# Specialized Hospital Booking System

**A MINI-PROJECT REPORT**

***Submitted by***

**PRANAV NARAYANAN T 240701393**

**PRASANNA K 240701396**

***in partial fulfillment of the award of the degree***

***of***

**BACHELOR OF ENGINEERING**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**


**RAJALAKSHMI ENGINEERING COLLEGE, CHENNAI**

**An Autonomous Institute**

**CHENNAI**

**NOVEMBER 2025**

## BONAFIDE CERTIFICATE

Certified that this project **"Specialized Hospital Booking System"** is the bonafide work of **"PRANAV NARAYANAN T, PRASANNA K,"** who carried out the project work under my supervision.

**SIGNATURE**

**Mr.S.Adhithyan**

**ASSISTANT PROFESSOR**

Dept. of Computer Science and Engg,
Rajalakshmi Engineering College
Chennai

This mini project report is submitted for the viva voce examination to be held on

_____

**INTERNAL EXAMINER** **EXTERNAL EXAMINER**

# ABSTRACT

Specialized Hospital Management is a Java Swing and MySQL based hospital management front-end that streamlines patient intake, emergency response, ambulance booking, hospital selection, doctor assignment, ward allocation, food service selection, billing, and review capture. The user-centered interface provides secure sign-up/sign-in (with placeholders for third-party OAuth), stepwise patient verification, fast emergency handling with ambulance booking, and clear transaction breakdowns. The system stores all records in a MySQL backend for retrieval and audit. Designed for a mini-project, it demonstrates full-stack integration, Ul workflows, data validation, and simulated notification flows for real-world hospital operation.

# ACKNOWLEDGEMENT

We express our sincere thanks to our beloved and honorable chairman **MR. S. MEGANATHAN** and the chairperson **DR. M.THANGAM MEGANATHAN** for their timely support and encouragement.

We are greatly indebted to our respected and honorable principal **Dr. S.N. MURUGESAN** for his able support and guidance.

No words of gratitude will suffice for the unquestioning support extended to us by our Head Of The Department **Dr. E.M. MALATHY** and our Deputy Head Of The Department **Dr. J. MANORANJINI** for being ever supporting force during our project work

We also extend our sincere and hearty thanks to our internal guide **Mr.S.Adhithyan,** for his valuable guidance and motivation during the completion of this project.

Our sincere thanks to our family members, friends and other staff members of computer science engineering.

**1. Pranav Narayanan T**

**2. Prasanna K**

# TABLE OF CONTENTS

# LIST OF FIGURES

# CHAPTER 1

# INTRODUCTION

## 1.1 INTRODUCTION

**The Specialized Hospital Management System is a Java Swing and MySQL-based project that automates hospital operations like patient registration, ambulance booking, doctor assignment, room and food management, billing, and report generation through an interactive, user-friendly interface.**

## 1.2 SCOPE OF THE WORK

**The scope of this project is to digitalize hospital processes by managing patient records, doctor details, ambulance services, room and food preferences, and billing efficiently, ensuring smooth, secure, and user-friendly hospital management operations.**

## 1.3 PROBLEM STATEMENT

**Manual hospital management often leads to data errors, delays, and poor coordination. This project aims to solve these issues by developing an automated system that efficiently handles patient details, hospital services, billing, and communication through a centralized digital platform.**

## 1.4 AIM AND OBJECTIVES OF THE PROJECT

**The aim of this project is to develop an automated hospital management system that simplifies and digitalizes hospital**

**operations. Its objectives include managing patient records, ambulance services, doctor details, billing, and communication efficiently using a secure and user-friendly interface.**

# CHAPTER 2

## SYSTEM SPECIFICATIONS

### 2.1 HARDWARE SPECIFICATIONS

| | | |
|---|---|---|
| Processor | : | Intel i3 |
| Memory Size | : | 8GB (Minimum) |
| HDD | : | 1 TB (Minimum) |

### 2.2 SOFTWARE SPECIFICATIONS

| | | |
|---|---|---|
| Operating System | : | WINDOWS 10 |
| Front – End | : | Java Swing |
| Back - End | : | MySql |
| Language | : | Java Swing,MySQL |

# CHAPTER 3

## MODULE DESCRIPTION

This application consists of two modules. When the program runs, it will ask for a confirmation to the login window. The person who interacts can login as an Administrator or as a User. The description of the modules are as follows:

1. **Admin login**

   When the person who interacts tries to login as Admin then he needs to login with his username and password. The administrator only has the power to change and manipulate the data in the database.

2. **User login**

   When the person tries to login as a user then he/she will be prompted to enter the number of symptoms and the final result will be printed in the form of table.

# CHAPTER 4

## SAMPLE CODING

```
import java.sql.*;

import javax.swing.*;



public class SampleLogin {

    public static void main(String[] args) {

        String user = JOptionPane.showInputDialog("Enter Username:");

        String pass = JOptionPane.showInputDialog("Enter Password:");



        try {

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection con = DriverManager.getConnection(

                "jdbc:mysql://localhost:3306/hospital_management", "root",
"yourpassword");
```

```
            PreparedStatement pst = con.prepareStatement(
                "SELECT * FROM users WHERE username=? AND password=?");
            pst.setString(1, user);
            pst.setString(2, pass);
            ResultSet rs = pst.executeQuery();

            if (rs.next())
                JOptionPane.showMessageDialog(null, "Login Successful!");
            else
                JOptionPane.showMessageDialog(null, "Invalid Credentials!");

            con.close();
        } catch (Exception e) {
            JOptionPane.showMessageDialog(null, "Error: " + e.getMessage());
        }
    }
}
```

## Sample 1

Sample 1 depicts the display code, that gets the data from the database i.e. being stored there and represented on users demand with the layout and measurements i.e. being already specified.

```
import java.sql.*;


public class SampleSignUp {

   public static void main(String[] args) {

      String username = "john_doe";

      String email = "john@example.com";

      String password = "12345";



      try {

         Class.forName("com.mysql.cj.jdbc.Driver");

         Connection con = DriverManager.getConnection(

            "jdbc:mysql://localhost:3306/hospital_management", "root",
"yourpassword");



         PreparedStatement pst = con.prepareStatement(
```

```
            "INSERT INTO users (username, email, password) VALUES (?, ?, ?)");
        pst.setString(1, username);
        pst.setString(2, email);
        pst.setString(3, password);

        int rows = pst.executeUpdate();
        if (rows > 0)
            System.out.println("User Registered Successfully!");
        else
            System.out.println("Registration Failed!");

        con.close();
      } catch (Exception e) {
        System.out.println("Error: " + e.getMessage());
      }
    }
}
```

**Sample 2**

Sample 2 depicts the booking part of the code, where it displays booking details and enter user data and store it in database

```
import java.sql.*;

import javax.swing.*;



public class SampleBooking {

   public static void main(String[] args) {

      String patientName = JOptionPane.showInputDialog("Enter Patient Name:");

      String disease = JOptionPane.showInputDialog("Enter Disease:");

      String ambulance = JOptionPane.showInputDialog("Need Ambulance?
(Yes/No):");



      try {

         Class.forName("com.mysql.cj.jdbc.Driver");

         Connection con = DriverManager.getConnection(

            "jdbc:mysql://localhost:3306/hospital_management", "root",
"yourpassword");



         PreparedStatement pst = con.prepareStatement(

            "INSERT INTO bookings (patient_name, disease, ambulance_required)
VALUES (?, ?, ?)");

         pst.setString(1, patientName);
```

```
            pst.setString(2, disease);

            pst.setString(3, ambulance);



            int rows = pst.executeUpdate();

            if (rows > 0)

               JOptionPane.showMessageDialog(null, "Booking Successful!\nPatient: "
+ patientName +

                     "\nDisease: " + disease + "\nAmbulance: " + ambulance);

            else

               JOptionPane.showMessageDialog(null, "Booking Failed!");



            con.close();

         } catch (Exception e) {

            JOptionPane.showMessageDialog(null, "Error: " + e.getMessage());

         }

      }

}
```

# CHAPTER 5

## Screenshots

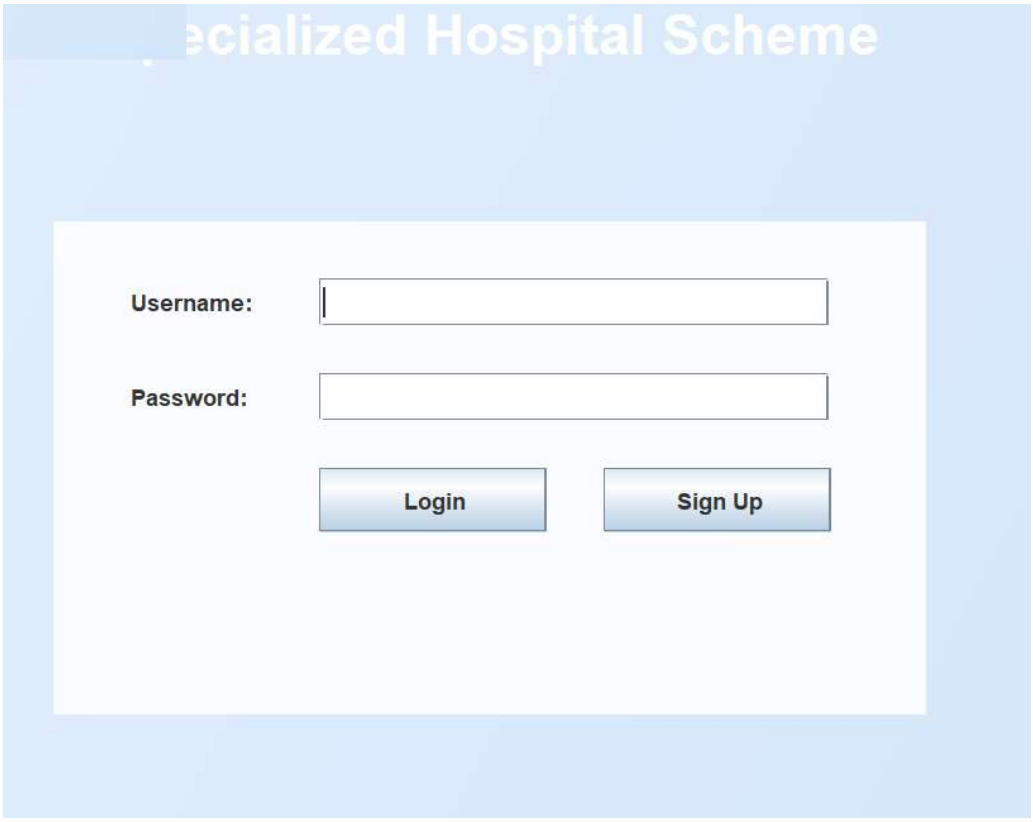


**Fig 5.1 Introduction page**

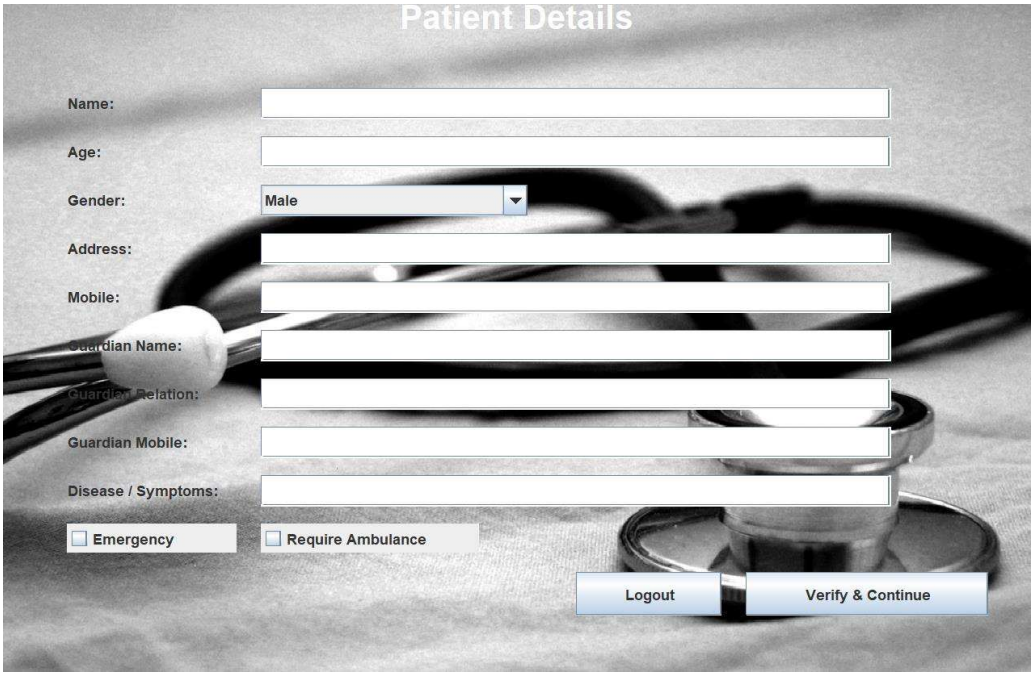

**Fig 5.2 Patients details**

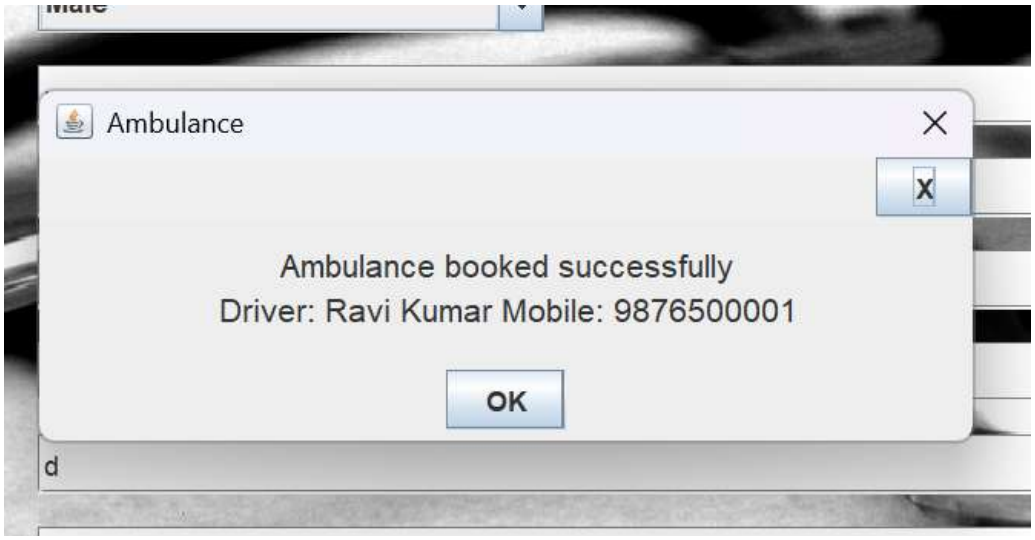


**Fig 5.3 Booking Log**

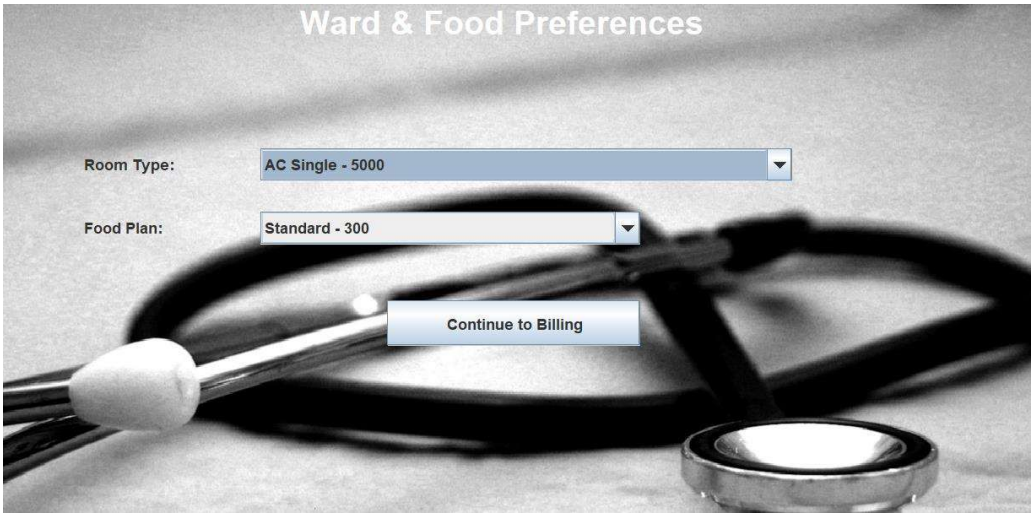


**Fig 5.4 Booking creation**


**Fig 5.5 Billing and Payments**

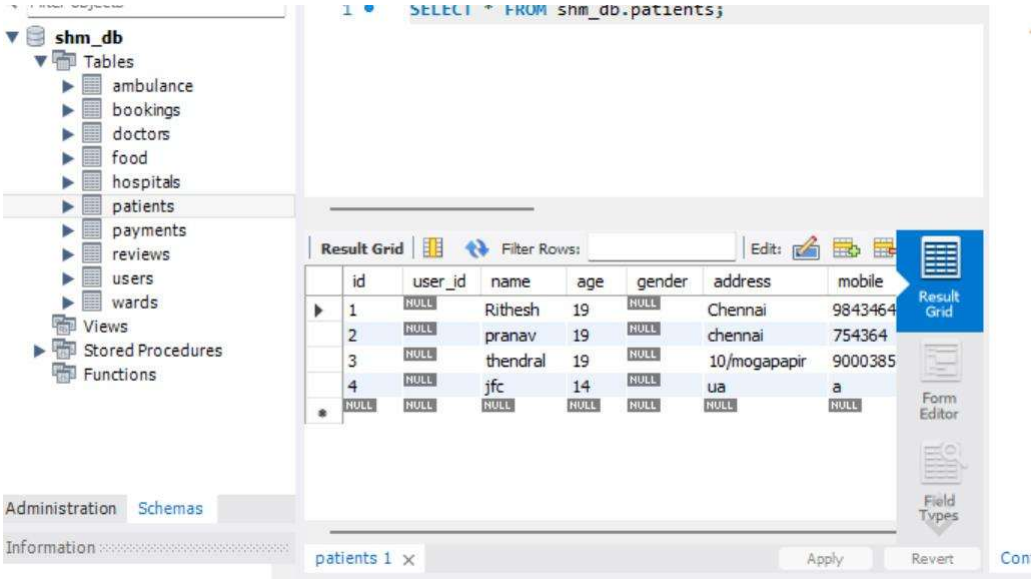

**Fig 5.6 Database creation**

# CHAPTER 6

## CONCLUSION AND FUTURE ENHANCEMENT

The Specialized Hospital Management System efficiently digitalizes hospital operations, improving accuracy and reducing manual workload through automated data handling. In the future, this system can be enhanced with features like cloud-based storage, AI-assisted diagnosis, mobile app integration, real-time ambulance tracking, and advanced data security for better scalability and user experience.

# REFERENCES

1. HTTPS://WWW.W3SCHOOLS.COM/SQL/

2. HTTPS://WWW.TUTORIALSPOINT.COM/SQLITE/INDEX.JAVA

3. HTTPS://WWW.WIKIPEDIA.ORG/

4. HTTPS://WWW.LEARNJAVA.ORG/

5. HTTPS://WWW.CODECADEMY.COM/LEARN/LEARN-JAVA