Project for the Degree of B.Sc. Engineering

Project On: Gopalganj Doctors
Course Code: CSE378

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Project Approval

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Gopalganj Doctors

We the undersigned, recommend that the project completed by the student listed above, in partial fulfillment of B.Sc. Engineering degree requirements, be accepted by the Department of Computer Science and Engineering, Bangabandhu Sheikh Mujibur Rahman Science and Technology University for deposit.

Supervisor Approval

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Dr. Saleh Ahmed

Chairman & Associate Professor

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Abstract

The project titled "Gopalganj Doctors" is a android application. The project based on Java programing language. This project made with android studio. Software design also created using android studio. Using this software, we can give serial to a doctor. Doctors can see the record of patient and also can give prescription. SQL database used for the project. This software helps us to give serial to a doctor easily by using our smart phone.

Acknowledgment

In this very special moment, first and foremost I would like to express my heartiest gratitude to the almighty God for allowing me to accomplish this project successfully. It is my first project in Android Studio. I am really thankful for the enormous blessings that the Almighty has bestowed upon me not only my student life but also throughout my whole life. Then I like to give many thanks to my project supervisor Dr. Saleh Ahmed, Chairman & Associate Professor, Department of Computer Science and Engineering, who encouraged, supervised and supplied necessary requirements and guideline in performing this work. In achieving the gigantic goal, I have gone through the interactions with and help from internet and would like to extend my deepest appreciation to those who have contributed to this dissertation itself in an essential way.

Md Sakib Hossain

19 May 2022

Contents

Chapter 1:   Introduction

The project titled "Gopalganj Doctors" is a android application. The project based on Java programing language. Gopalganj Doctors is an application programmed to run in the mobile operating system Android, which helps seeking patients to find their desired doctor about any doctor available in Gopalganj and also can give serial to them for appointments. This application has a separate authorized access to the database for the admin and for the patient to see their activity.

1.1.   Purpose

This document provides a base to all the functionalities which should be carried out by the application, how that works the outputs available to the end users.

1.2.   Scope of the Project

This project intends to maintain a record of all the necessary information of a doctor and patient. It also facilitates alteration of such data, to add, update or delete data from the database, with specific authorization. This will ensure the database stays up-to-date and common users can get information on doctors with specific specialization for different purposes. Users can also book appointments and navigate to the chamber location.

1.3.   Overview

Overall, this project serves as an application which keeps information on doctors and shows information to the users and books appointments without much hassle. This document specifies all kinds of methods used in coding and the objects used for designing, using Android Studio.

Chapter 2: Literature Review

Our modern age of technology is greatly dependent on internet. As the world is going so faster so there is always a desire to communicate faster and effectively. There are no such things that comes out without any limitations, but we focused to overcome the best we could do. Our main focus was to determine the features for the patients. They are the large community of this system and they deserve to get the most out of this system. By using this system both doctors and patients become beneficial. A lot of patient's daily visit to healthcare clinic or hospital and facing problem regarding have no knowledge about doctor specialty, wait for a long time to get doctor appointment. There are several ways to booking an appointment. A person can either go to the hospital directly for consultation or make an appointment from home through internet by using the application. To solve this problem, we have developed an appointment system which improve the patient's satisfaction like patient can get reliable and timely access. So that we wish to offer such a system which will help them a lot. Our system will provide best result and save their valuable time too.

Related Work: There some related systems are available right now but not a large number and no one is totally similar. Many of the system has some limitations. From the study of this similar project we got interested to develop our system. Some of the related systems of our project are mentioned below. We have explored many applications which are related to medical health consciousness, like, DocTime, Sebaghar, Life Plus.

Chapter 3: Description

3.1. Perspective
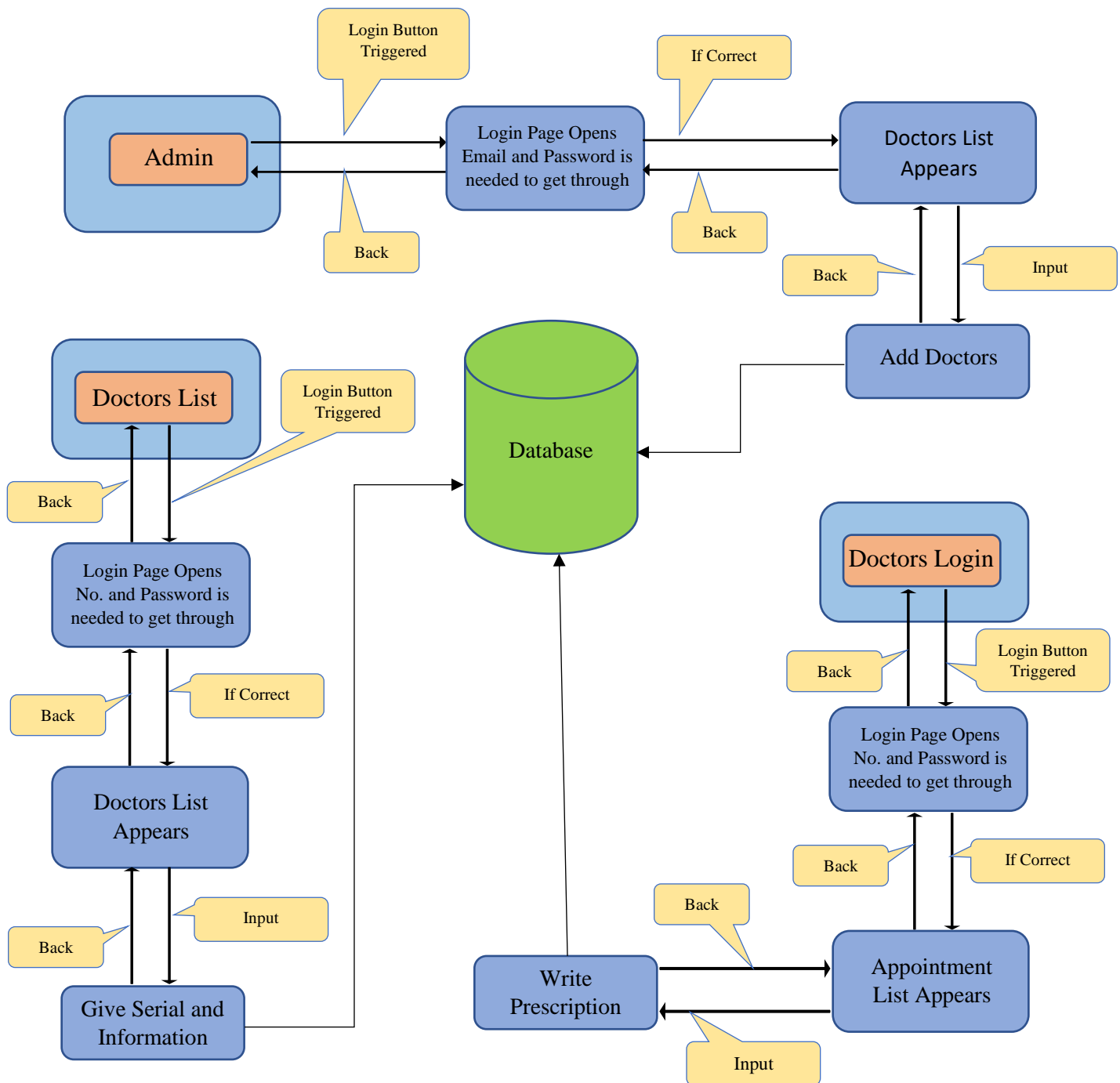
3.2. Functions of the Application

- Displaying Doctor's information like name, contact number, available dates, timings etc to common users.

- Take Bookings for Doctors.

- Adding new doctors.

- Updating a doctor's existing information from database.

- Deleting a doctor's information from database.

- Showing all appointments/bookings.

- Deleting Appointments from database.

- Adding prescription for the patient.

3.3. User Characteristics

There are 2 user levels in this application for accessing doctor's information

a. Patients

b. Admin

a. Patients

Patients can access only the needed and limited information of any respective doctor. They can book an appointment.

b. Administrator

This includes the internal users like a manager or staff. This type of user has a login page with a login email and password. This user has full access to all the information of any doctor's entry present in the database.

3.4. Constraints
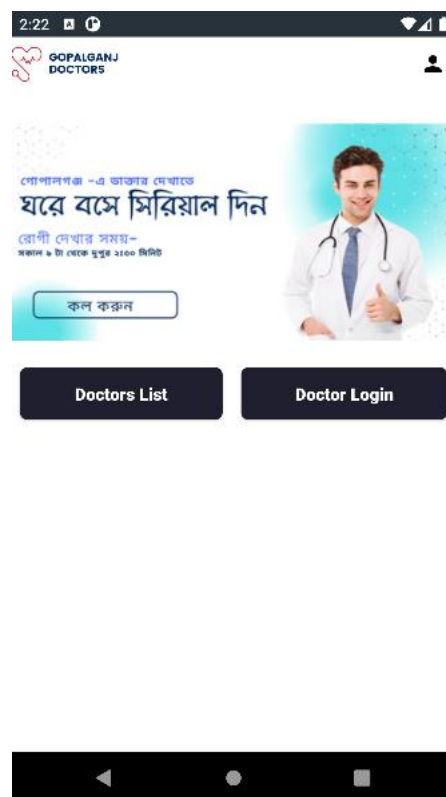
Some basic constraints present are,

i. The software must be in English.

ii. The android version in the phone should be Android Lollipop 5.0 or higher for proper functioning.
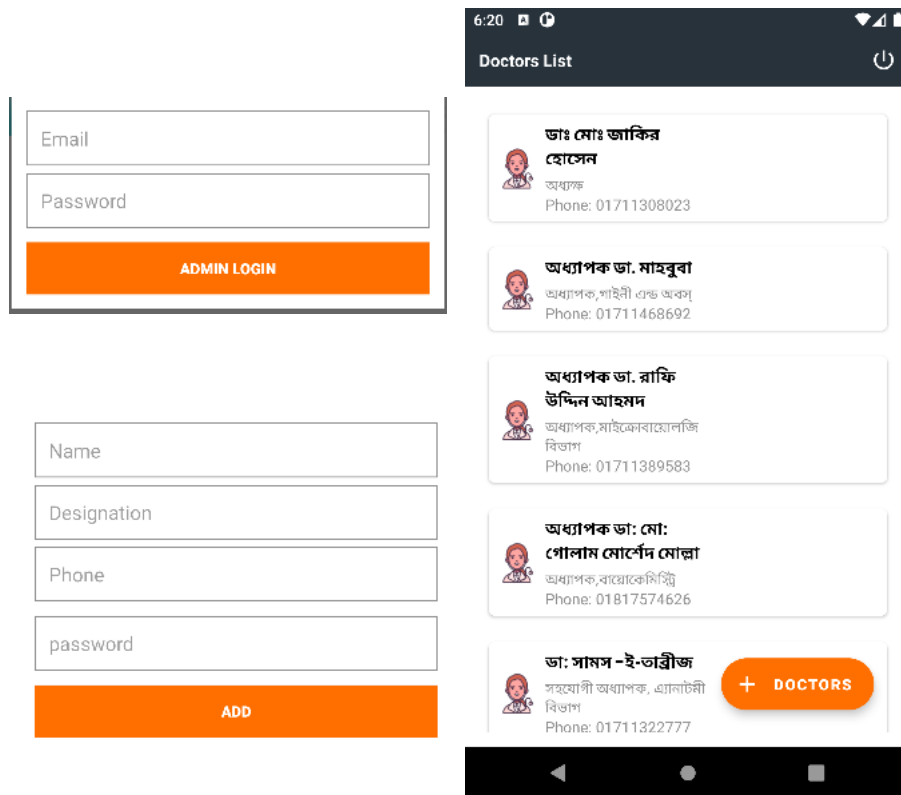
3.5. Expected Results

It is expected that the application will work properly in almost every Android OS installed device without any glitch and the application will be bug free. In case of any changes, this document will be flexible to reflect every one of them

Chapter 4: Implementation Details

Main Screen:

The main screen has 3 main elements. Three buttons, one for User's access to doctor's information and booking appointments, the other one for Doctor's to give prescription and one for admin to add Doctors in database. A 'ImageView' is present above the buttons which displays like this,

Admin: Here admin can login and add doctors in the list.

Doctors List: Here patient can see doctors list and can fix an appointment with doctors.

Doctors Login: Here doctors can see the patient who fix appointment with him and give them prescriptions.
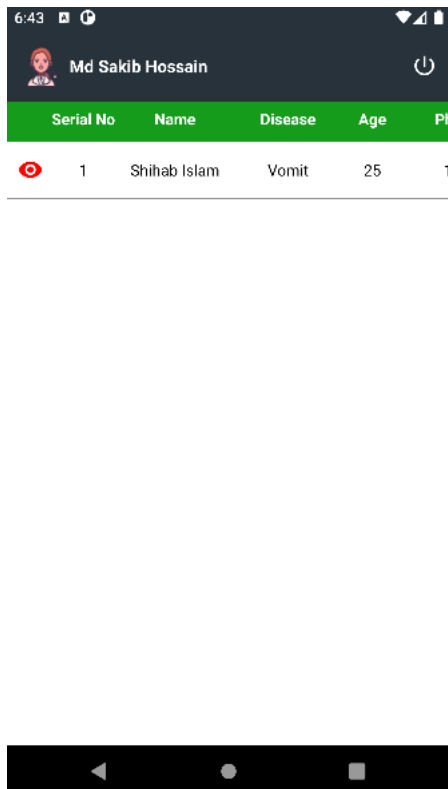
Database: Database for the project.
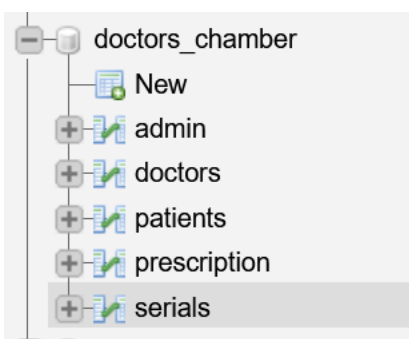
adminID	email	password
1	admin@gmail.com	123456
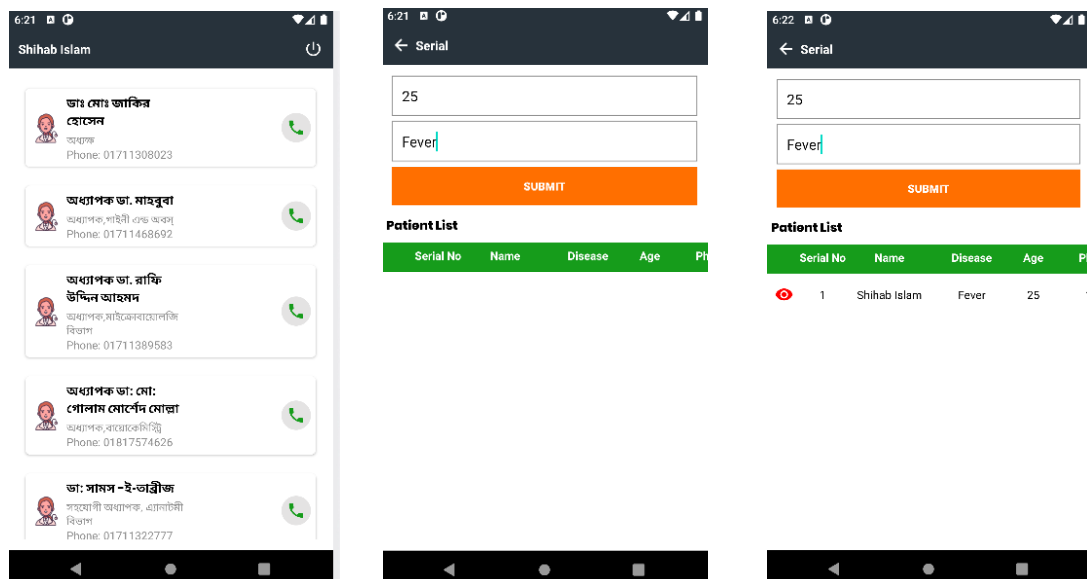
doctorID	doctor_name	doctor_designation	doctor_phone	password
1	ডাঃ মোঃ জাকির হোসেন	অধ্যক্ষ	01711308023	123456
2	অধ্যাপক ডা. মাহবুবা	অধ্যাপক,গাইনী এন্ড অবস্	01711468692	123456
3	অধ্যাপক ডা. রাফি উদ্দিন আহমদ	অধ্যাপক,মাইক্রোবায়োলজি বিভাগ	01711389583	123456
4	অধ্যাপক ডা: মো: গোলাম মোর্শেদ মোল্লা	অধ্যাপক,বায়োকেমিস্ট্রি	01817574626	123456
5	ডা: সামস -ই-তাব্রীজ	সহযোগী অধ্যাপক, এ্যানাটমী বিভাগ	01711322777	123456
6	ডা: আশরাফ উদ্দিন খান	সহযোগী অধ্যাপক, রেডিওলজি বিভাগ	01778190026	123456
7	ডা: সুভাষ চন্দ্র ভাদুরী	সহযোগী অধ্যাপক, মেডিসিন বিভাগ	01716753914	123456
8	Md Sakib Hossain	Medicine	123456	123456

patientID	patient_name	patient_phone	patient_password
1	Shihab Islam	111	123456
2	Tonmoy	222	123456
3	Rabbi Hasan	333	123456
4	Shobuj	444	123456

prescriptionID	serialID	doctorID	patientID	medicine	days	rules
1	3	1	1	Napa	7	সকাল: ১ টা, রাতে ১ টা
2	3	1	1	Dextrim	5	সকাল: 5 ml
3	4	1	1	Napa	45	সকালে ১টা রাতে ১টা
4	4	1	1	Dyclofane	70	সকালে ১টা রাতে ১টা
5	7	1	3	Ace Plus	3	রাতে ১টা
6	1	2	1	Avomin	2	রাতে ১টা
7	5	2	3	Revotril	10	সকালে ১টা,রাতে ১টা
8	7	1	3	Alatrol	7	রাতে ১টা
9	3	1	1	Glucose	7	প্রতিদিন ১ গ্লাস
10	8	6	4	napa	2	1+1+1
11	8	6	4	seclo	2	1+1+1
12	9	1	4	Bexadil	10	Morning 1, Night 1
13	12	8	1	Avomin	5	1+0+1

serialID	doctorID	patientID	age	disease	date
1	2	1	25	বমি	
2	2	1	28	আমাশয়	
3	1	1	21	Fever	2022-05-18
4	1	1	20	Broken Hand	
5	2	3	35	নিদ্রাহীনতা	
6	2	3	30	উচ্চরক্তচাপ	
7	1	3	35	এলার্জি	2022-05-18
8	6	4	28	pain	2022-05-19
9	1	4	28	pain	2022-05-19
10	1	4	28	pain	
11	4	1	25	Fever	
12	8	1	25	Vomit	2022-05-19

USERS

DOCTORS

Access Limited Information

Access Information

Login And Give
Prescription

Login And Books
Appointments

Doctor Database
System and
Appointments

Login

Access All Information

ADMINISTRATOR

Chapter 6: System Requirements
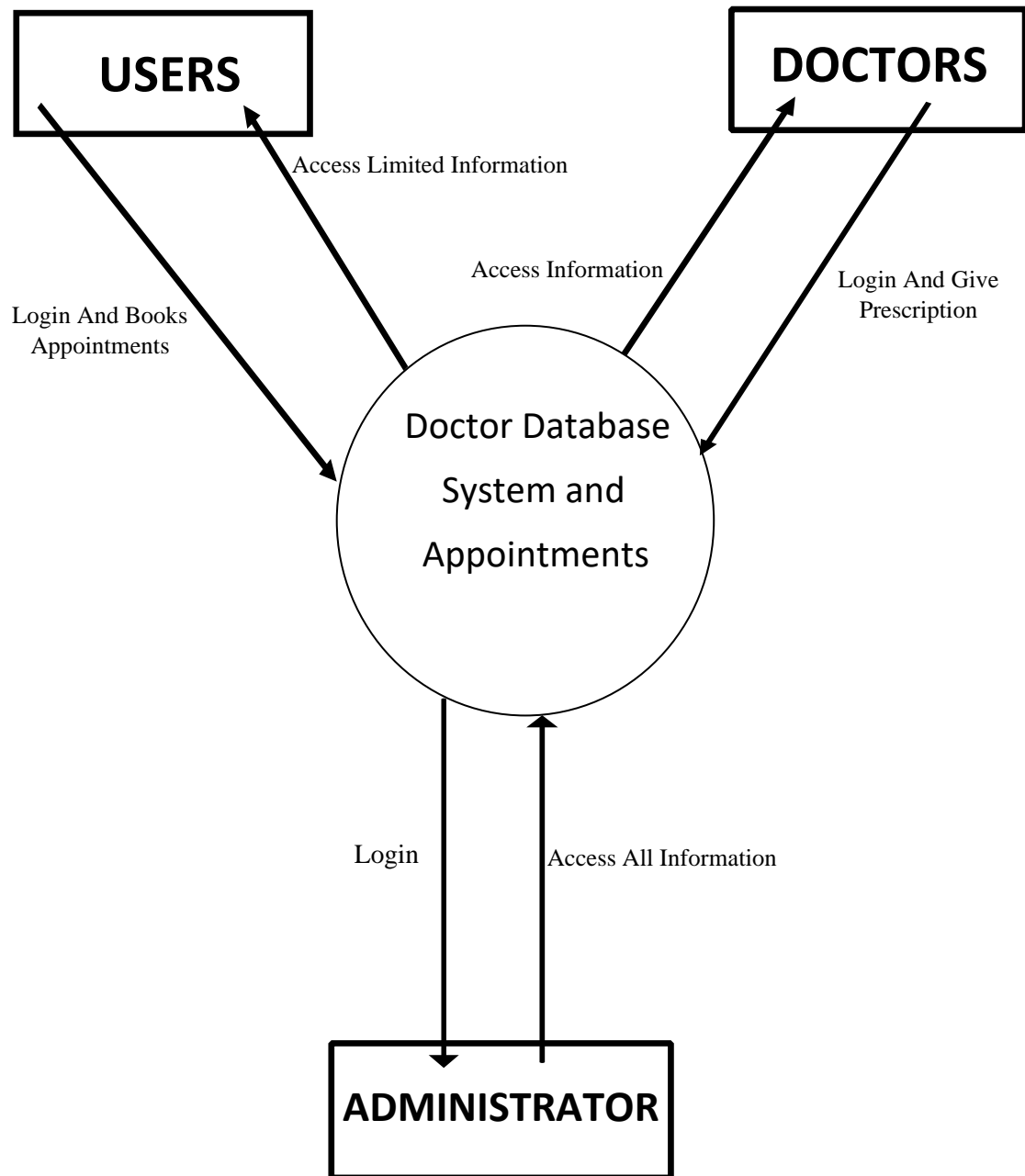
1. Smartphone with Android OS version 5.0 (Lollipop) or higher
2. Minimum 512 MB of RAM
3. A processor with speeds above 1.2 GHz (any make)
4. 16 MB of storage for the app and extra for the data stored, the size of the app increases as the number of entries are increased
5. Android API version 12 or above
6. Permission to install applications over USB and installation from unknown sources from 'Developer Options'

Chapter 7:   Applications and Technology Used

Android Application Development is possible with a couple of software and development kits to support the software and execution, they are as follows,

1. **<u>Android Studio:</u>** Android studio is the official Integrated Development Environment (IDE) for designing, coding, debugging and executing applications for Google's smartphone operating system, Android. It has all keywords inbuilt for ease in back-end programming and also design statements, for ease in designing as well. The version of Android Studio used to design the application is 2021.1.1.

2. **<u>Java Development Kit (JDK):</u>** Since, Android applications require Java programming for its backend programming; it needs a JAVA environment to support its functions, executions and syntax.

3. **<u>MySql :</u>** The tables in the database for storing doctor's information and patient information for appointments has been create from Sql statements.

4. **<u>Xml:</u>** The front-end design of the application involves xml statements for the layouts, image buttons, buttons, text boxes and text views.

Chapter 8:   Id and Passwords for Login

Admin:
1) Email: admin@gmail.com   Password: 123456

Doctors:
1) Number: 01711308023   Password: 123456
2) Number: 01711468692   Password: 123456
3) Number: 01711389583   Password: 123456

Patients:
1) Number: 111   Password: 123456
2) Number: 222   Password: 123456
3) Number: 333   Password: 123456

Chapter 9:   Features Planned

i.   If the name of the doctor is wrong, it cannot be changed, the entry has to be deleted and added again. This is due to the fact that doctor information are searched as per the doctor's name, so if it's changed, the process will fail to locate the entity in the table. Better searching method is planned in the application, if feasible.

ii.   Doctors and patients registration data can be added only, no scope for editing, so in case of mistakes, it has to be deleted and added again, which only an administrator can do.

iii.   Appointments can be added only, no scope for editing, so in case of mistakes, it has to be deleted and added again, which only an administrator can do.

iv.   There isn't any video call system in the application.

v.   There is no location system in the application.

By upgrading these features in future this application will provide more options to the user.

Chapter 10:   CONCLUSION

So, we come up to the conclusion that, this app will help normal users to access limited doctor's information and take appointments. The administrator can login using the in-built id and password and access all information, delete and update them. Administrator can view appointments too. Common users who don't know the password can only get access to limited and relevant information on any doctor. Due to time constraints, many drawbacks are present as mentioned which are planned to be fixed if possible.

From this project we learnt about android studio and it has also enhanced our knowledge of the programming methods since. This application serves the basic purpose of accessing doctor's information, booking appointments and modifying information.

Chapter 11:   References

- https://www.merriam-webster.com/words-at-play/is-it-doctors-appointment-or-doctor-appointment
- https://www.nia.nih.gov/health/how-prepare-doctors-appointment
- https://plushcare.com/online-doctor/
- https://www.englishforums.com/blog/doctor-appointment-doctors-appointment/
- https://www.zocdoc.com/