# Hospital Management System
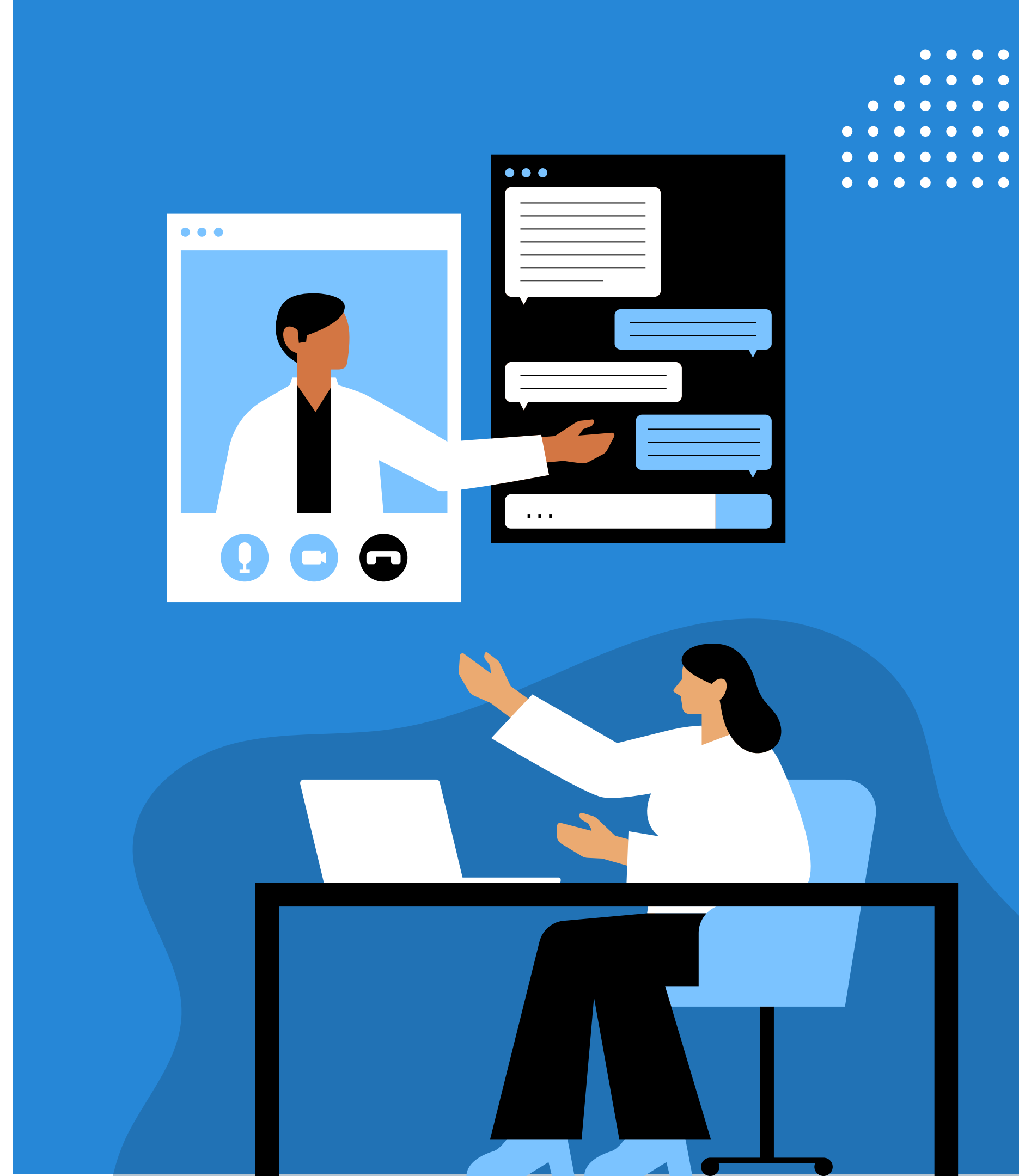
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**20222757**

**BVoc Software Development**

**Help and Support- Vipin Rathi Sir**

# Objective of the project

**To develop a user-friendly and efficient software to manage hospital operations such as patient registration, room allocation, appointments, and billing.**
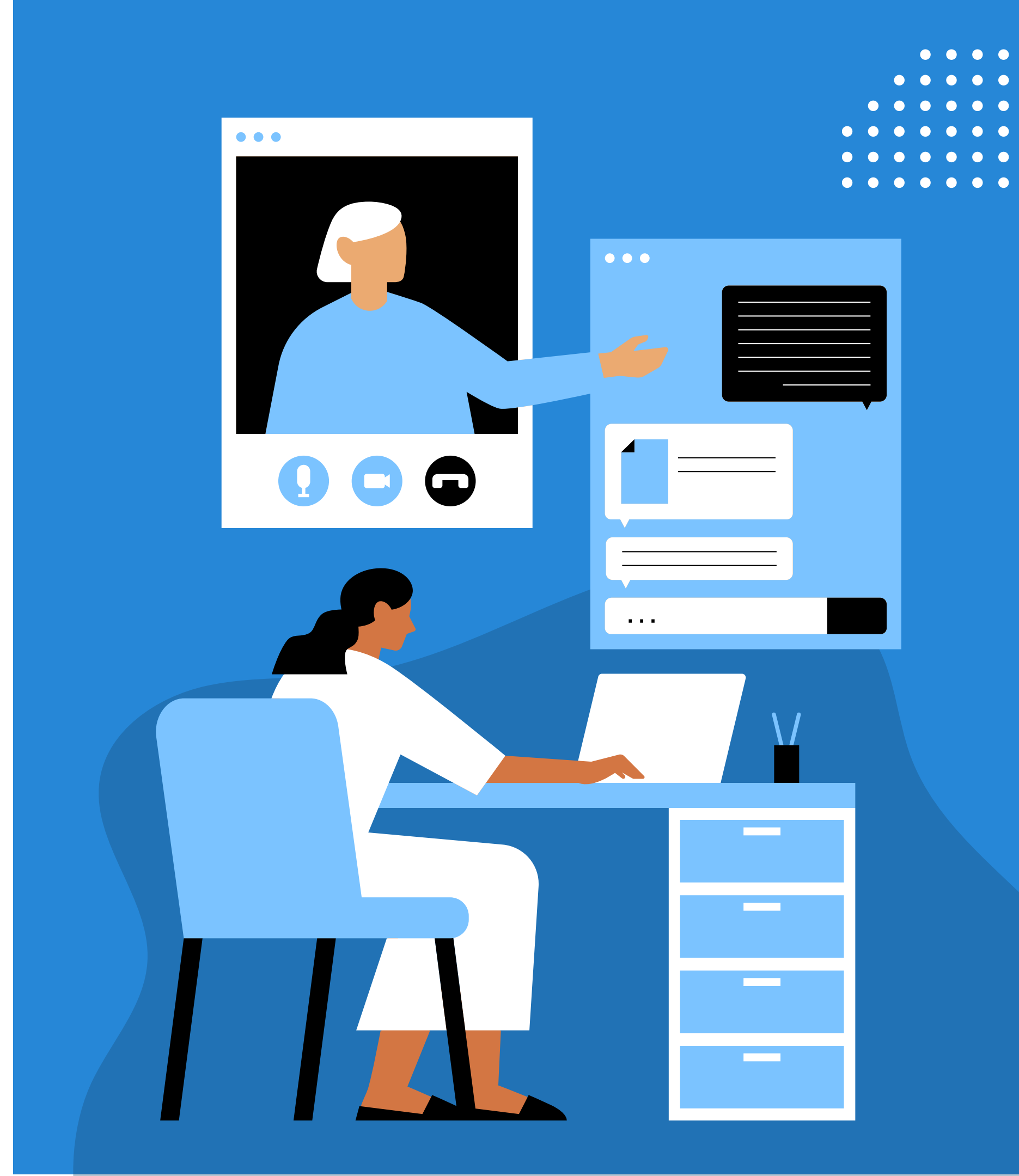
# Problem Statement

- **Challenges in Traditional Hospital Management**

Manual record-keeping is prone to errors.

Difficulties in retrieving patient information quickly.

# Solution:

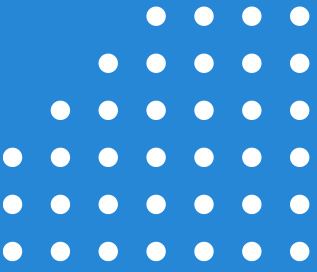A computerized Hospital Management System to streamline operations.

# SOFTWARE STACK

- **Technologies Used**

*Frontend: Tkinter*

*Backend: Python*

*Database: SQLite (DB Browser)*

# Key Features

1. Login System:
Secured access with username and password.

2. Patient Management:
Add, update, search, and delete patient records.

3. Room Allocation:
Assign and manage room details for patients.

4. Employee Management:
Add and delete employee records.
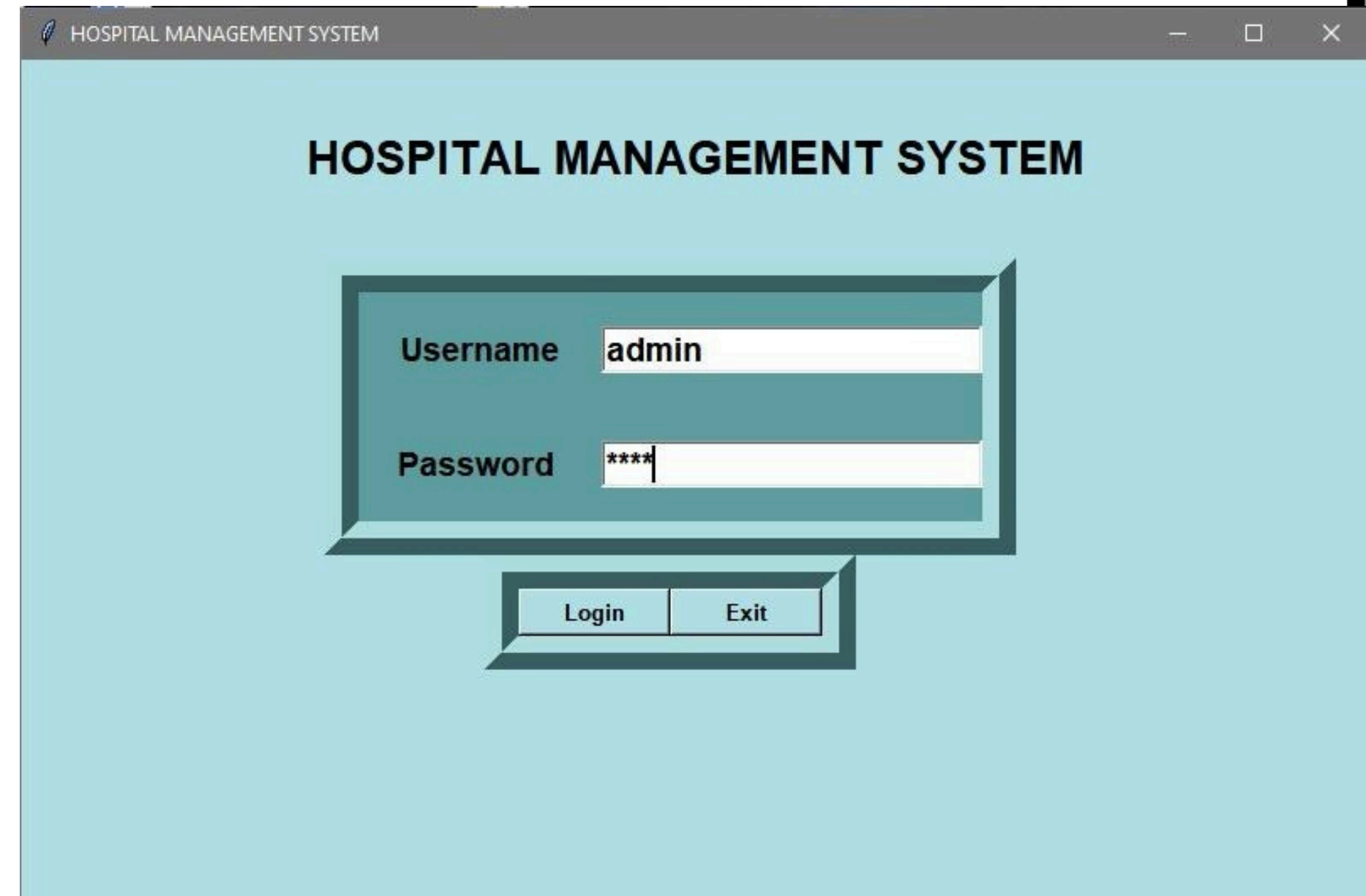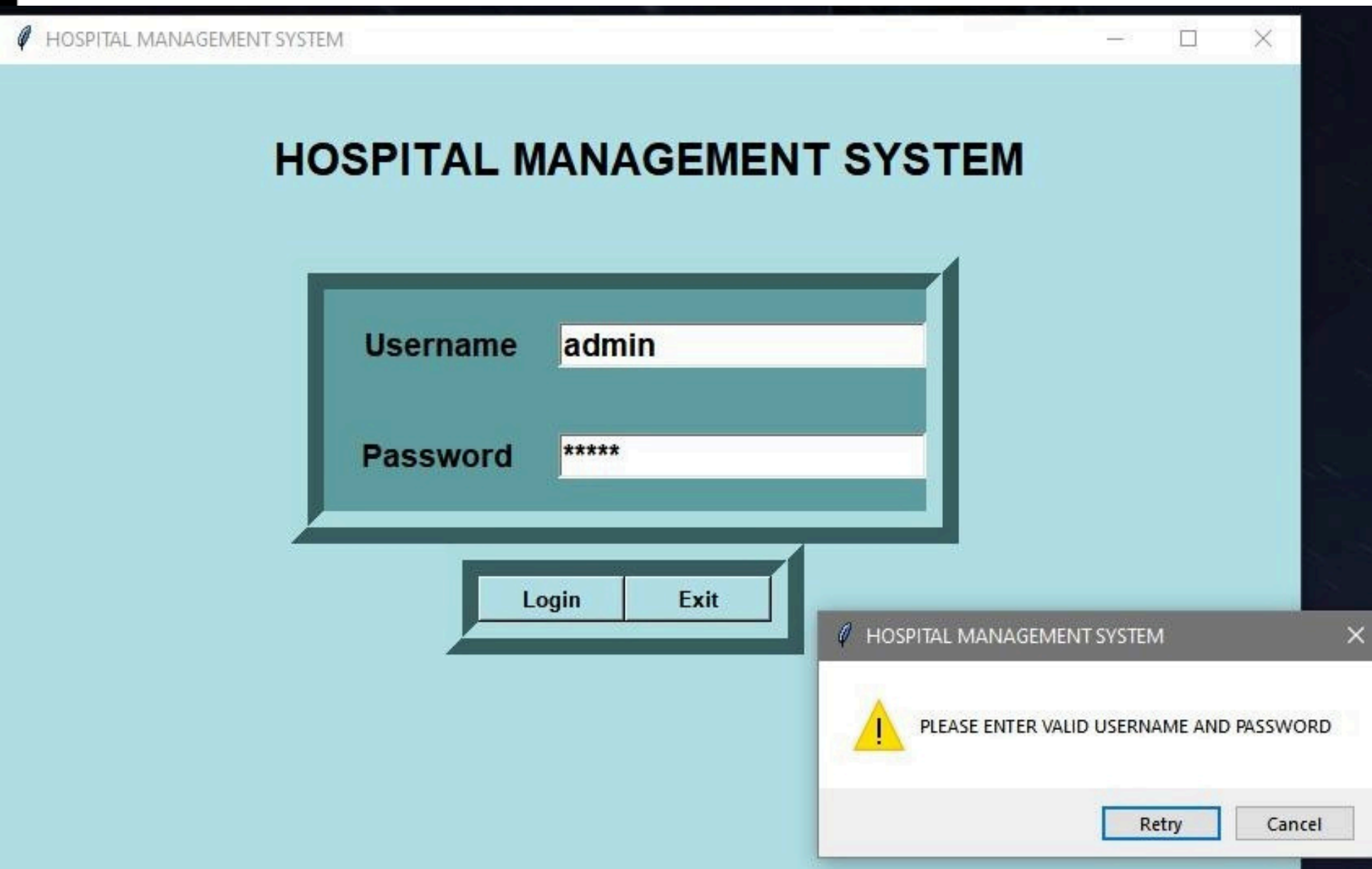
5. Appointment Scheduling:
Book, delete, and search appointments.

6. Billing System:
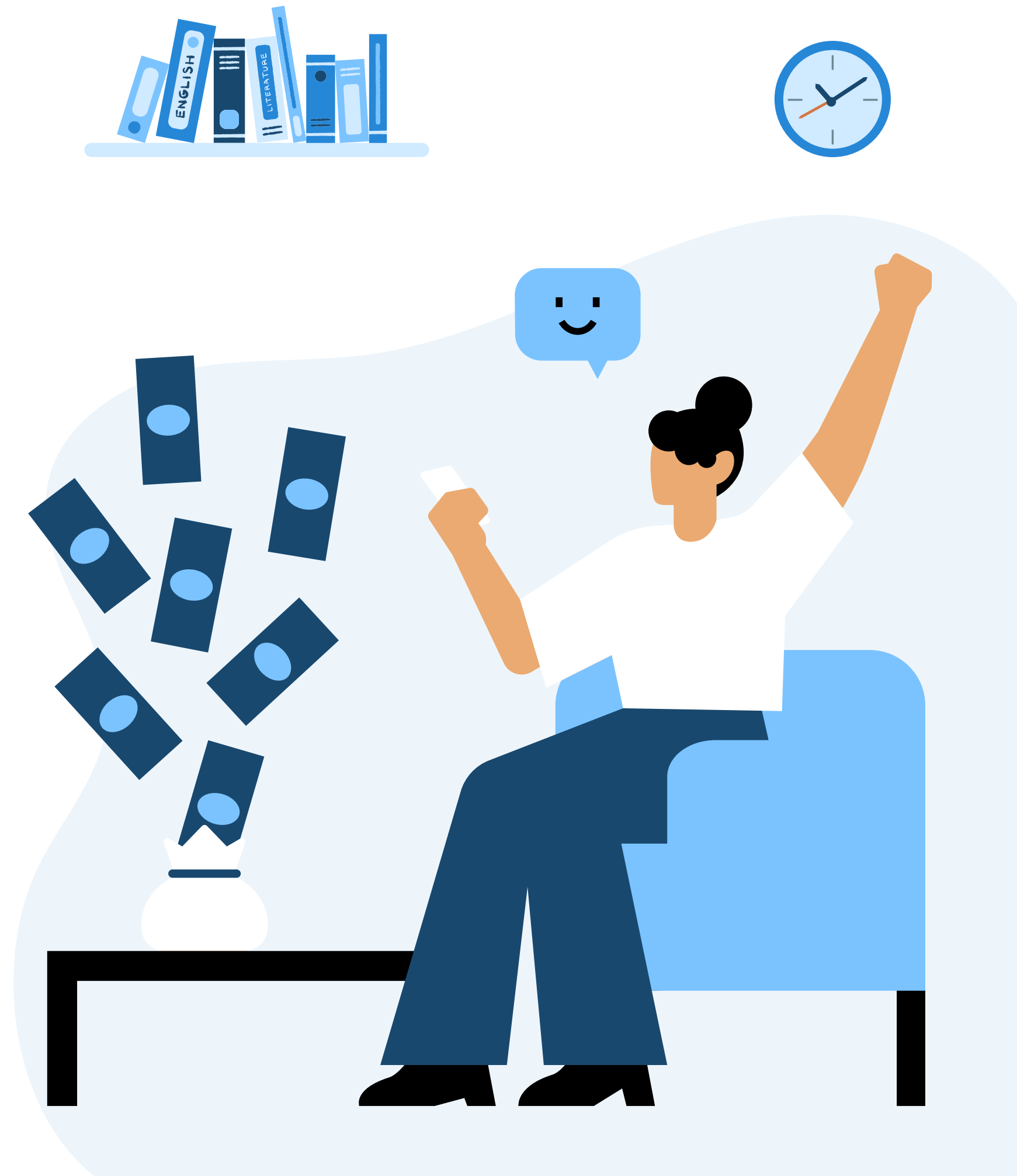Generate and update patient bills.

# OUTPUT SCREENSHOTS ARE ADDED TO README FILE

# Challenges

Learning GUI development with Tkinter.

Managing database connections efficiently.

# Demonstration Workflow

1. Launching the Application:

Open the Visual Studio Code (VS Code) editor or terminal.

Run the Python script (main.py) to launch the Hospital Management System.

The login window appears as the starting interface.

2. Login Process:
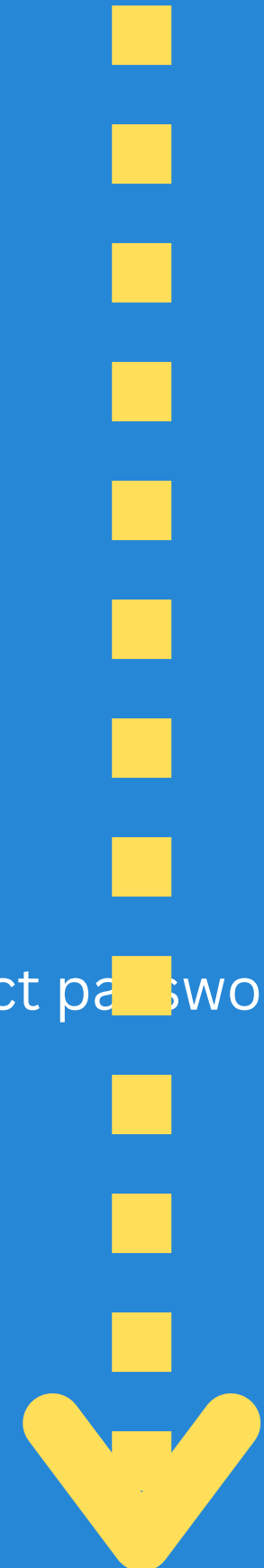
Enter valid admin credentials to access the system.

Demonstrate what happens with valid and invalid login attempts (e.g., error message for incorrect password).

3. Patient Management:

Navigate to the Patient Registration module from the main menu.

Perform actions:

Add a new patient with basic details (e.g., name, age, contact).

# Demonstration Workflow

4. **Room Allocation**:

Use the Room Allocation module to assign a room to a patient.

Demonstrate how to update room details (e.g., room type or status).

Show the process of viewing available rooms in the system.

5. **Employee Management:**
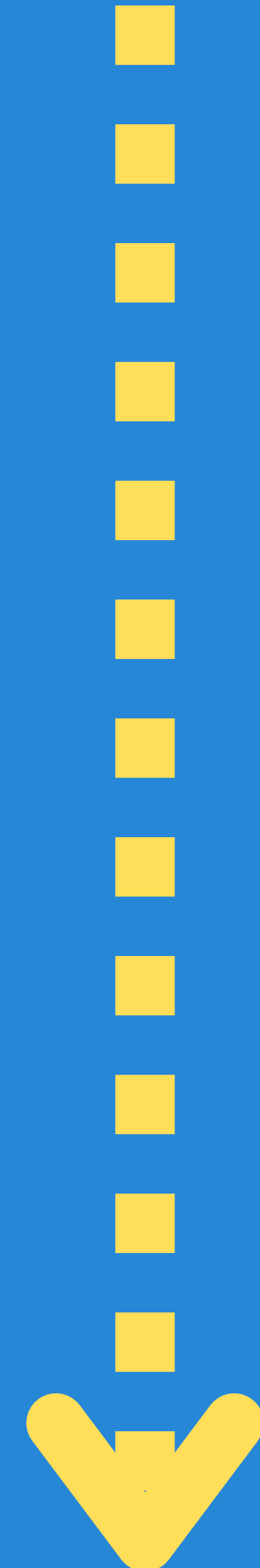
Open the Employee Registration module.

Add a new staff member with details like name, position, and contact.

Show how to delete an employee record.

6. **Appointment Booking:**

Access the Book Appointment feature.

Add an appointment for a specific patient and doctor, including time and date.

# Demonstration Workflow

**7. Billing System:**

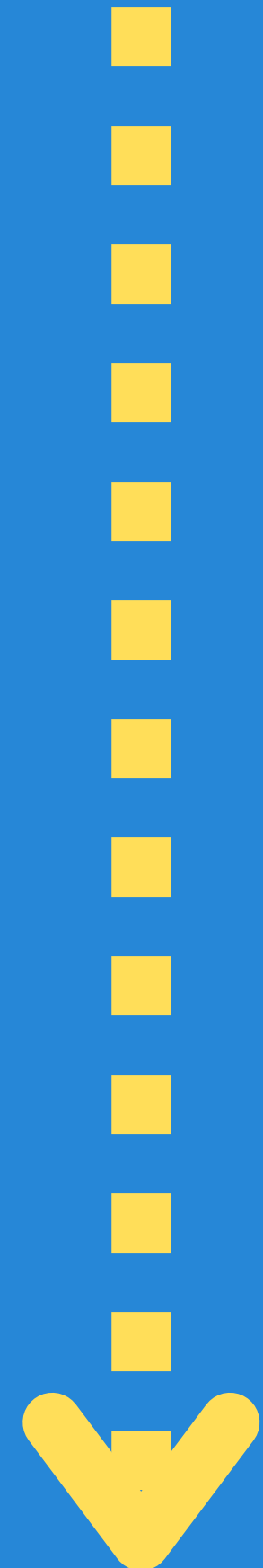**Navigate to the Patient Billing module.**

**Update patient data, including discharge date and other details.**

**Generate a bill and showcase the bill format in the GUI.**

**8. Logging Out:**

**Return to the main menu and log out of the system securely.**

**Demonstrate how unauthorized users cannot access sensitive modules.**

# Future Enhancements

1. Patient Medical History:

Add a feature to store and retrieve detailed medical history for each patient, including past treatments, prescriptions, and lab reports.

2. Doctor-Patient Portal:

Introduce a portal for doctors and patients to communicate securely.

Allow patients to view their medical records and doctors to update treatment plans.

3. Advanced Appointment Scheduling:

Include appointment reminders via email or SMS.

Implement a calendar-based appointment booking system for easy scheduling.

4. Mobile Application

5. Feedback and Support System

# Thank You