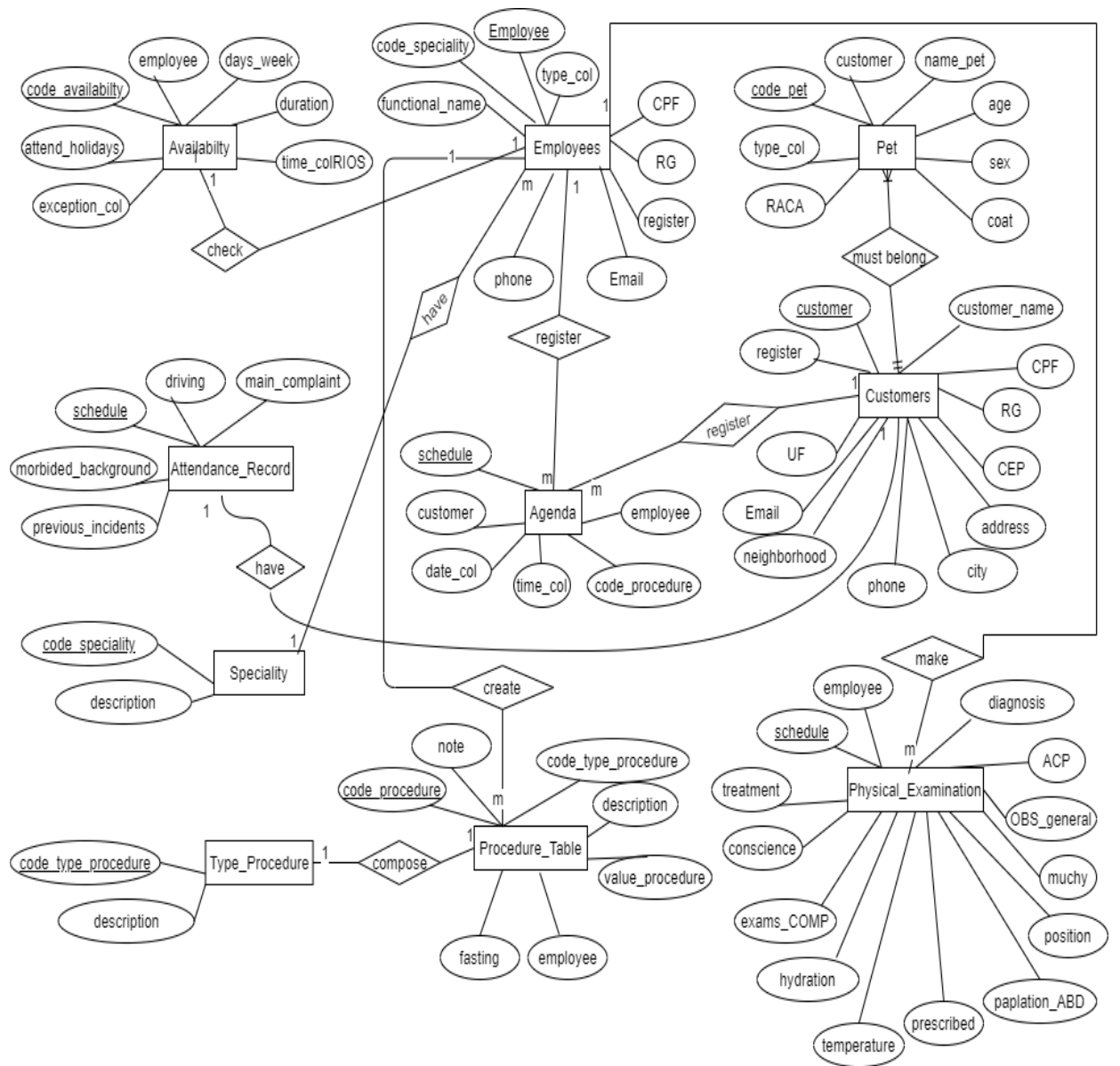
level One:



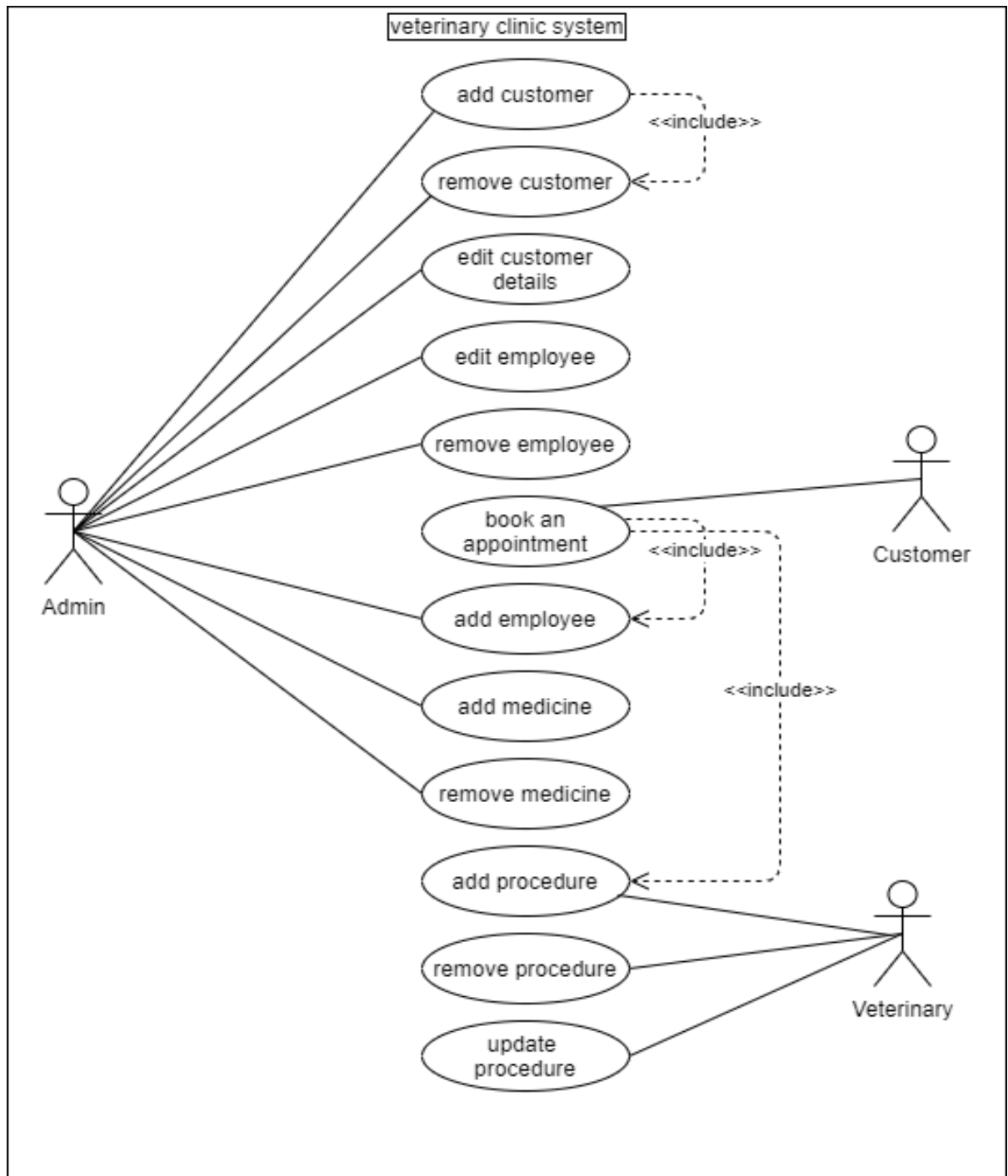
Level 2:



4.2 ERD:

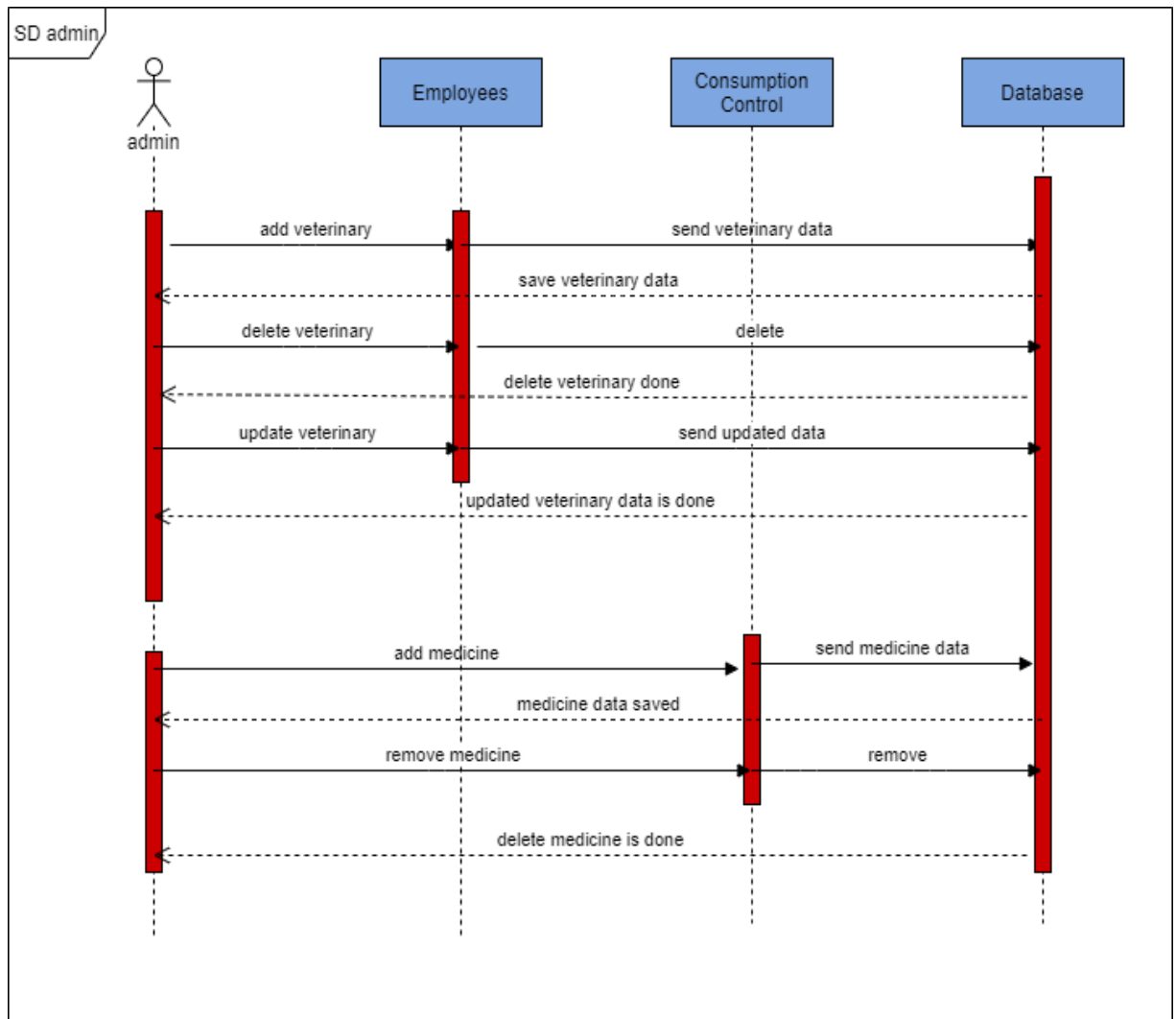


4.3 Use case diagram:

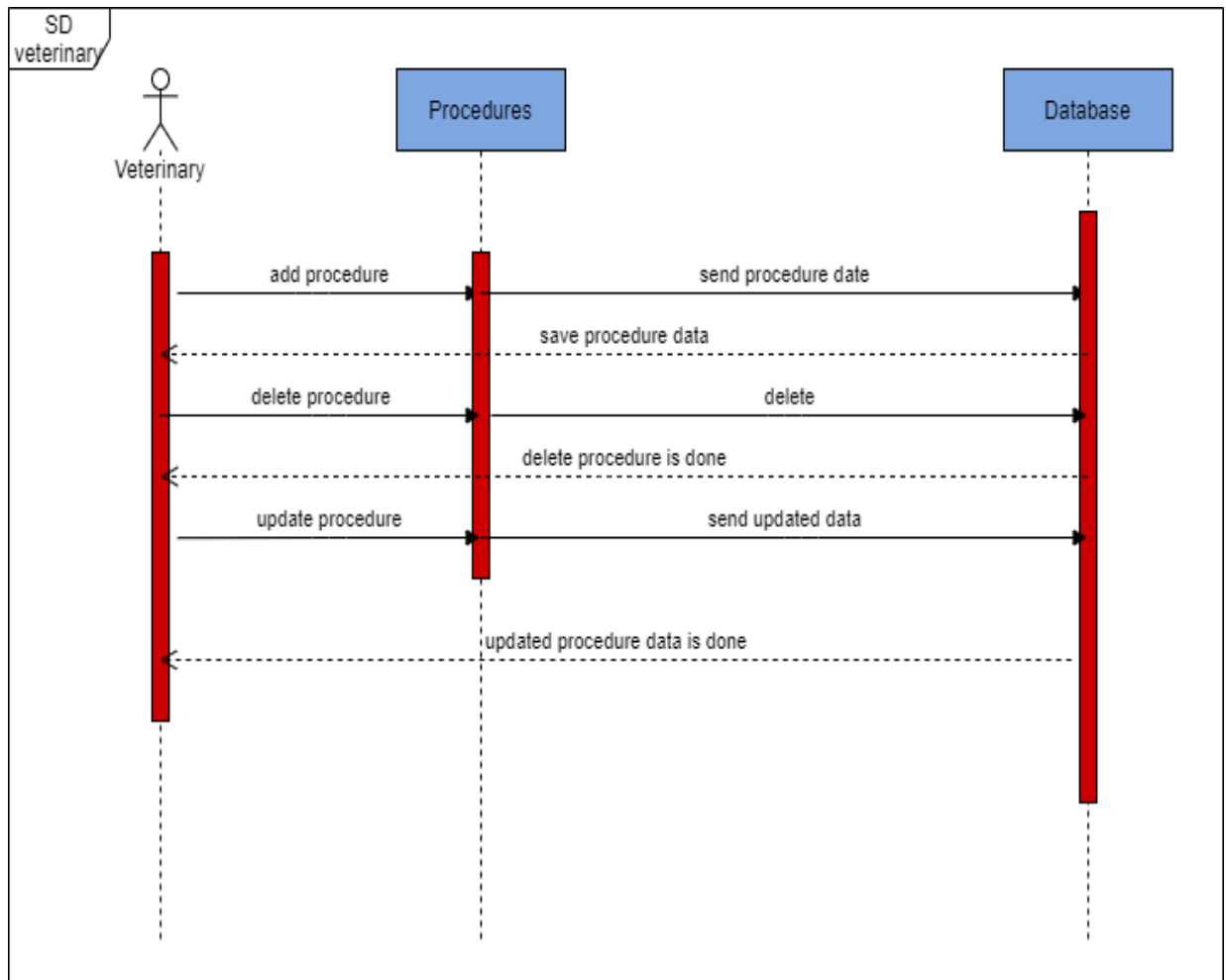


4.4 Sequence diagram:

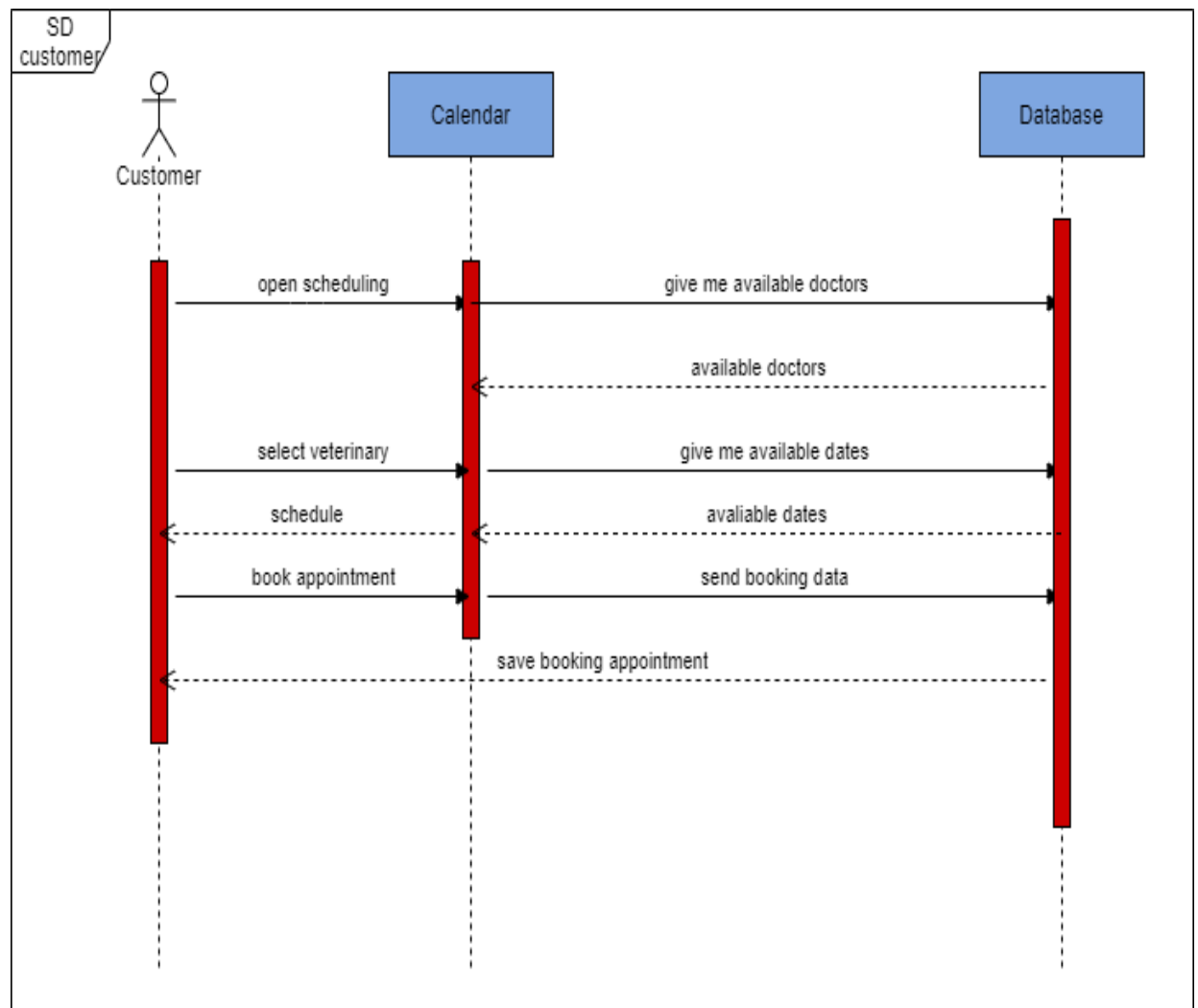
Admin sequence diagram



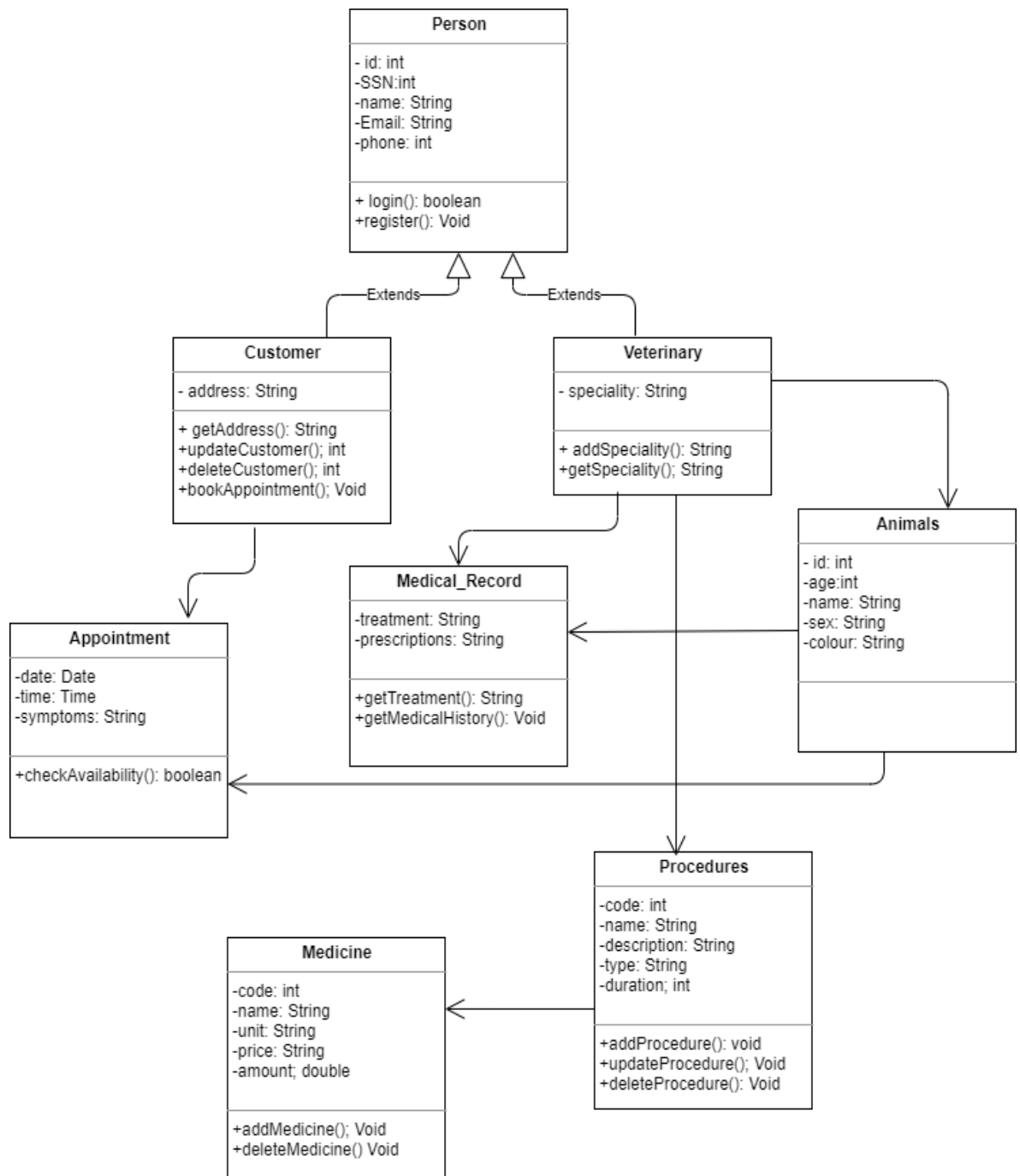
Veterinary sequence diagram



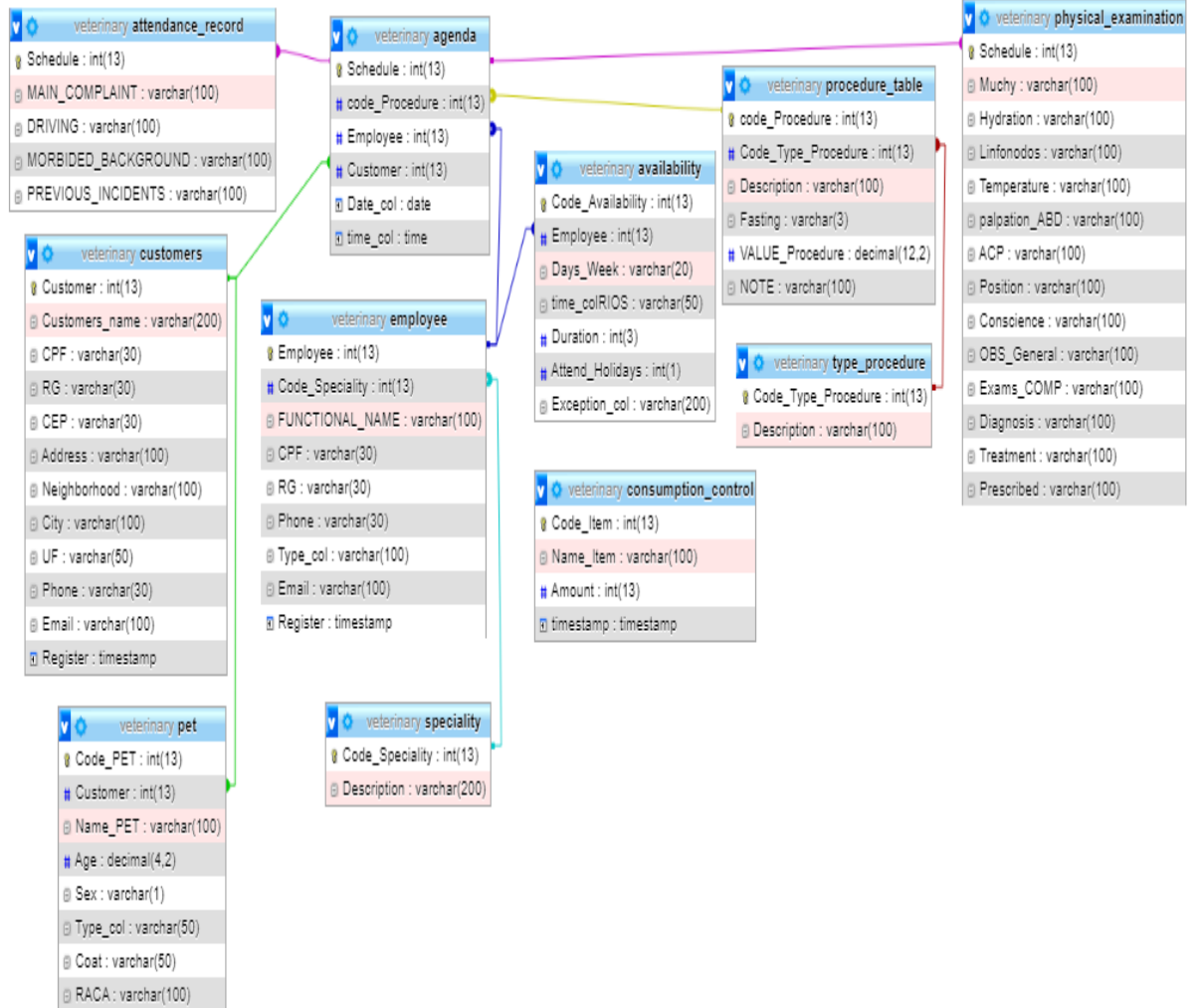
Customer sequence diagram



4.5 Class diagram:



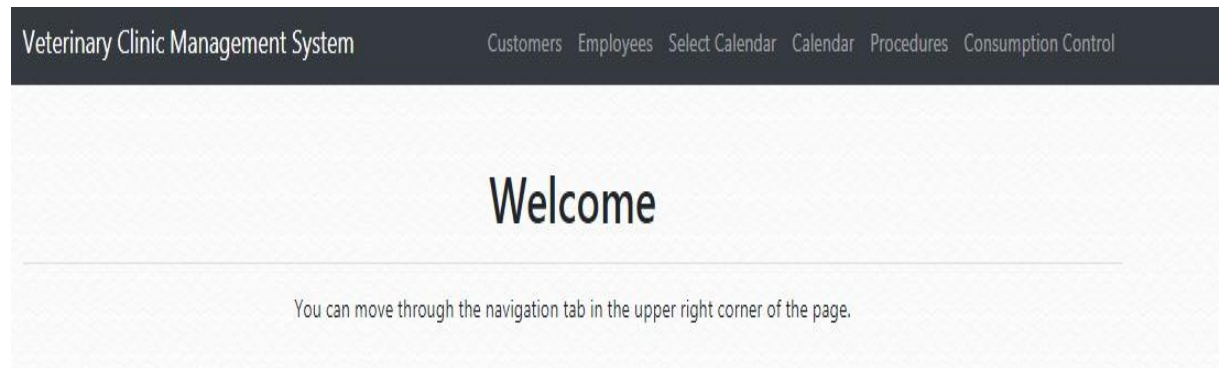
4.6 Database:



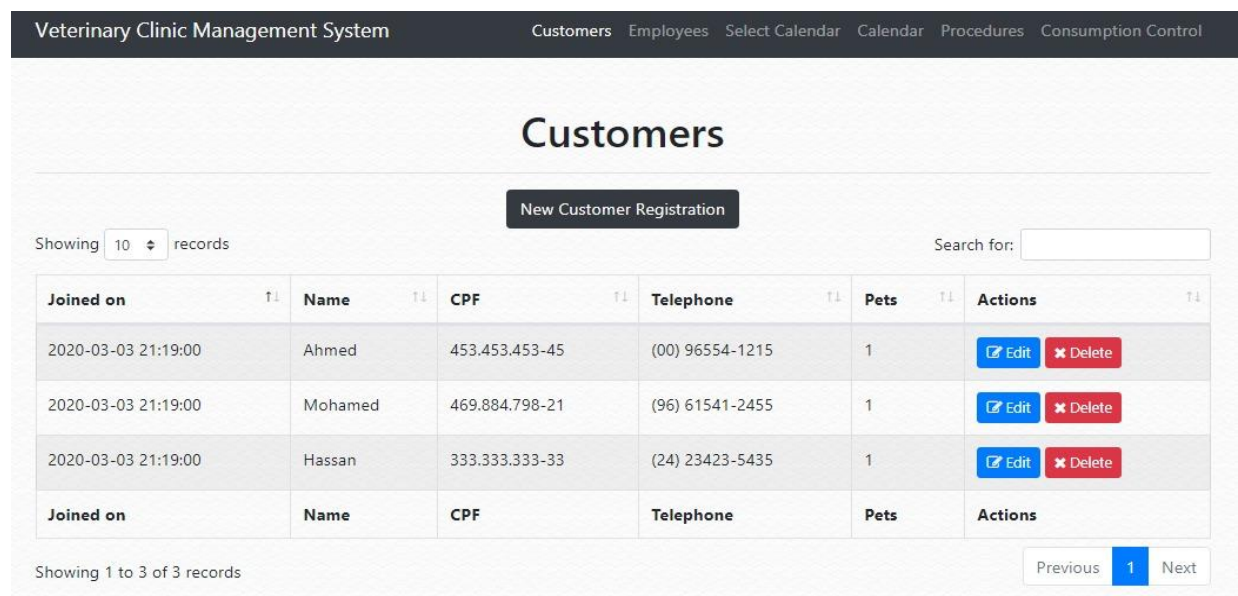
Chapter 5

Web Application Screenshots

Welcome Page



Customers Page



Edit Customer Page

Customers

[« Return customers list](#)

Owner Name*

CPF*

RG*

CEP*

City* State* Neighborhood* Street* No.*

Mobile*

Email*

Adding New Animal Page

Animal Registration ✕

Animal Name*

Kind*

Breed*

Sex*

Age*

Coat / Hair Type*

+ New Animal

Employees Page

Veterinary Clinic Management System [Customers](#) [Employees](#) [Select Calendar](#) [Calendar](#) [Procedures](#) [Consumption Control](#)

Employees

[Register New Employee](#)

Showing records Search for:

Joined on	Name	Specialty	Type	Telephone	Actions
2019-11-20 22:11:01	Mohamed Ali	Veterinary Surgeon	Gastro Surgeon	(96) 87445-2123	Edit Delete
2019-11-20 22:12:12	Fahd AbdElaziz	Veterinary Doctor	General Physician	(96) 45122-4784	Edit Delete
2019-11-27 22:49:12	Ahmed Swar	Veterinary Surgeon	Surgeon	(96) 74851-2324	Edit Delete

Showing 1 to 3 of 3 records [Previous](#) [1](#) [Next](#)

Adding New Employee Page

Employees

[« Return the list of employees](#)

Employee Name *

Specialty *

CPF *

RG *

Telephone *

Type *

Email *

Availability of Employee Page

Availability

Days of the week *

Sunday Monday Tuesday Wednesday Thursday Friday Saturday

Schedules *

09:00-12:00, 13:00-17:00

Average duration of each service *

30 minutes

Attend on National Holidays? *

No

Exceptions **(dates when the employee will not be available for emergencies or special occasions)**

Ex: 05/08/2018, 20/04/2018

[Save Data](#)

Select Calendar Page

Veterinary Clinic Management System [Customers](#) [Employees](#) [Select Calendar](#) [Calendar](#) [Procedures](#) [Consumption Control](#)

Select a calendar

- [Mohamed Ali \(Veterinary Surgeon\)](#)
- [Fahd AbdElaziz \(Veterinary Doctor\)](#)
- [Ahmed Swar \(Veterinary Surgeon\)](#)

Calendar: Mohamed Ali

[« Return employee selection](#)

[<](#) [>](#) Today

April 2020

[New Schedule](#)

[month](#)

[week](#)

[day](#)

[list](#)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3

Scheduling Page

Scheduling

Type of Procedure *
Image

Procedure *
X-ray

Employee *
Mohamed Ali (Veterinary Surgeon)

Customer *
Ahmed - (00) 96554-1215

Date *
10/04/2020
Today is **08/04/2020** - Wednesday
Closer dates with available times: **08/04/2020, 09/04/2020, 10/04/2020, 13/04/2020, 14/04/2020.**

Select a Time *
15:00

[Schedule Time](#)

Procedures Page

Veterinary Clinic Management System Customers Employees Select Calendar Calendar Procedures Consumption Control

Procedures

[Register new Procedure](#)

Showing 10 records Search for:

Description	Type of Procedure	Fasting	Procedure Value	OBS	Actions
Castration	Surgery	Yes	R\$ 80,00	Levar o animal com uma guia	Edit Delete
Gastrointestinal	Surgery	Yes	R\$ 250,00	Cirurgia gastro intestinal.	Edit Delete
General	Query	No	R\$ 80,00	Consulta geral.	Edit Delete
X-ray	Image	Yes	R\$ 80,00	Exame de imagem raio-x.	Edit Delete

Showing 1 to 4 of 4 records Previous 1 Next

Add New Procedure Page

Procedures

[« Return the list of procedures](#)

Description of the Procedure *

Type of Procedure *

Fasting? *

Value Procedure *

Note *

[Save Data](#)

Edit Procedure Page

Procedures

[« Return the list of procedures](#)

Description of the Procedure *

Type of Procedure *

Fasting? *

Value Procedure *

Note *

[Save Data](#)

Consumption Control Page

Consumption Control

#	Item Name	Quantity	Date / Time	Actions
23	RAGE VACCINE	2	2020-02-26 03:01:12	✖ Delete
24	BAND AID	5	2020-02-26 03:01:38	✖ Delete
25	Test_Medicine	20	2020-02-26 03:02:06	✖ Delete

Item Name

Quantity

Actions

Conclusion:

Veterinary clinic System is a website that provides useful information to the users. Users can be a pet owner or vice versa. Pet's owner can fill up online appointment form through the website. Not only that, the website also provides online boarding reservation form and pet grooming form. It makes it easier for pet's owner to fill it right in front of their computer. This project was expected to be one of the most useful systems for veterinary clinic because clients can avoid wasting their time, energy and money. With the existence of this website, it will act as a medium of interaction between the client and the clinic management staff. Clinic administrators can update any recent activities related to pets on the website front page.

Future Work:

The website is basically providing useful information and filling up forms through online for the users. There are not so much interesting pictures related to animal in the website. Recommendation: we recommend using flash for the next innovation or improvement of this system so that the website will be more interesting and cheerful.

5.3 References:

- <https://creatly.com/>
- <https://www.draw.io/>
- <https://kissflow.com/rad/rapid-application-development/>