Software Requirements Specification

for

VET CARE

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

This document includes specifications and features of the software in detail. It helps understand the target audience and user classes accordingly and internal and external interface requirements.

1.1 Purpose

This app solution helps animals' owners take care of their animals in the best way possible, meeting all their requirements without stepping outside of their homes. The app works with the aim to offer animals health-related services and information. This software solution comes integrated with animal's medicine prescription, Vet consultation, seamless search operation, and Artificial Intelligence aided tools to enhance pet healthcare.

1.2 Document Conventions

The mobile application developed is aimed at all workers of veterinary clinics, whether these are doctors or veterinary nurses. The main use scenario of the application will be to remind a doctor or veterinary nurse about treatments to be performed on a particular animal or even which medication to administer, when and at what dose. After performing the respective task,the employee who performed it, can complete that same task with just one touch.

1.3 Intended Audience and Reading Suggestions

The intended audience for this documentation should have some technical knowledge of the inner workings of software development. It is not required but it would help to fully understandeverything presented. It is directed towards developers, project managers, testers, and documentation writers.

Depending on the type of reader more emphasis should be placed on aspects of the requirements that are more relevant to them. Testers should place more focus on the requirements list. project managers should focus on the technology used for fulfillment of the requirements.

1.4 Project Scope

The scope of the project includes the following:

- Display readily viewable information requested by users.
- Assist in the improvement of waiting time at Animal Care facilities.
- Once released the software will be placed in kiosk on facility grounds or on mobile devices.

1.5 References

1. Documentation provided by LAC representatives
2. Sample Database provided by LAC representatives
3. Native Script
   Documentation
   Release version: 5.0
   Release Date: November
   2018 Located at:
   docs.nativescript.org
4. Native Script-Vue
   DocumentationRelease
   Version: 2.0
   Located at: nativescript-vue.org/en/docs/introduction
5. Loopback Documentation
   Release Date: October
   2018
   Located at: loopback.io/doc/en/lb4
6. LA County Animal Care and Control
   WebsiteLocated at:
   animalcare.lacounty.gov
7. Lunar's Documentation
   Located at: lunrjs.com/docs/index.html

2. Overall Description

The application will be created for use on the tablet and mobile devices. It will contain features that will help improve the user experience when visiting Animal Care and Control location. It will assist the user in finding the information that they need in a more organized manner or forwarding them to a help desk associate that can assist them with their needs.

2.1 Product Perspective

The application will interact with the user to gather information and requests and then relay it back to the database to conduct search or data entry into the system. It will work in cooperation with the database to be able to pass the information needed back and forth betweenthe two. This application is a new innovative software designed with the purpose of assisting the Animal Care and Control employees and customers to have a better and easier experience when at one ofthe facilities. Its features and design are all a product of the requirements and planning of the team assigned to the project.

2.2 Product Features

The main purpose of the Animal Care and Vet application is to allow the user to access the information that they need so that they can have their answer questioned or service provided. The information/features that will be provided by the application include:

- FAQ
- Animal Adoptions
- Animal Check-in
- Special Events
- Donation
- Contact Us

2.3 User Classes and Characteristics

There are generally two classes of user that will be using the application. The first class of user issomeone who wants to be informed and prepared when they decided to visit an Animal Care and Control location. Based on the reason for their visit to the location they will be able to inform themselves on the subject before they arrive at a location.

The second class of user that would generally be using this application is one who just shows upat one of the locations for one of the services provided whether it is to adopt an animal, register an animal or look for a lost pet. They will be able to interact with the application on site throughthe Lollypop (5.1) and be forwarded to where they need to be.

2.4 Operating Environment

The operating environment for the application will depend on the device that it will be running on. The Lollypop (5.1) version will be on an Android operating system, the downloadable application will depend on the user's device which will work with either Android or iOS. The operating system will not affect the application in a negative way it will be able to work as intended on either operating system.

2.5 Design and Implementation Constraints

The primary target for the application is an Android Mobile that will serve as the Lollypop that will be located in one of the facilities. There will not be any specific hardware constraints other than that since most smartphones can run the same applications as tablets and this application will not be hardware intensive. It will however be required to have constant communication with the servers which contain the database for all of the information that will be passed between application and user.

2.6 User Documentation

The application will be created in such a way that no documentation will be needed, one of the requirements for the application is that it is simple to follow and use for the user.

2.7 Assumptions and Dependencies

As stated, before the application will be created based on the assumption that it will provide access to core device features while the operating system is either Android or iOS it will work

3. System Features

Following are the major features of the system. The detail description of each feature is given below:

3.1 System Feature 1-For Doctors

3.1.1 Description and Priority

The feature will allow doctor to access database record and give the information to farmers accordingly.

Stimulus/Response Sequences

1.The doctor will be able to login and register.

2. The user's data will be automatically added to the database, The doctor will be able to see the farmers request and complains.

3.1.2 Functional Requirements

FE-1: Invalid login:

1. User enters wrong id and password
2.Farmers can see their given request.
3.Farmers get the notification if the doctor give the given solution.

3.2 System Feature 2- For Farmers

3.2.1. Description and Priority

1. Farmers must send his animals signs in the form of image or text.
2.Farmers must register first and subscribe.

3.2.2. Stimulus/Response Sequences

1.The farmers will be able to login and register

2.The Doctor will be able to see the Farmers address.

3.2.3 Functional Requirements

1.Email id should be correctly entered.

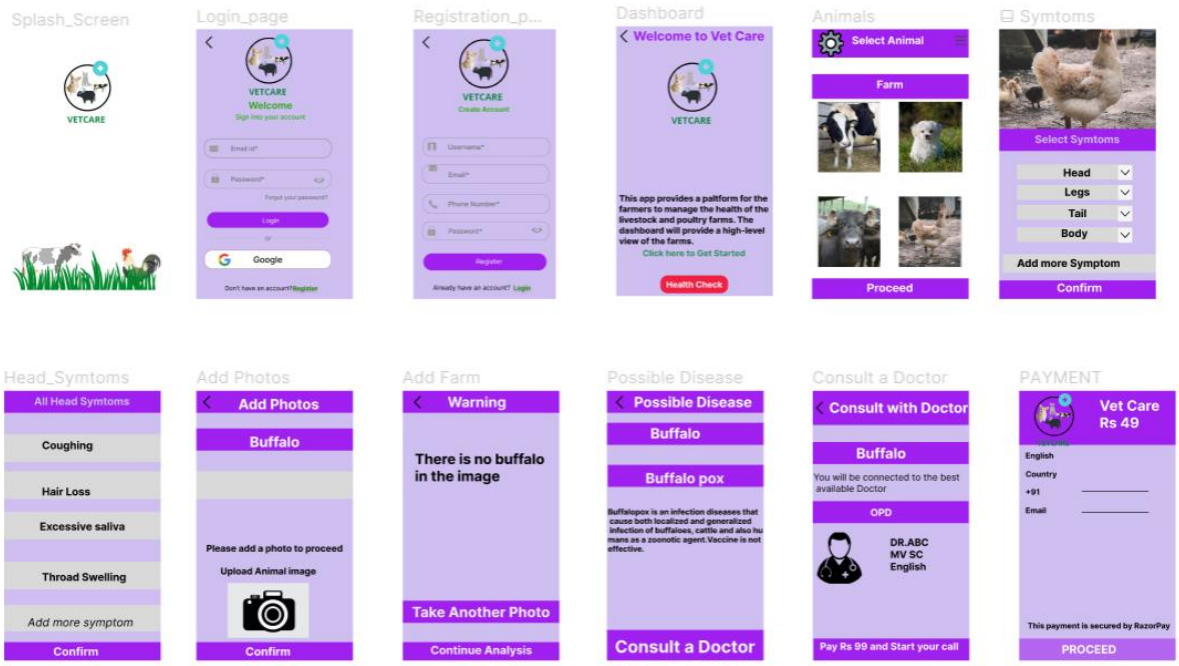
2.Doctors can get the notification about the Farmers request.

3.Doctor can accept or reject the notification.

4. External Interface Requirements

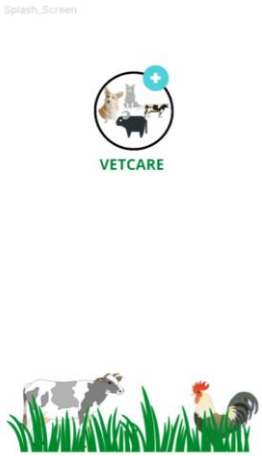
4.1 User Interfaces

The user interface shall begin with the main page which will contain buttons for each of the available services. Upon the selection of a service the user will be directed to a separate pagecontaining the required information.
When the user selects the Adoption page, they shall be forwarded to a scrollable page withimages of animals available for adoption.
When the user wants to view the FAQ, they shall be directed to a list of the available questions and answers and will also have the ability to ask their own question. Upon failure to find the question requested a ticket request will be available to the user to be submitted to speak to a frontdesk clerk.There will be measures implemented to ensure that the application is accessible to people withdisabilities.



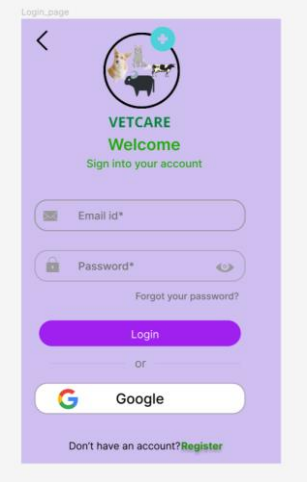
Figma Wireframe:
https://www.figma.com/file/tDT1WbWV2JXOT3UBlecWZj/Untitled?node-id=0%3A1

➢ Splash Screen



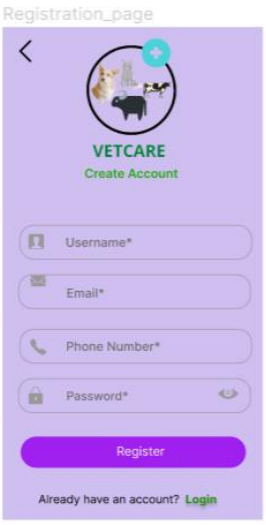
Splash Activity:This is the first activity when the app is open this screen appers at first it contains an image which is attached using image view. After 3 sec this screen will be closed and the next screen will be opened.

➢ Login Page



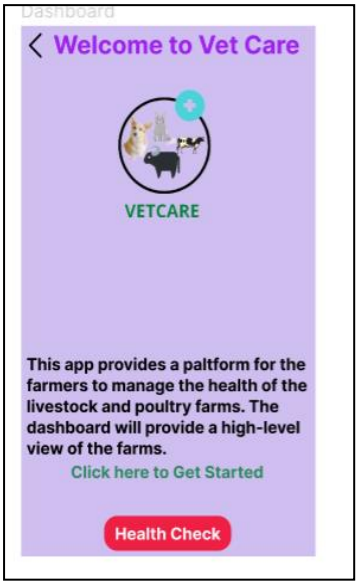
This is the Login Page, This page contains an image on the top. Below the image we have used a text box for Welcome and Sign to your account. Below the text view we have used the two edit text for email id and password for login. We have kept a button Login to sign in to our app when the email id and password is valid .After the Login button we have used an sign in with google option. The work consists of only two activities: the Login and Main activity. The Main Activity is the main **Activity** where all the fragments developed for the application regarding the different functionalities are inserted. The decision to use several fragments instead of **Activities** was based on small research in which it was possible to conclude thatit is a good programming pattern in Android to use several fragments linked together, as well as the fact that the initialization of an **Activity** consumes more time and memory than initializinga Fragment. Putting these facts together, what was taught in classes and knowing that Fragments appeared on Android as a way to create reusableinterfaces, it was then decided to use several Fragments instead of several **Activities.** This decision made it easier for us to use a **Navigation Drawer** (which will be explainedbelow), since it is common to all fragments and is inserted in the Main Activity. At last we have used text view for don't have an account and also a clickable text view Register when the user click this register it will redirect to registration page.

➢ Registration Page



Registration activity is the activity in which there is some box which take the information of the users until unless the user does not fill the details the user cannot access or login otherwise user has been sign in with google or some other authentication. There is username, email, password and phone number and registration button when the user hit the button with proper field he can access by login and the details of the user can be stored in the firebase fire store. If user is all ready registered then he can hit or click login text and the user will be login activity.

➢ Dashboard

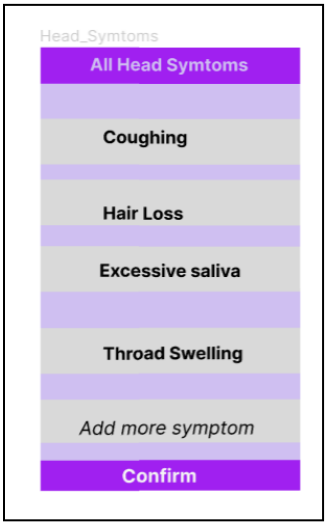


After the Successful Registration, Customers will come in Dashboard Page, where the customer can read about the APP with high level view of the farms. And they can proceed further for health check for their animal by clicking on Health Check Button.

➢ Animal Selection Page

By clicking health check , the customer come in their required animals problem field, and customers need to select that animals which is suffering from different diseases. After Successful Selection of animals the customer need to click on proceed button for further verification. The Navigation Drawer is an important element of the main UI as it allows navigating to any of the fragments where the main features developed are implemented. This component shows useful information to the user, such as the name and email of the clinic through which the user logged in and thebuttons that can be used to navigate through the application.

➢ Symptoms



After Selecting animals , the problem which appears on animals customer need to Verify the Symptoms from the given option which are given from our side. If the Given Symptoms are not include in the drop down menu then Customer need to click on Add more symptoms and need to Manually types the given symptoms. And confirm for further process.

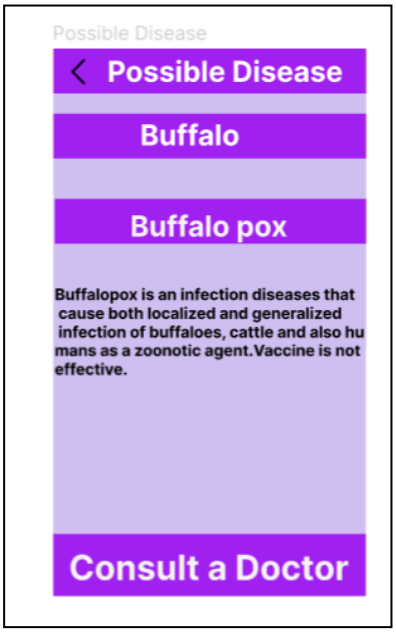
➢ Add Photos

After getting all the symptoms user need to click the animals symptoms photo and upload , After Uploading the photo user need to click on confirm button for further Process.

➢ Warning

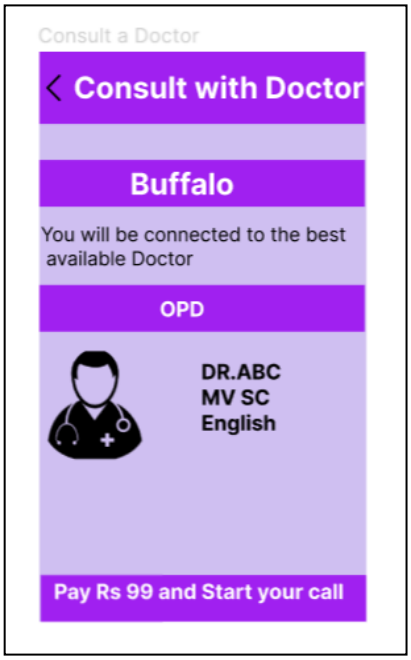
After Uploading photo of animal if the Photo is clicked on well mannered then only the System will take to it's database otherwise it will suggest for another one. If user Satisfy with his clicked photo he can Process it by Clicking Continue Analysis button.

➢ Possible Diseases



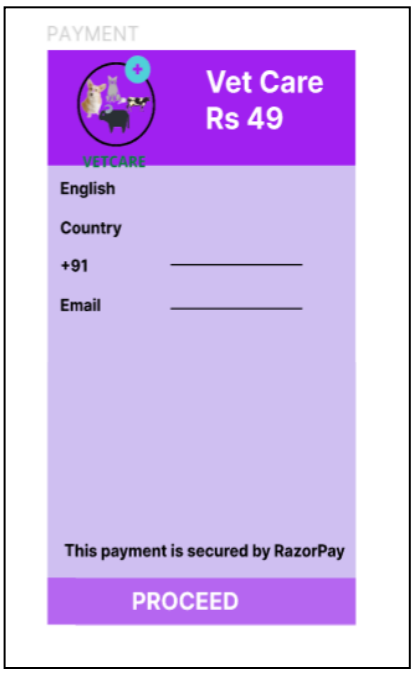
After Clicking analysis Button, the Summary with be shown of the Given Symptoms provided by User. After Satisfaction of user, User can Go for help of doctor by clicking consult a doctor

➢ Consult With Doctor



After Clicking on the Consult with Doctor , User can choose the different doctor , the doctor which user want to contact he can contact with him personally by paying the certain Amount as a Fee of Doctor.

- **Payment**



After Clicking on consult with Doctor User need to pay some amount. And the payment method is showed in this Page.

Hardware Interfaces

There are no Hardware interface requirements currently.

4.2 Software Interfaces

The application is being built with the android studio and database connectivity with Firebase.

4.3 Communications Interfaces

The application shall use the HTTP? HTTPS protocol for communication over the internet.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Some performance requirements that the application will have include:

- Page to page transition will be performed in a timely manner
- Images shall be rendered with appropriate pixel definition
- Search and results shall be performed in a timely manner

5.2 Safety Requirements

There are currently no safety requirements.

5.3 Security Requirements

1.Every user must change his initial password after first successful login.
2.Every user must update their profile timely.

5.4 Software Quality Attributes

The application shall be made to be updated whenever necessary. The application shall beavailable to users indefinitely, but will be informed should maintenance interrupt service.

6. Other Requirements

There are no other requirements currently. This might change in the future as the implementation of the application progresses.

Appendix A: Glossary

Lollypop - in this sense the Lollypop referred to will be an android

based Mobile.

HTTP - Hypertext Transfer Protocol, is the underlying protocol used

by the World Wide Web and this protocol defines how messages are

formatted and transmitted, and what actionsWeb servers and browsers

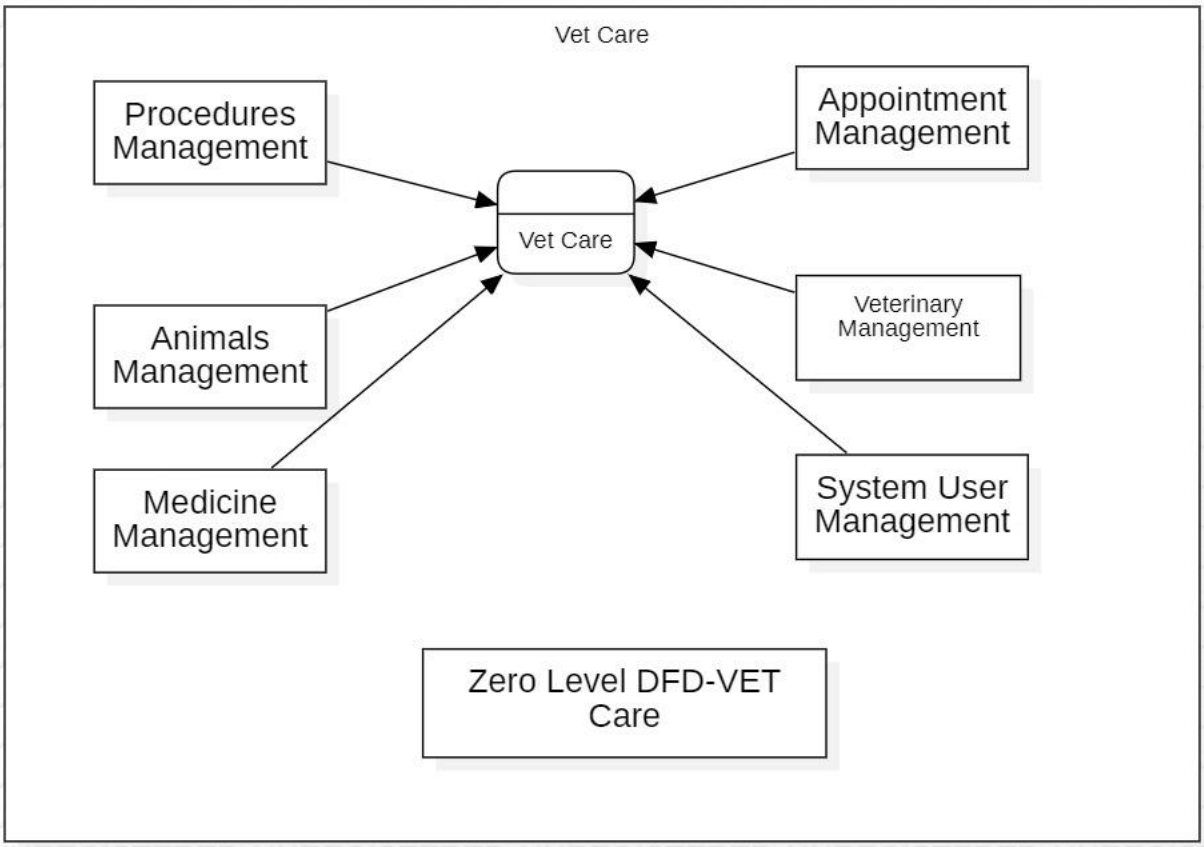
should take in response to various commands.

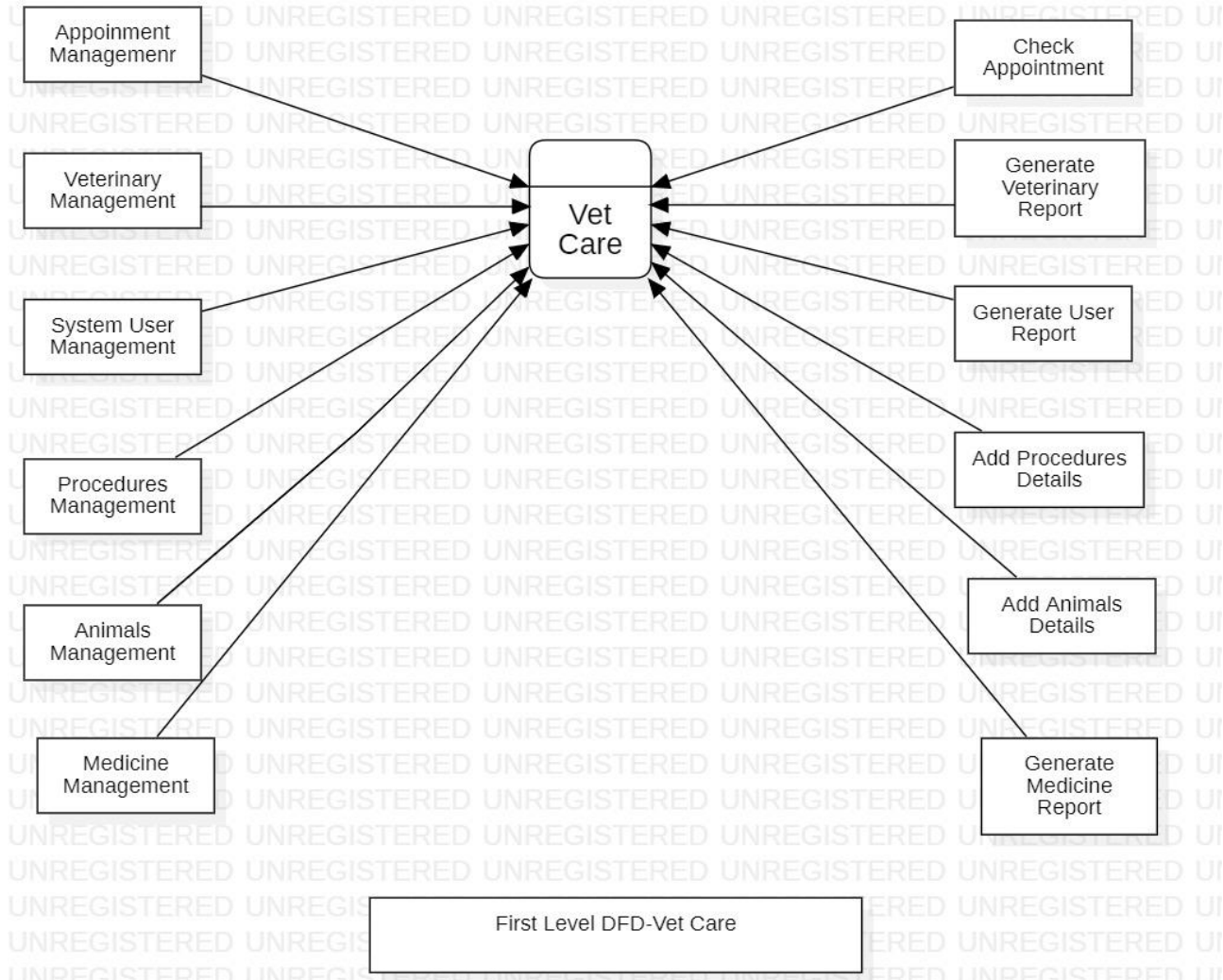
GUI - Graphical User Interface, is a form of user interface that allows users to interact with electronic devices through graphical icons and visual indicators such as secondary notation, instead of text-based user interfaces, typed command labels or text navigation.

Module - each of a set of standardized parts or independent units that can be used to construct amore complex structure.

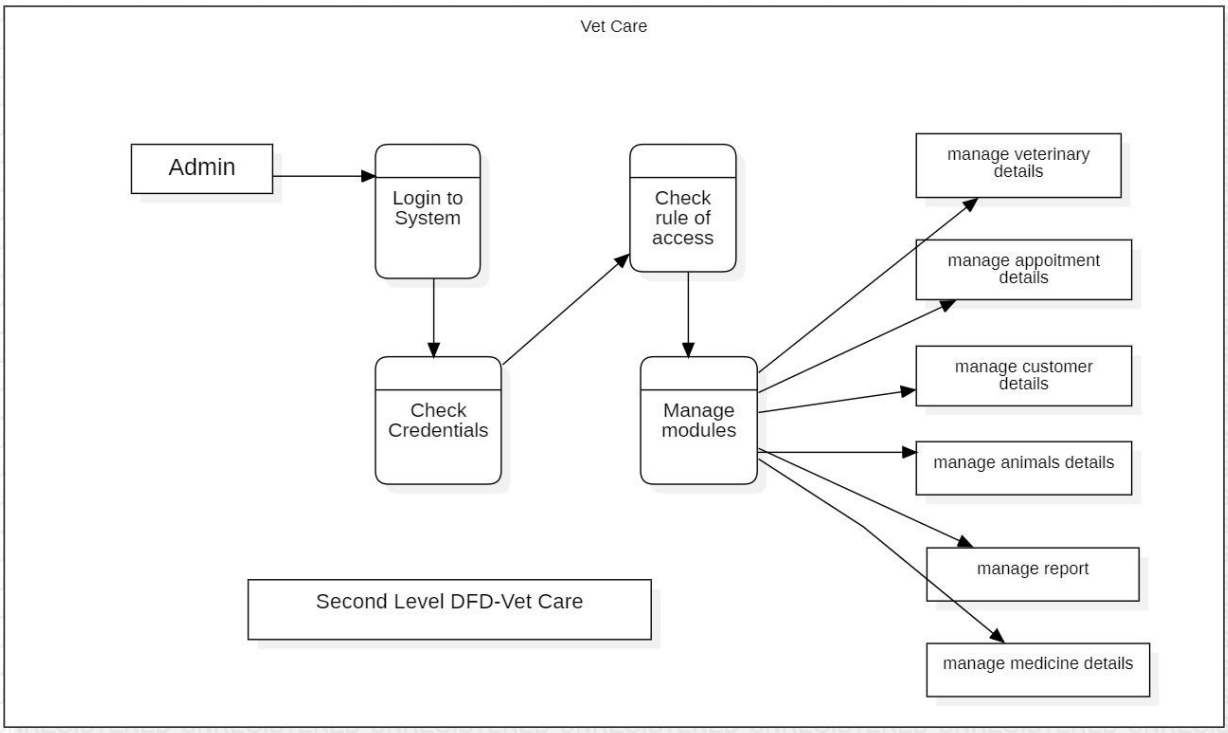
Appendix B: Analysis Models

DFD:

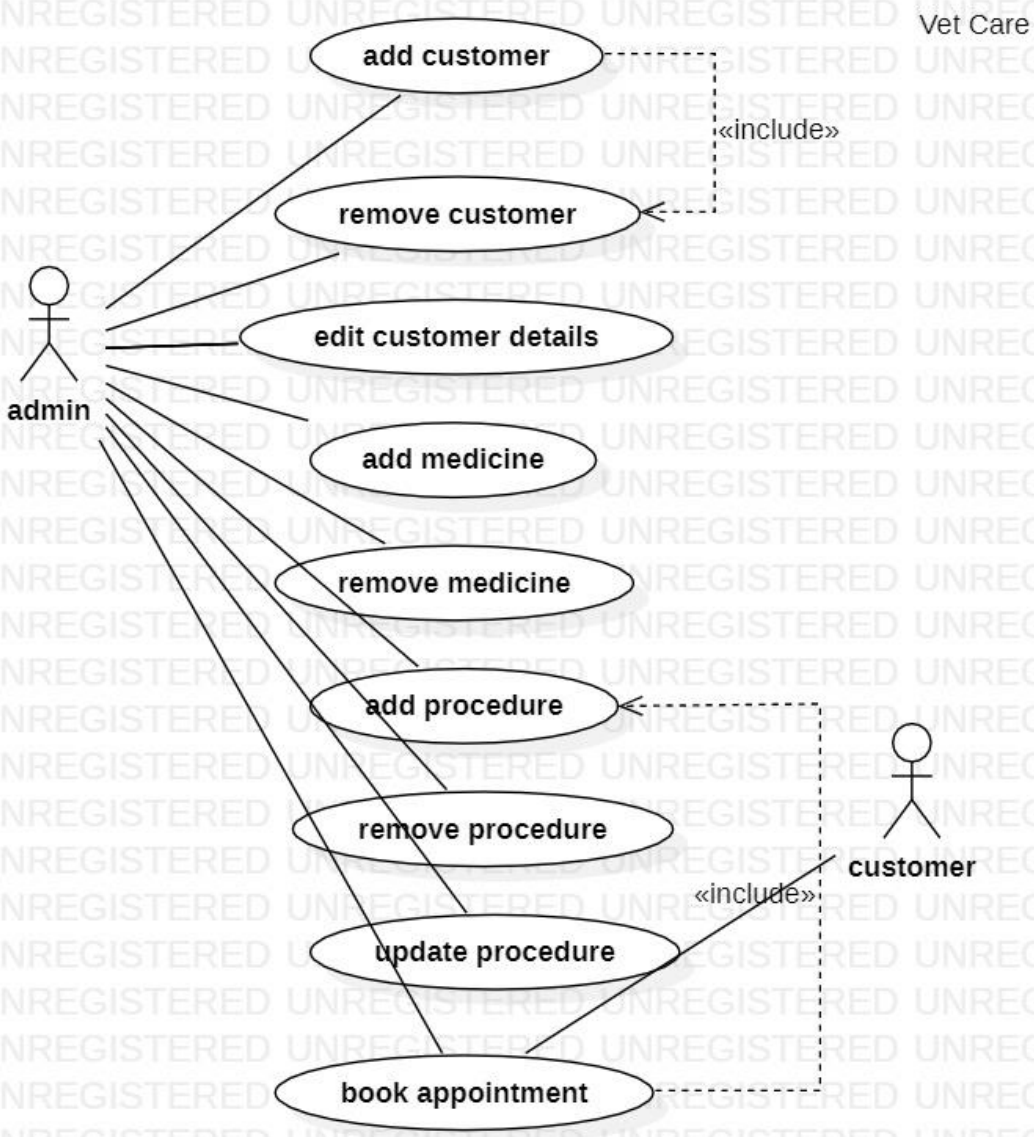




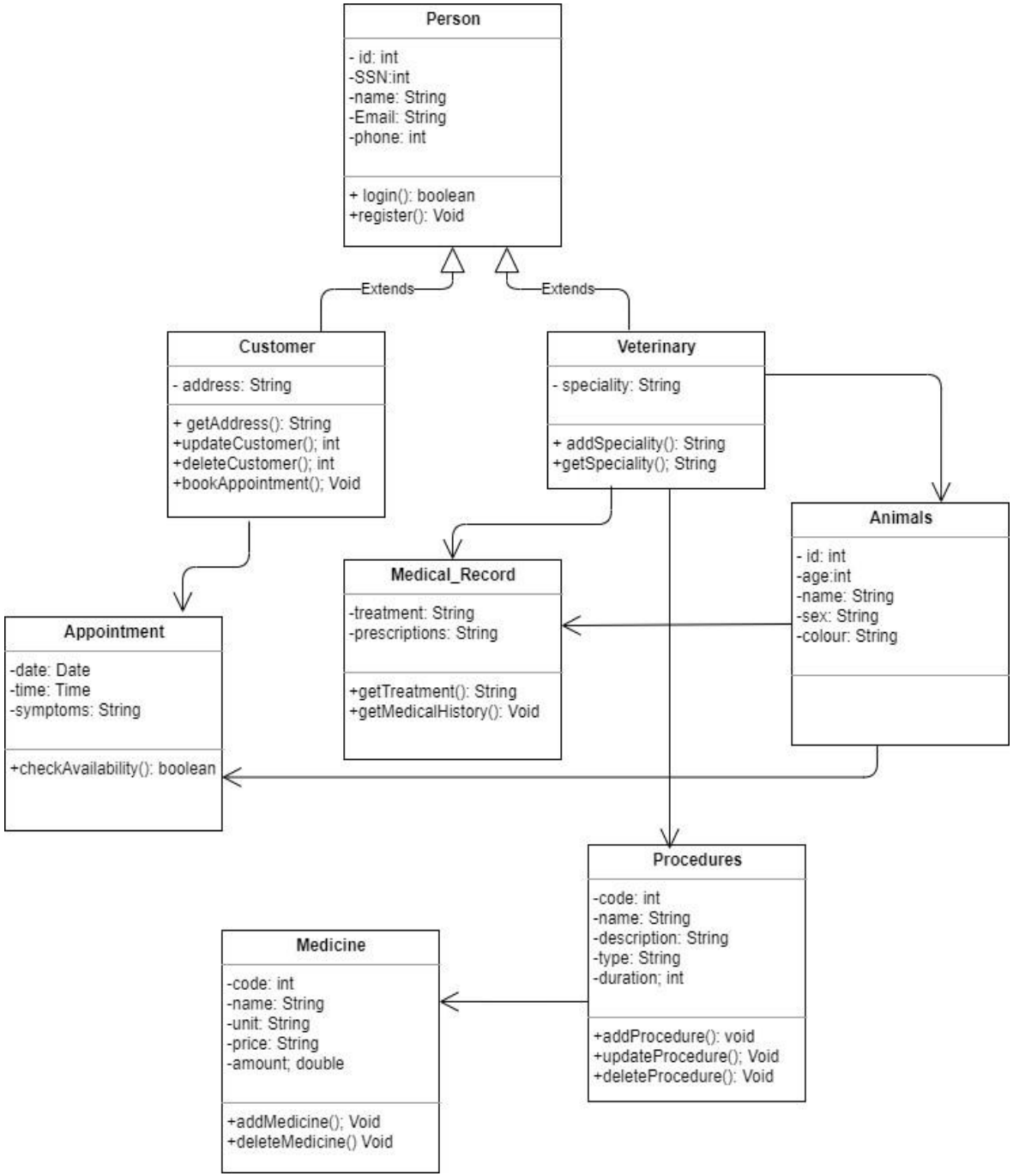
First Level DFD-Vet Care



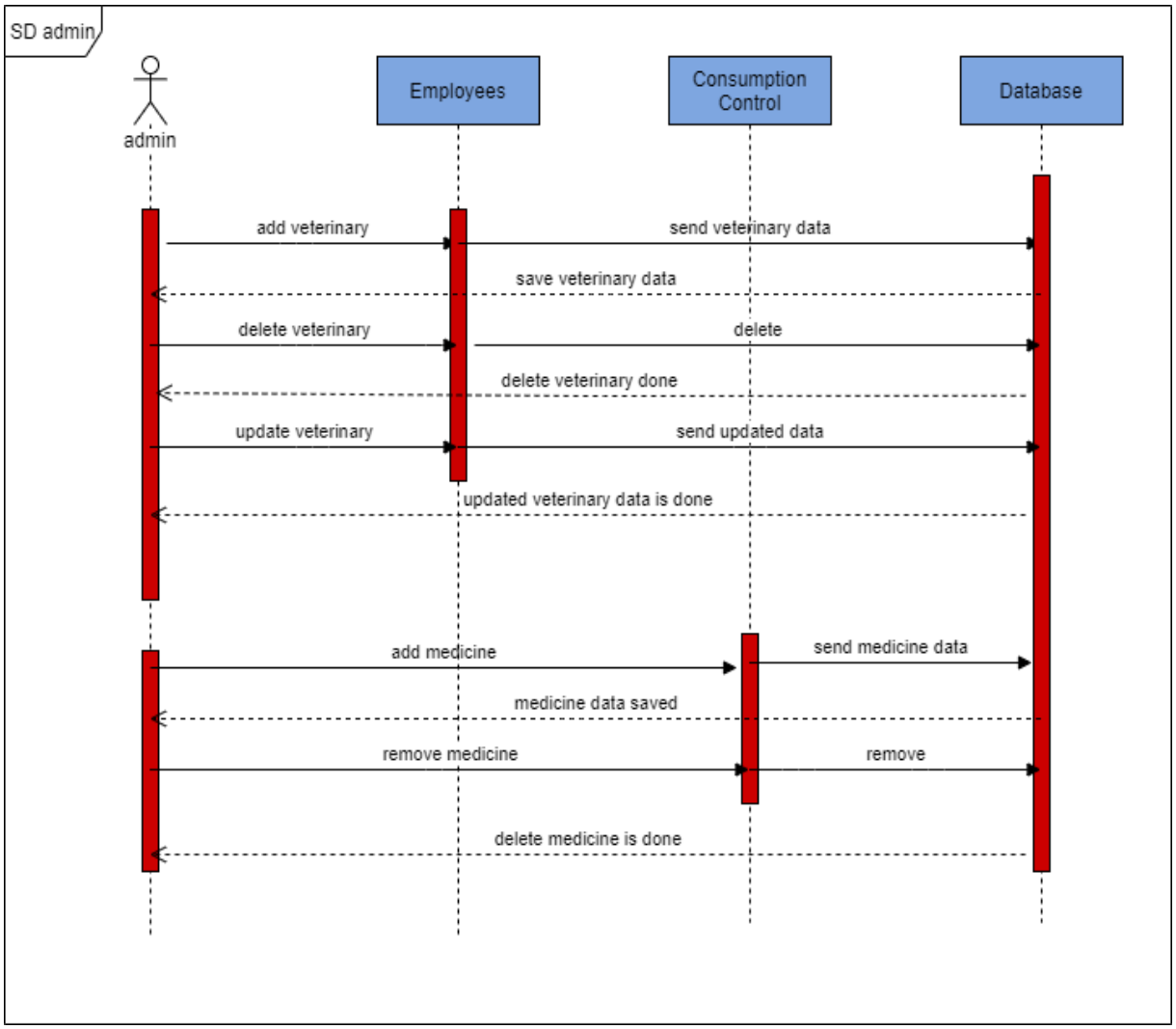
USECASE:


Vet Care
add customer
«include»
remove customer
edit customer details
admin
add medicine
remove medicine
add procedure
remove procedure
customer
«include»
update procedure
book appointment

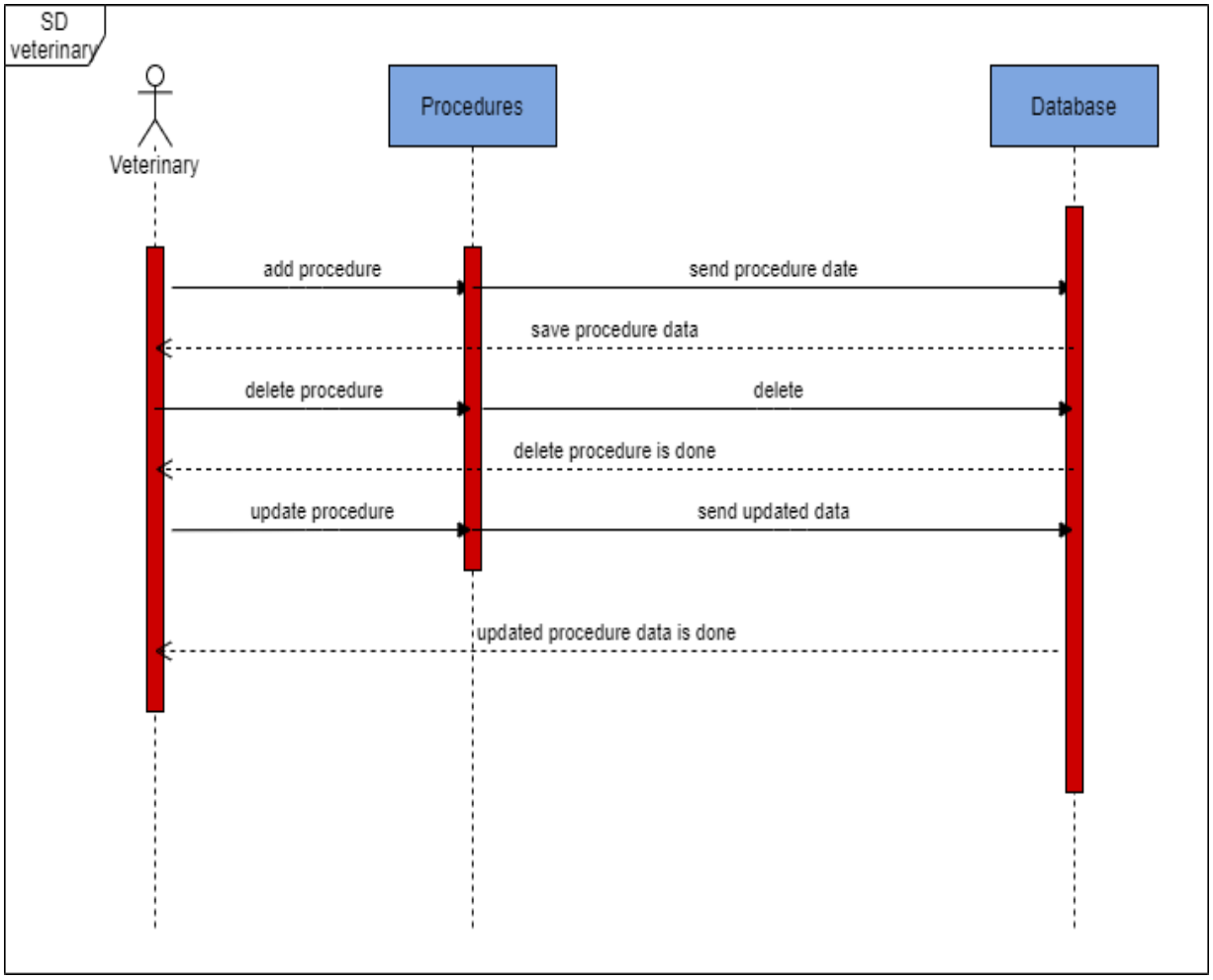
Class Diagram:



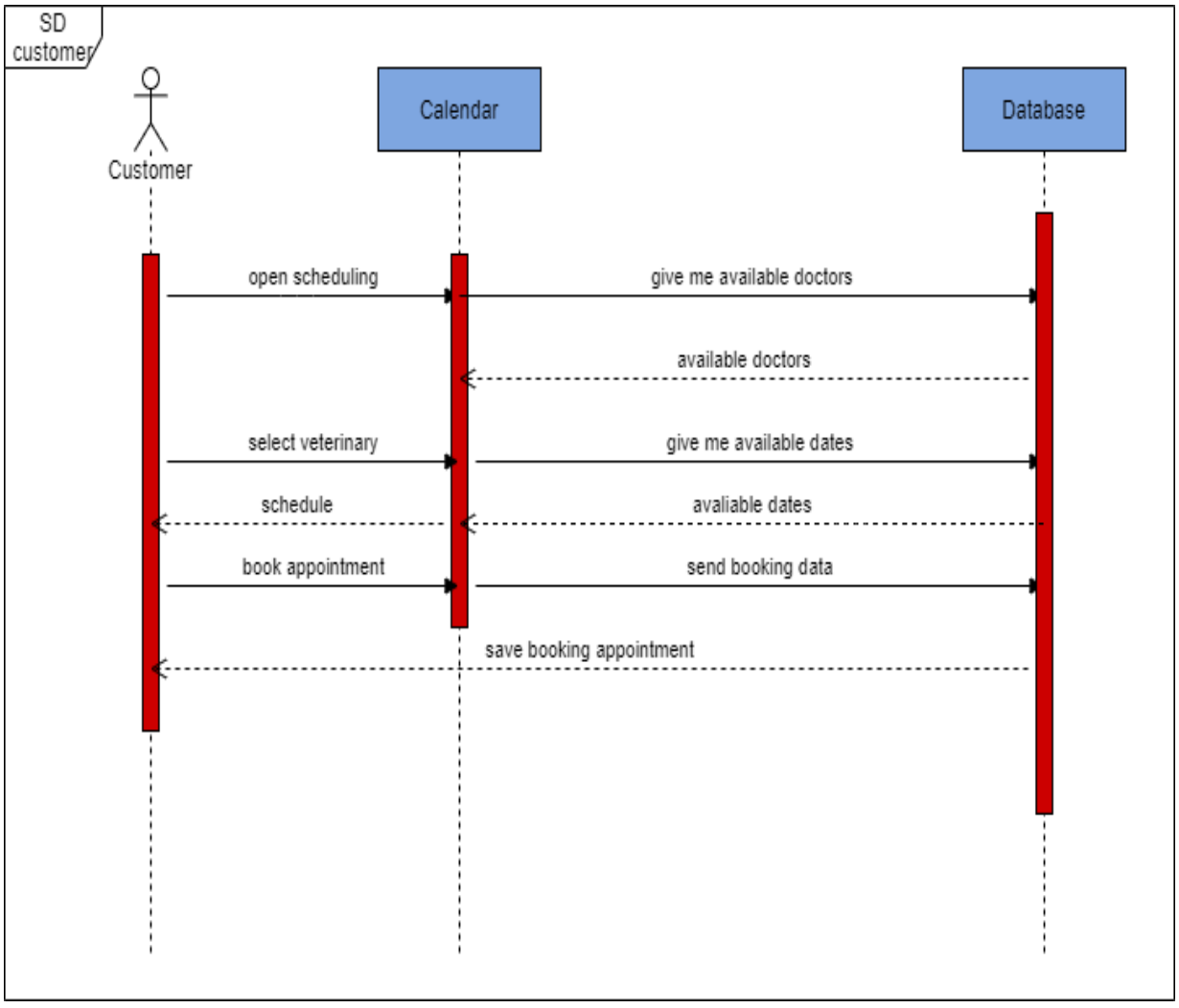
Admin Sequence Diagram:



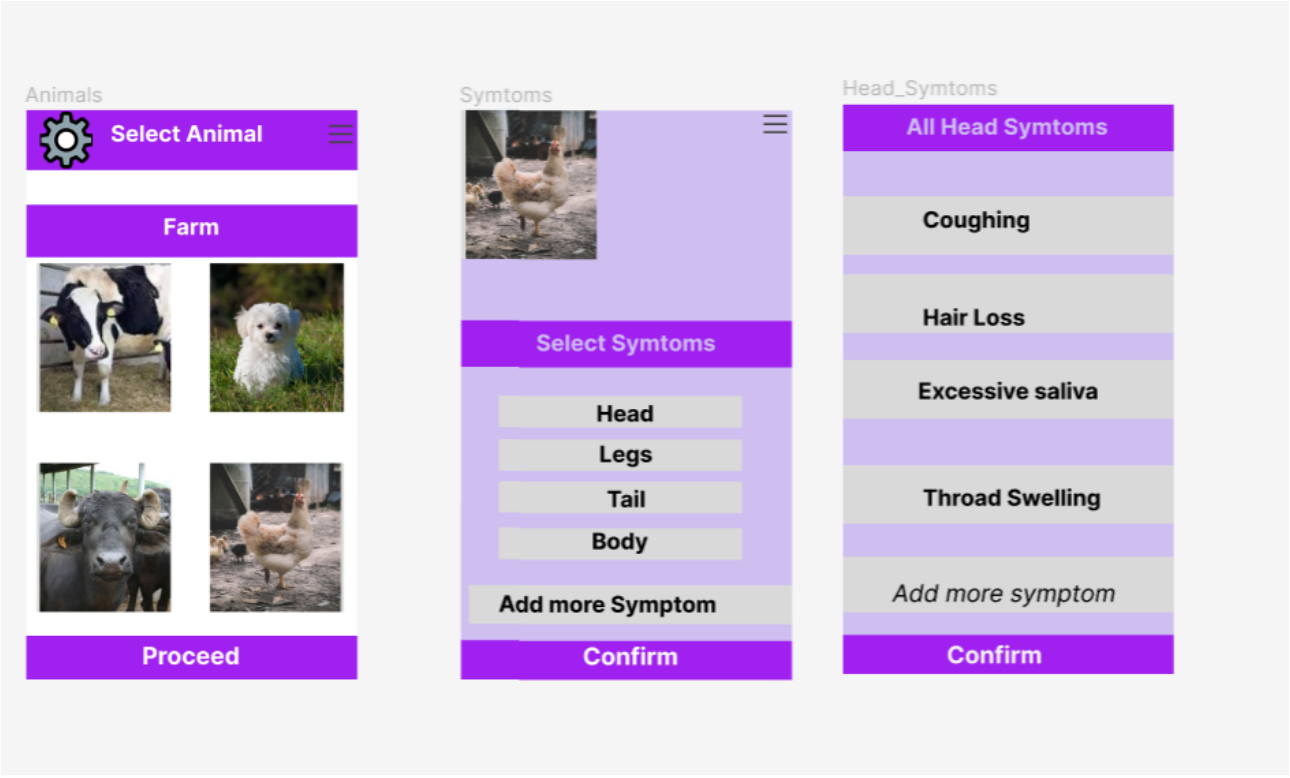
Veterinary sequence Diagram:



Customer Sequence Diagram:



Wireframe Of Vet Care App:



Add Photos

Add Photos

Buffalo

Please add a photo to proceed

Upload Animal image

Confirm

Add Farm

Warning

There is no buffalo in the image

Take Another Photo

Continue Analysis

Possible Disease

Possible Disease

Buffalo

Buffalo pox

Buffalopox is an infection diseases that cause both localized and generalized infection of buffaloes, cattle and also hu mans as a zoonotic agent.Vaccine is not effective.

Consult a Doctor

Consult a Doctor

Consult with Doctor

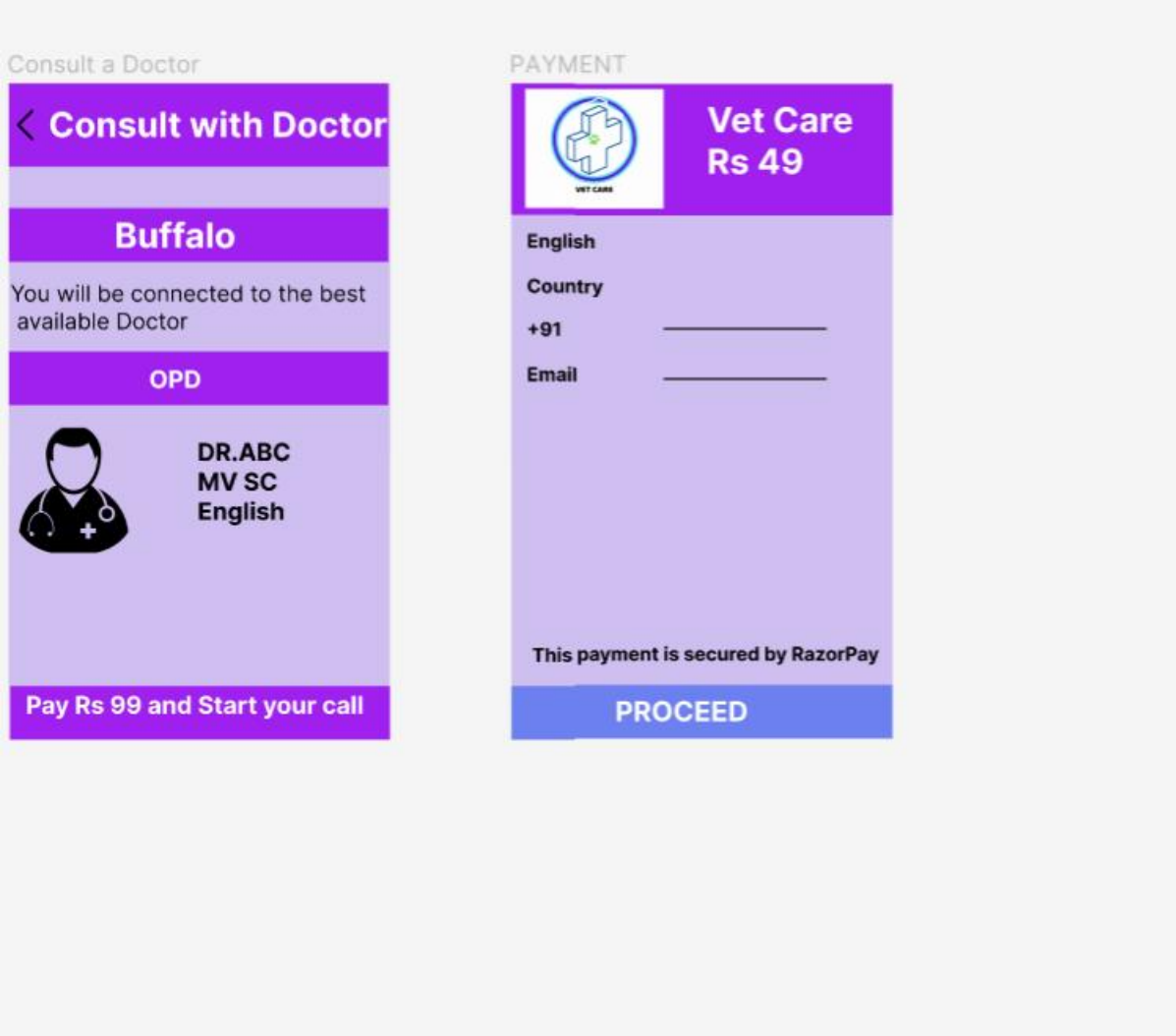
Buffalo

You will be connected to the best available Doctor

OPD

DR.ABC
MV SC
English

Pay Rs 99 and Start your call



Appendix C: Issues List

1. Wrong inputs will affect the project outputs.

2. The android mobile user will not be able to insert or view details if the server goes down. Thus, there is disadvantage of single point failure.

3.Sometimes the error may occur due to intent passing.