

Project Name: “Ayurveda”

Project Member:

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Abstract:

Ayurveda is a system of medicine with historical roots in the Indian subcontinent. Globalized and modernized practices derived from Ayurveda traditions are a type of alternative medicine. Online facility to take an appointment with the doctor. Providing communication through online system.

In these we can create a general awareness about diseases and their homemade therapy with their effectiveness cure and ayurvedic properties.

- **Doctor Module**

Doctor can be accessible to their portal through their credentials. They can have access the calendar controller in which they can select their holidays or leaves whenever they are not available on desired dates.

So that patient can have an idea about availability of doctor on desired days.

- **Patient Module**

Patient can able to take an appointment on desired dates for their diseases with online available specialists. They can take an appointment by themselves when doctor is available.

They can have search functionality of nearby doctor to their place.

- **Technology : Java, SpringBoot,Hibernate, MySQL, Bootstrap.**

Implementation Technologies:

1. Spring Framework:

Spring Framework is a Java platform that provides comprehensive infrastructure support for developing Java applications. Spring handles the infrastructure so you can focus on your application.

Spring enables you to build applications from “plain old Java objects” (POJOs) and to apply enterprise services non-invasively to POJOs. This capability applies to the Java SE programming model and to full and partial Java EE.

1.1 Features of Spring Framework:

1. Lightweight

Spring is modular lightweight framework which allows you to selectively use any of its modules on the top of Spring Core.

2. Inversion of Control (IOC)

This is another top feature of Spring framework where application dependencies are satisfied by the framework itself. Framework creates the object in runtime and satisfies application dependencies.

3. Aspect Oriented Programming (AOP)

Aspect Oriented Programming (AOP) is very popular in programming world and in Spring it is well implemented. Developer can use Aspect Oriented Programming (AOP) feature of Spring to develop application in which business logic is separated from system services.

4. Container

Spring provides their own container for managing the bean lifecycle.

5. MVC Framework

Spring MVC Framework is used for developing MVC based web applications.

6. Transaction Management

Spring framework provides generic Transaction Management layer which can be used with or without J2EE(JEE) environment.

7. JDBC Exception Handling

Spring provides their own abstraction of JDBC exception which further simplifies the exception handling in program.

1.2 Advantages of Spring Framework:

1. Solving difficulties of Enterprise application development

Spring is solving the difficulties of development of complex applications, it provides Spring Core, Spring IoC and Spring AOP for integrating various components of business applications.

2. Support Enterprise application development through POJOs

Spring supports development of Enterprise application development using the POJO classes which removes the need of importing heavy Enterprise container during development. This makes application testing much easier.

3. Easy integration other frameworks

Spring designed to be used with all other frameworks of Java, you can use ORM, Struts, Hibernate and other frameworks of Java together. Spring framework do not impose any restriction on the frameworks to be used together.

4. Application Testing

Spring Container can be used to develop and run test cases outside enterprise container which makes testing much easier.

5. Modularity

Spring framework is modular framework and it comes with many modules such as Spring MVC, Spring ORM, Spring JDBC, Spring Transactions etc. which can be used as per application requirement in modular fashion.

6. Spring Transaction Management

Spring Transaction Management interface is very flexible it can be configured to use local transactions in small application which can be scaled to JTA for global transactions.

2. Spring Boot:

Spring Boot helps you to create stand-alone, production-grade Spring-based applications that you can run. We take an opinionated view of the Spring platform and third-party libraries, so that you can get started with minimum fuss. Most Spring Boot applications need very little Spring configuration.

You can use Spring Boot to create Java applications that can be started by using `java -jar` or more traditional war deployments. We also provide a command line tool that runs “spring scripts”.

Our primary goals are:

- Provide a radically faster and widely accessible getting-started experience for all Spring development.
- Be opinionated out of the box but get out of the way quickly as requirements start to diverge from the defaults.

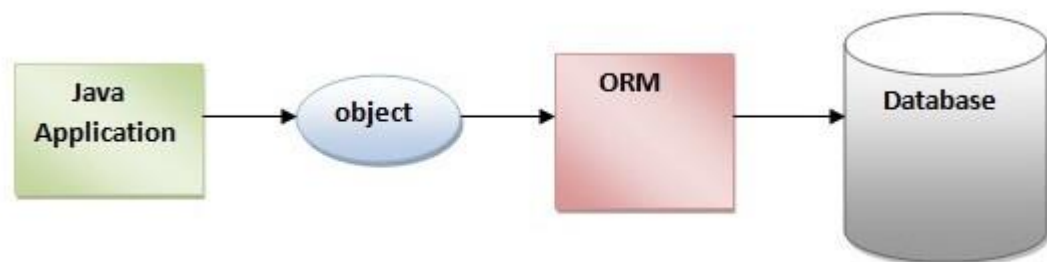
- Provide a range of non-functional features that are common to large classes of projects (such as embedded servers, security, metrics, health checks, and externalized configuration).
- Absolutely no code generation and no requirement for XML configuration.

3. Hibernate:

Hibernate is a Java framework that simplifies the development of Java application to interact with the database. It is an open source, lightweight, ORM (Object Relational Mapping) tool. Hibernate implements the specifications of JPA (Java Persistence API) for data persistence.

3.1 ORM Tool:

An ORM tool simplifies the data creation, data manipulation and data access. It is a programming technique that maps the object to the data stored in the database.



The ORM tool internally uses the JDBC API to interact with the database.

4. MySQL

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

Features of MySQL:

- **MySQL is a database management system.**

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

- **MySQL databases are relational.**

A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment.

- **MySQL software is Open Source.**

Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything.

- **The MySQL Database Server is very fast, reliable, scalable, and easy to use.**

MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

- **MySQL Server works in client/server or embedded systems.**

The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

3. Hardware and Software Requirements (Minimum):

Hardware:

1. Intel i5 processor 10th generation
2. 2 GB RAM.
3. Windows 10 Home edition.
4. 200 GB Sata HDD Space
5. Data Connection 200 kbps

Software:

1. Eclipse IDE for Enterprise Java Developers
2. MySQL 5.7 with Workbench 8.0
3. Google Chrome version 93.0
4. Apache Tomcat Server 8.5
5. Maven Dependencies

4. ER Diagram:

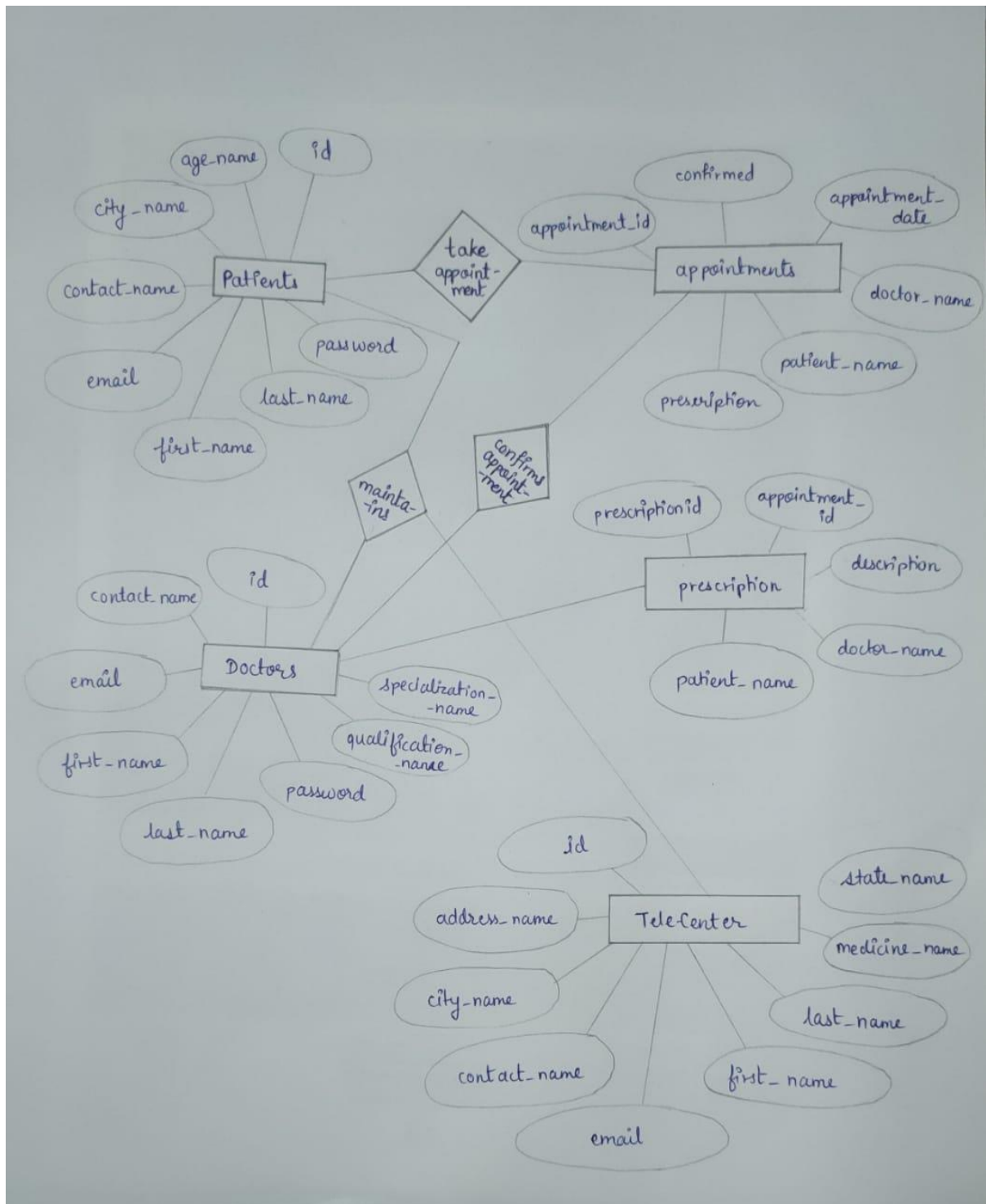


Figure 1: ER Diagram

5. Table Structures:

1.Table:users

Columns:

<u>id</u>	bigint AI PK
age_name	varchar(20)
city_name	varchar(20)
contact_name	varchar(20)
email	varchar(45)
first_name	varchar(20)
last_name	varchar(20)
password	varchar(64)

2.Table:usersdoctor

Columns:

<u>id</u>	bigint AI PK
contact_name	varchar(20)
email	varchar(45)
first_name	varchar(20)
last_name	varchar(20)
password	varchar(64)
qualification_name	varchar(20)
specialization_name	varchar(20)

3.Table:appointment

Columns:

<u>appointment_id</u>	int AI PK
confirmed	varchar(50)
appointment_date	varchar(50)
doctor_name	varchar(50)
patient_name	varchar(50)
prescription	varchar(50)

4. Table: **userstelecenter**

Columns:

<u>id</u>	bigint AI PK
address_name	varchar(20)
city_name	varchar(20)
contact_name	varchar(20)
email	varchar(45)
first_name	varchar(20)
last_name	varchar(20)
medicine_name	varchar(20)
state_name	varchar(20)

5. Table: **prescription**

Columns:

<u>prescriptionid</u>	int AI PK
appointmentid	int
description	varchar(255)
doctor_name	varchar(255)
patient_name	varchar(255)

6. UML Diagrams:

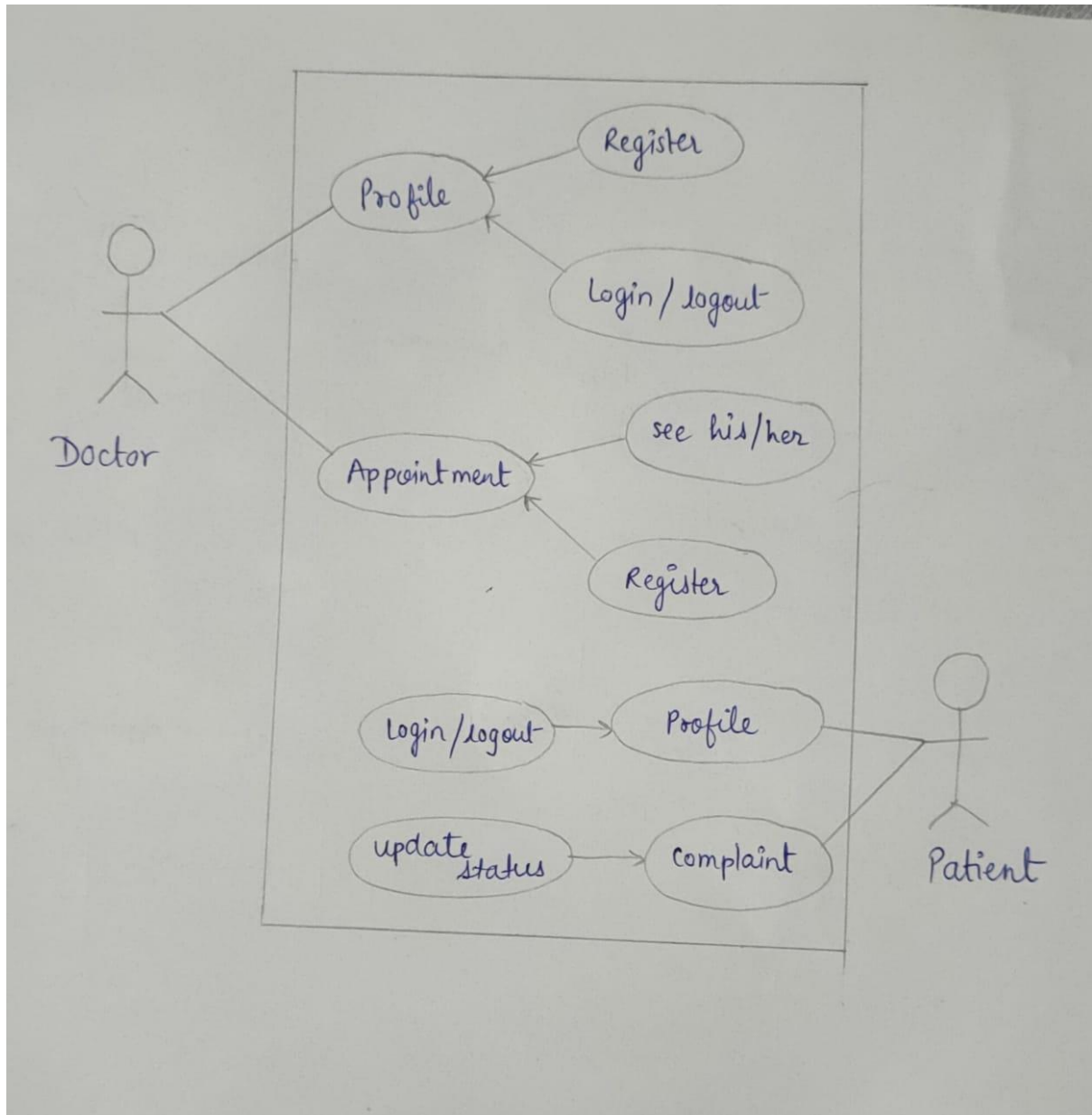


Figure 2: Use Case

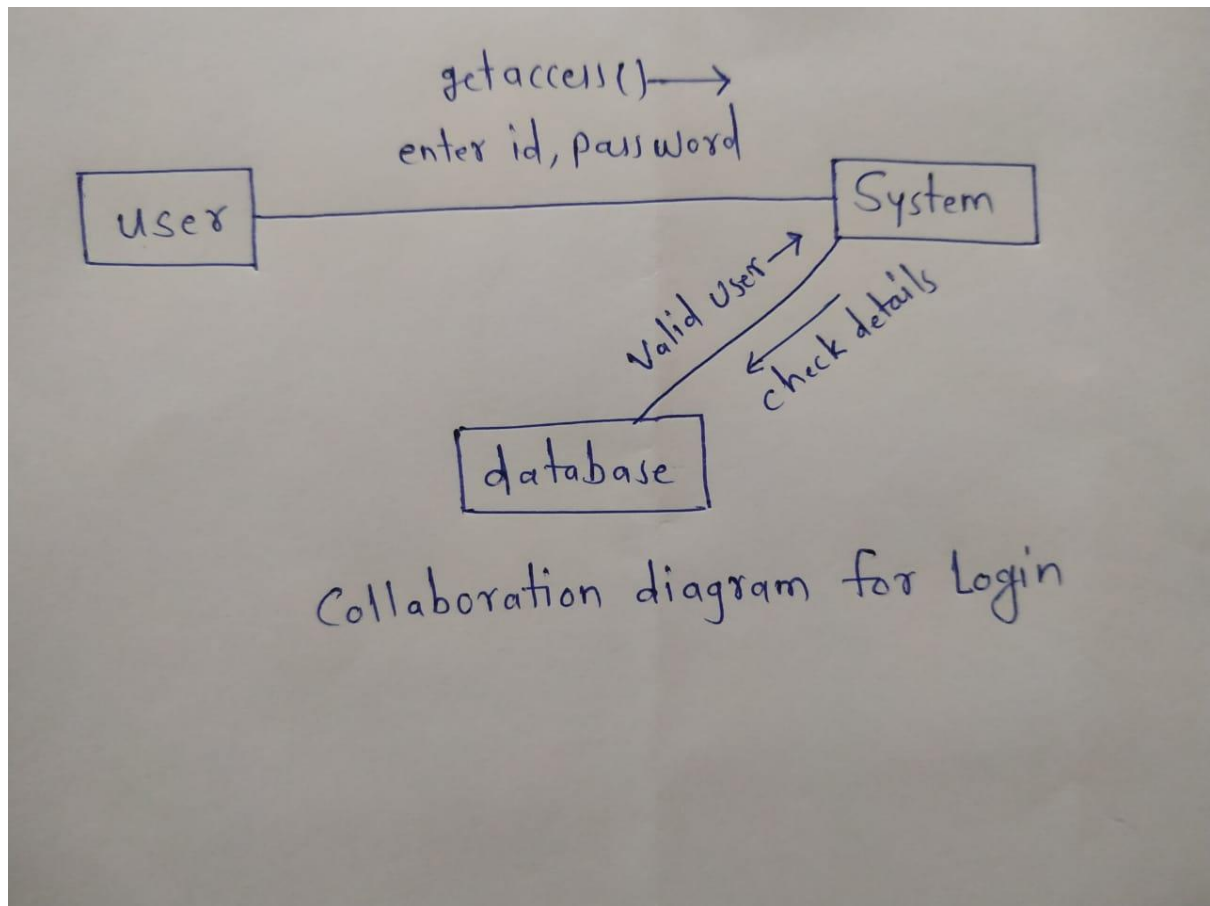
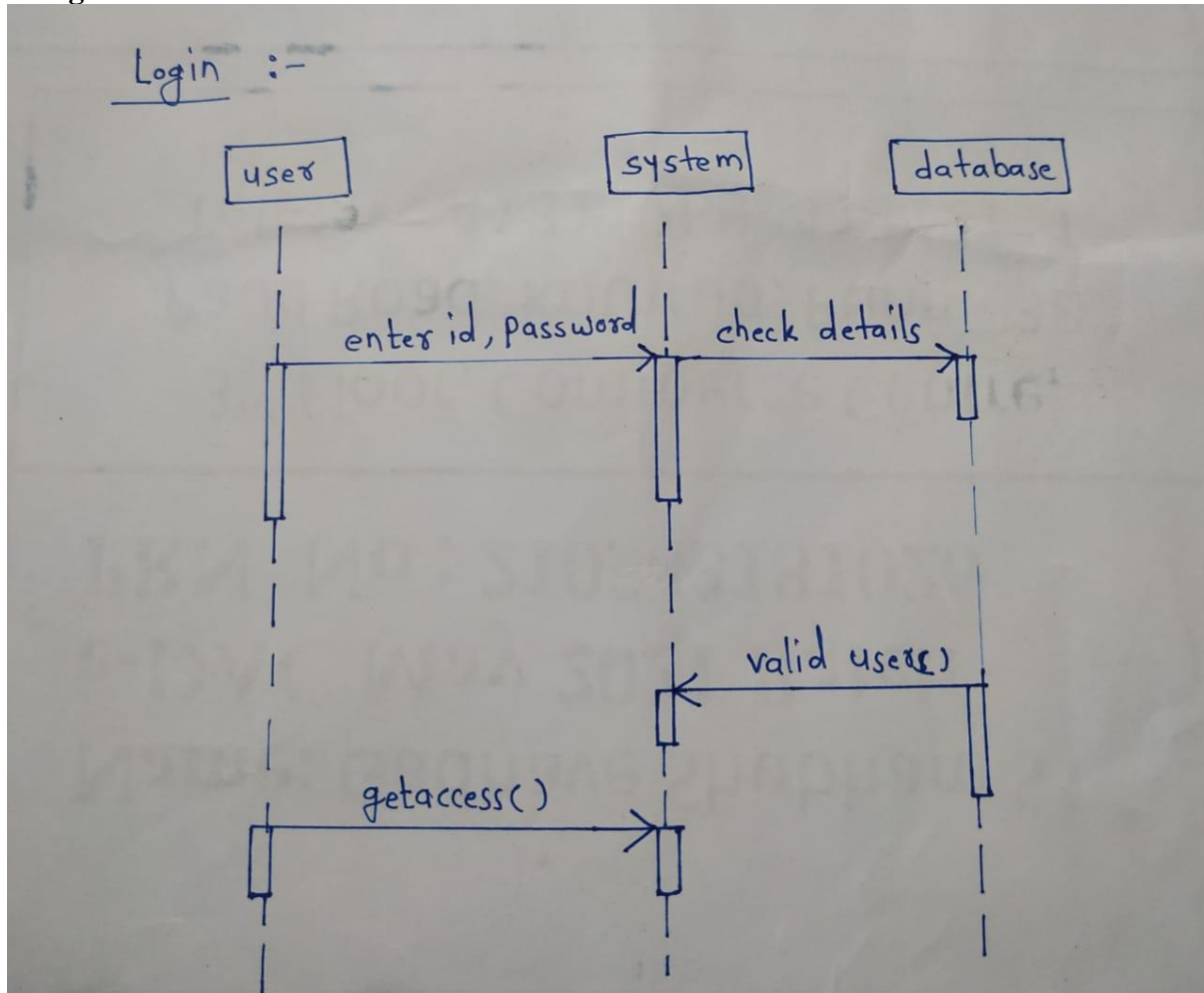
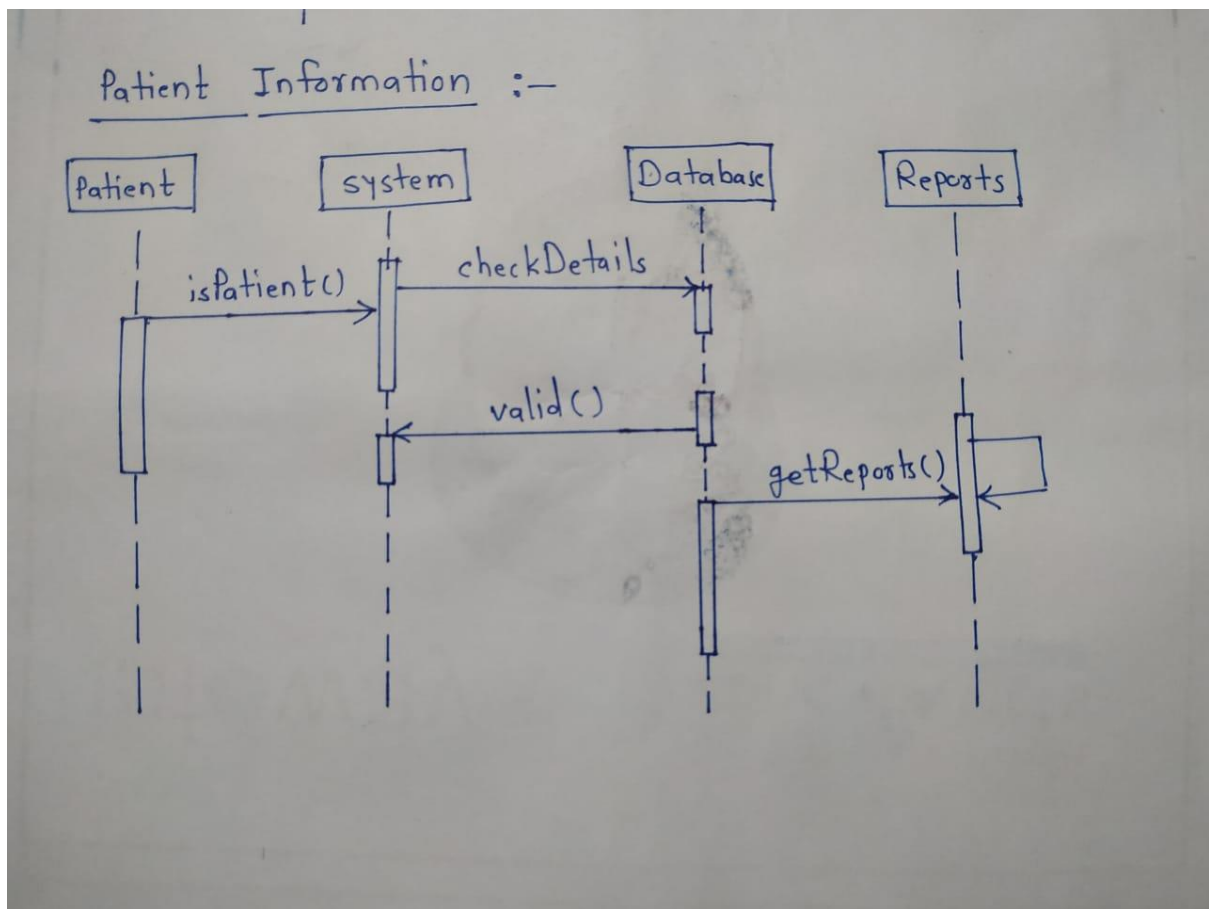


Figure 3: Collaboration Diagram

Login :



Patient Information :



Take Appointments :

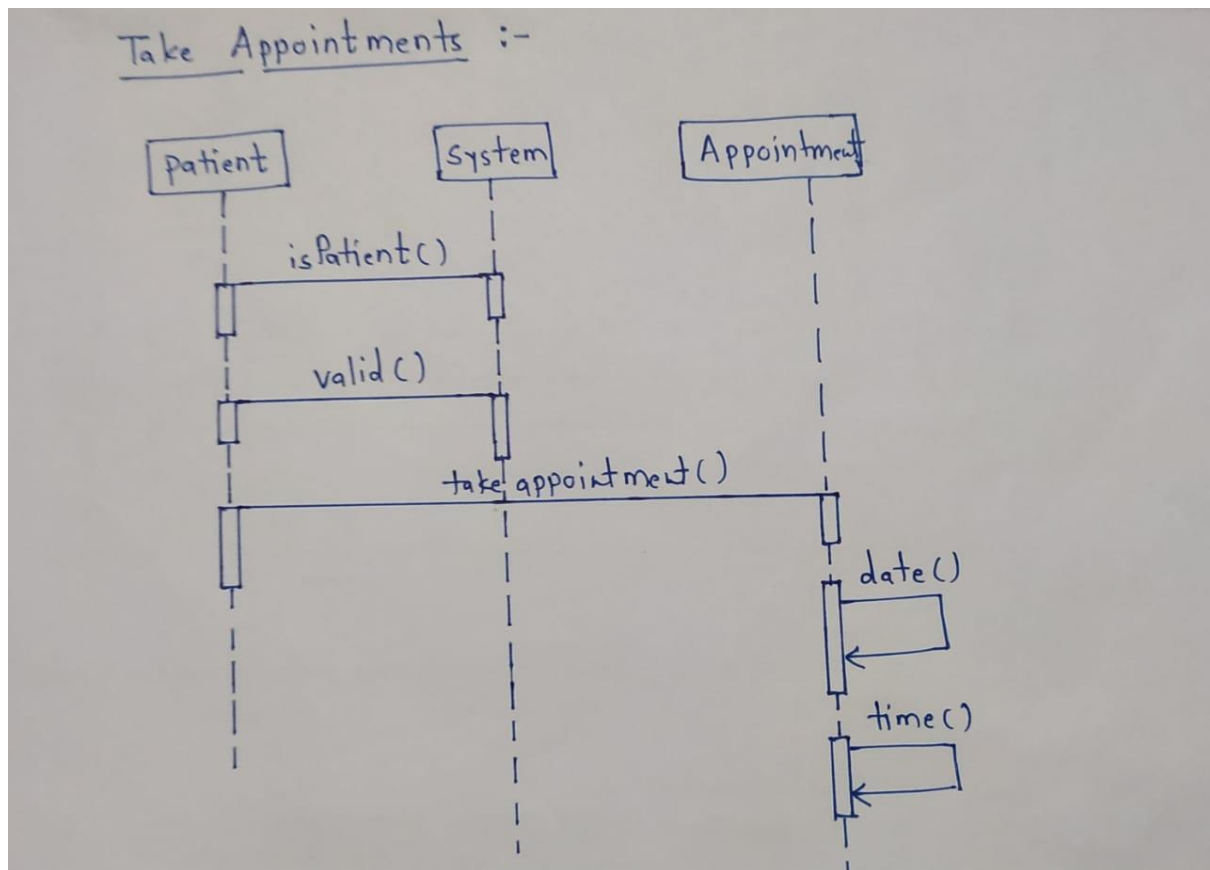


Figure 4: Sequence Diagram

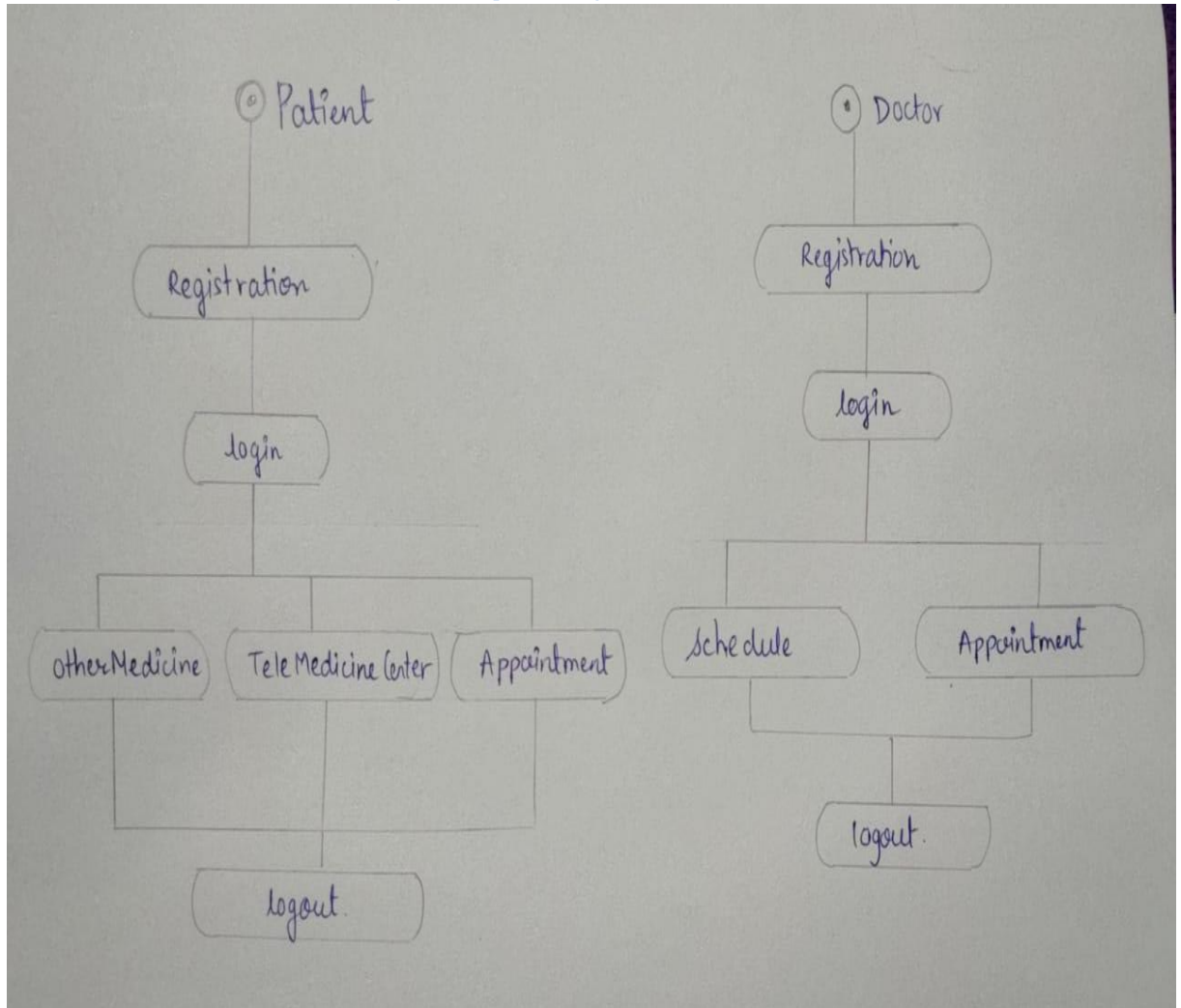


Figure 5: State Diagram

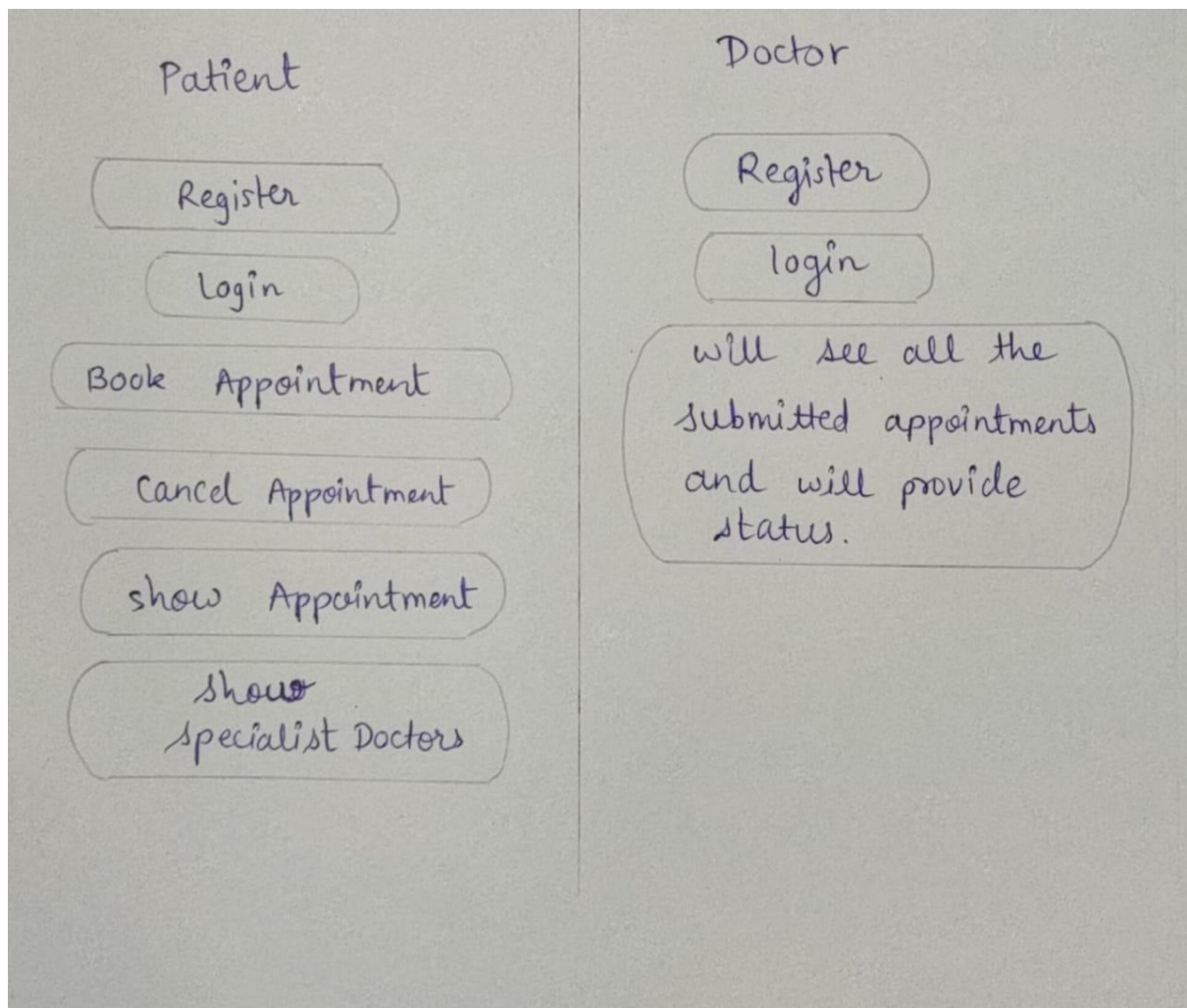


Figure 6: Activity Diagram

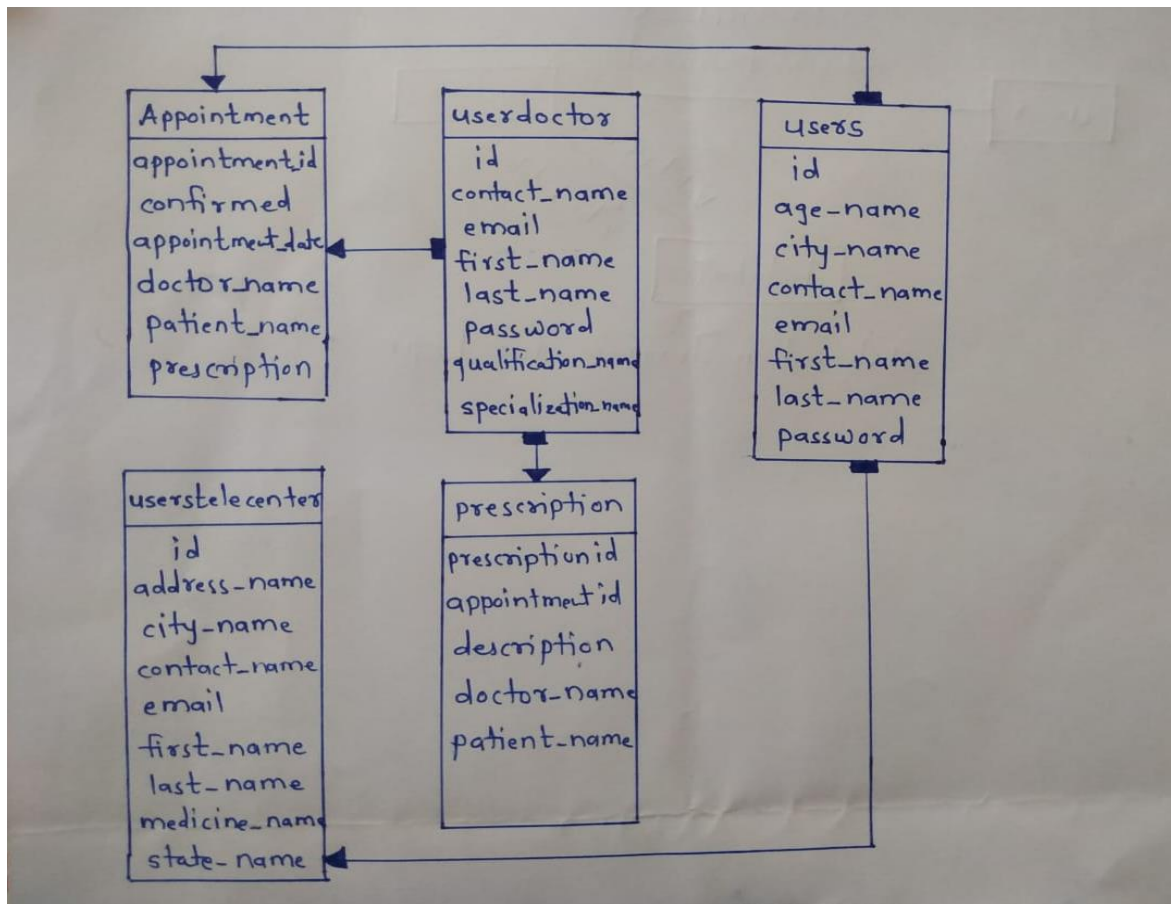


Figure 7: Class Diagram

7. End to End Flow of Application:

Patient:

Login:

Step 1: User should have valid username and password to login to the system.

- Make Login page of Ayurveda
- Enter username and password
- Click on login button and then shows welcome page.

Step 2: If invalid user login to the system then it shows invalid username and password so he should get register first.

Registration:**Step 1:** Registration for new patients.

- a. If the patient is a new user then first he should get registered.
- b. Then click on the Register button.
- c. Fill all the required details and click on register button.
- d. After the patient registration Now the patient can login and use the services.

Appointment:

- a. Patients can take online appointments from the doctors.
- b. Fill all the details in complaint form and click on Booking button.
- c. Patients can view doctor's prescriptions.

Doctor:

Step 1: The doctors should also get registered and the Admin registers the new doctors.

- a. Login as Admin to the system.
- b. Click on Add Doctor and the following register form appears.
- c. Fill all the details and the doctor gets registered.

Step 2:

- a. After the doctor registration login as Doctor.
- b. The doctor should give online appointments.
- c. Based on the Date of availability of doctor, the doctor sends Schedule and the appointment is given to the patient.

OtherMedicine:

User and patient can purchased/ordered medicines by filling the required information.

8. Future Scope Of Project:

Thank You!