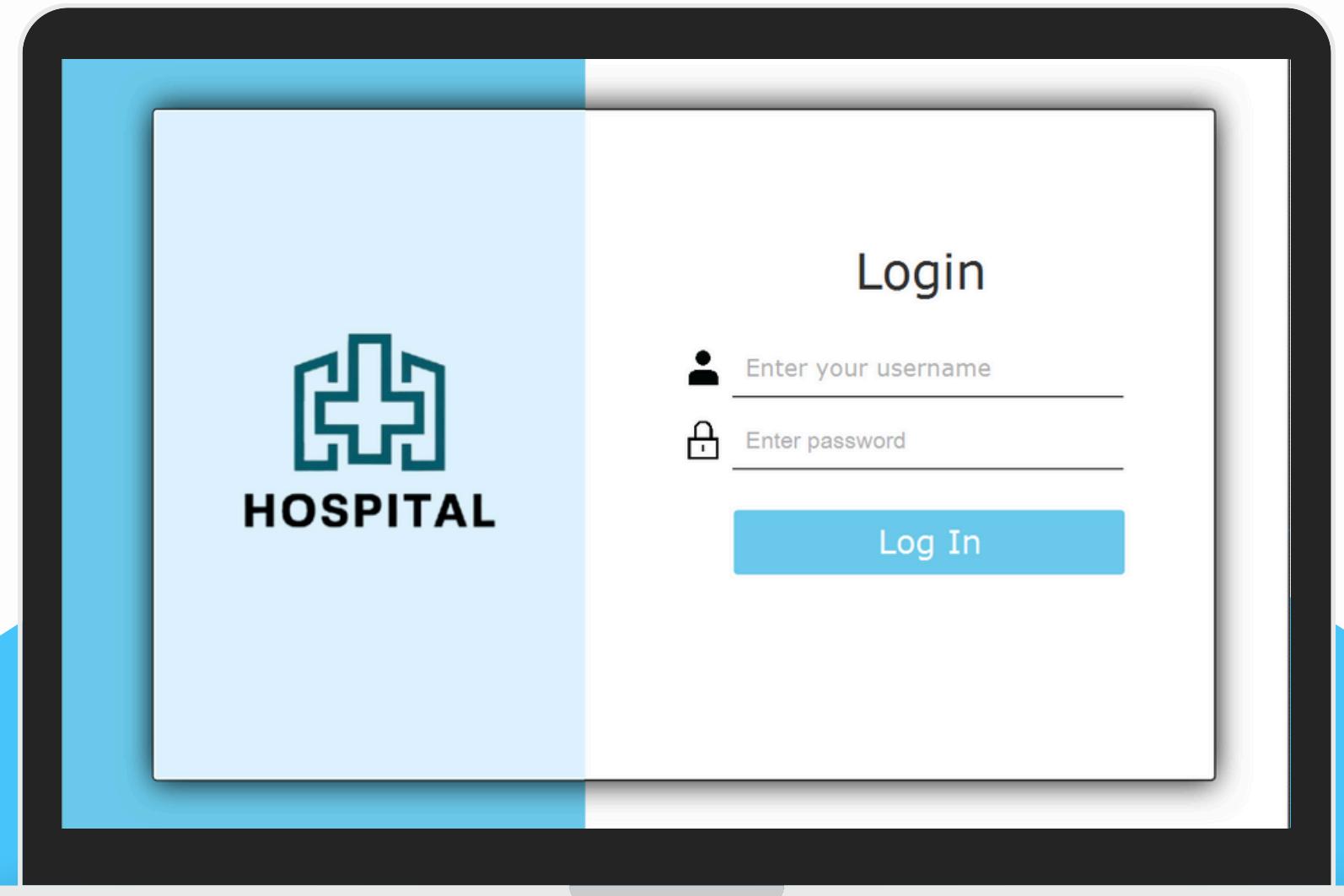




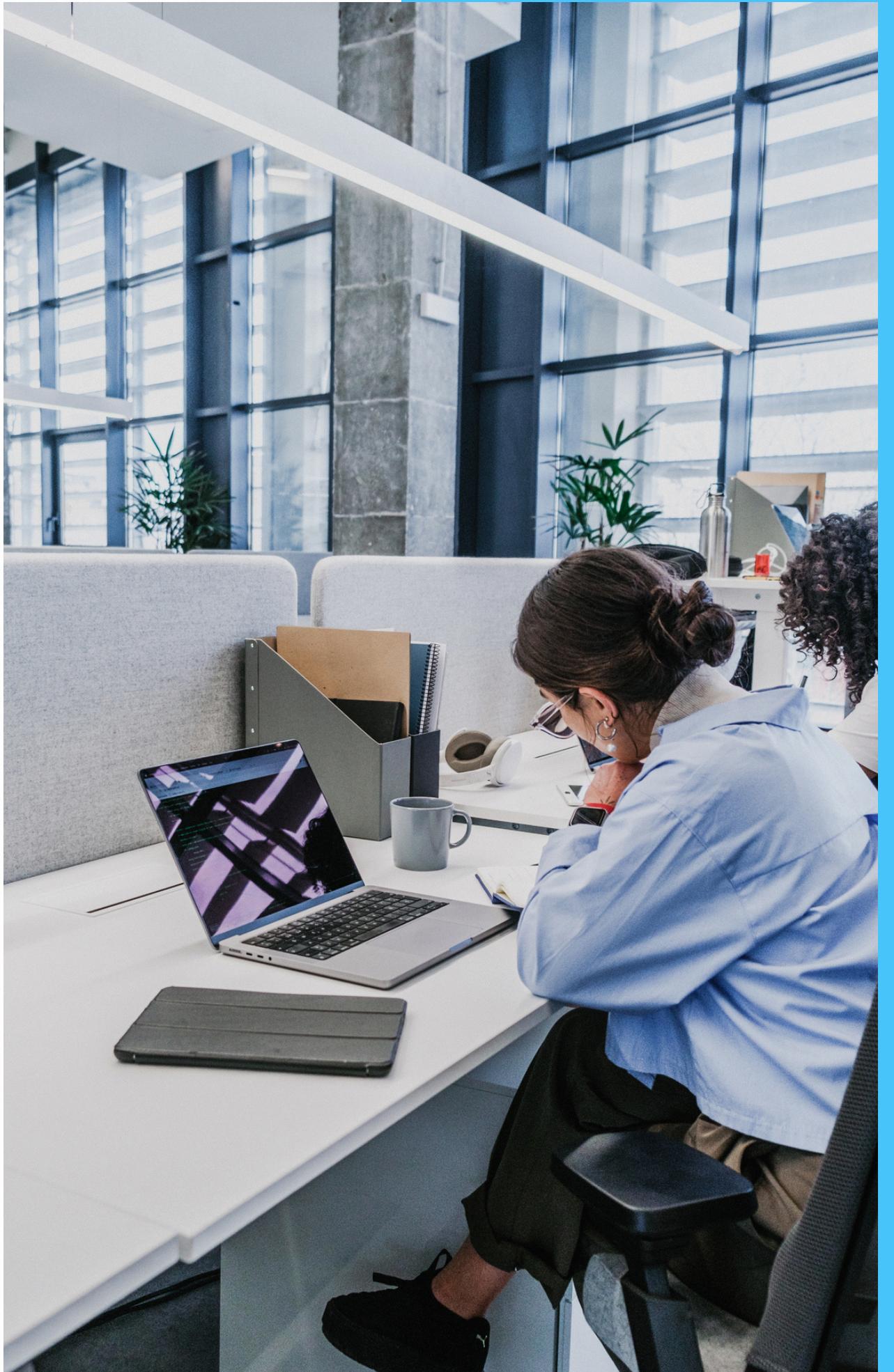
**Ice Berg Solutions**

# **Smart Hospital Operations System (SHOS)**



# Overview

- Introduction
- Problem Statement
- Objectives
- Product Functions
- User Interface Overview
- System Architecture
- Conclusion





# Introduction

- **Purpose:** To automate and enhance efficiency in hospital operations.
- **Scope:** Covers patient management, staff scheduling, inventory control, and billing.



# Problem Statement

## Challenges in Hospital Operations

- Manual processes in patient registration, staff scheduling, inventory, and billing cause errors, delays, and increased administrative workload.
- Inaccurate records lead to miscommunication, treatment delays, and reduced hospital efficiency.

## Hospital Management System (HMS) Solution

- Automates key functions, ensuring accurate data handling, efficient resource allocation, and timely decision-making.
- Enhances patient care, reduces manual errors, optimizes resource use, and adapts to hospitals of all sizes with a user-friendly interface.



# Objectives

## Efficient Patient Management

Streamline registration, admission, and discharge processes.

## Optimized Staff Scheduling

Automate staff schedules to prevent conflicts.

## Effective Inventory Control:

Real-time tracking of supplies and medications.

## Improved Billing and Payment Handling:

Quick and accurate billing processes.



# Product Functions

## Patient and Appointment Management

- Appointment Scheduling
- Patient Medical History
- Prescription Management

## Hospital Resource and Operations Management

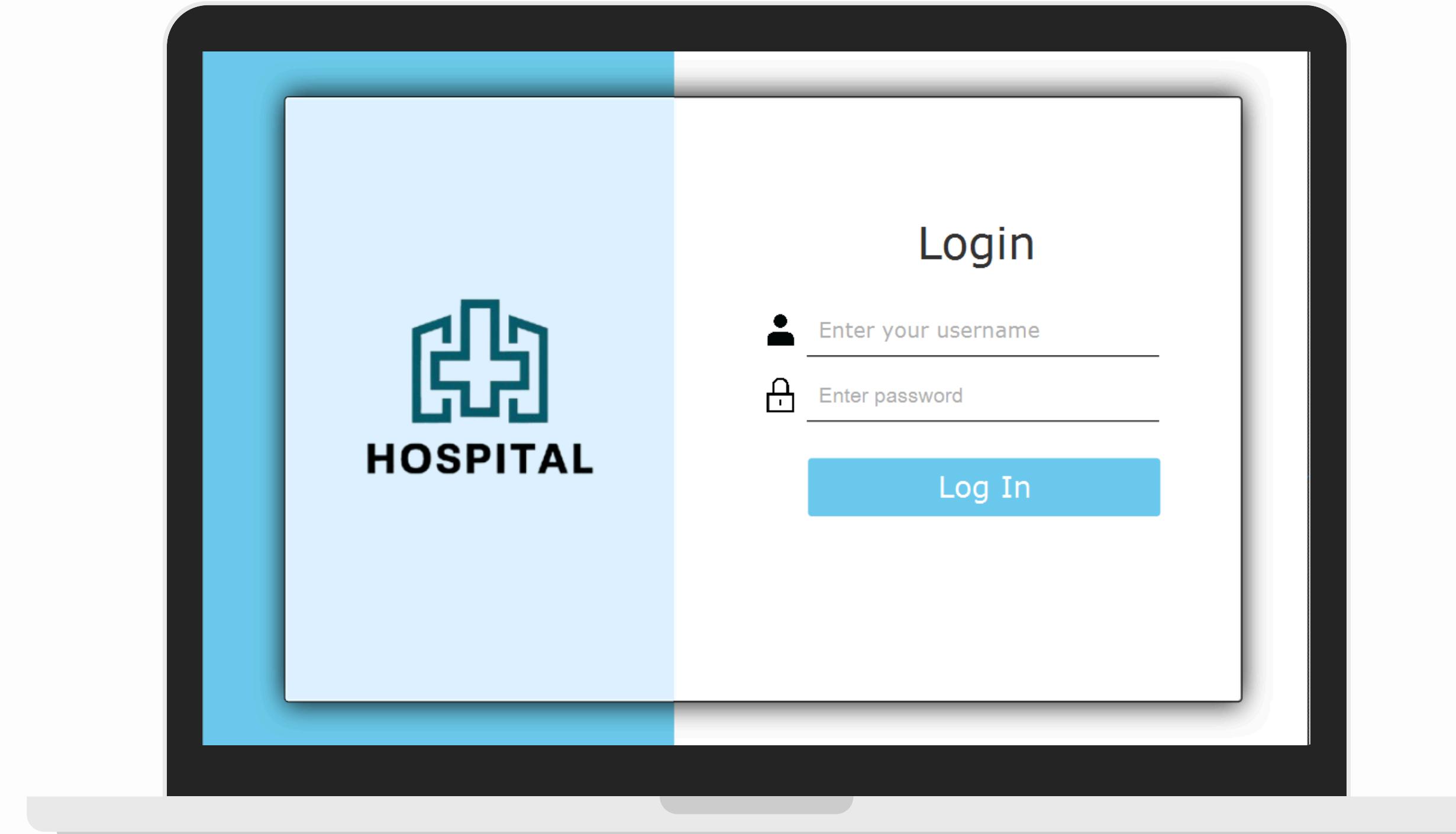
- Pharmacy Management
- Bed and Ward Management
- Laboratory System Management

# Product Functions

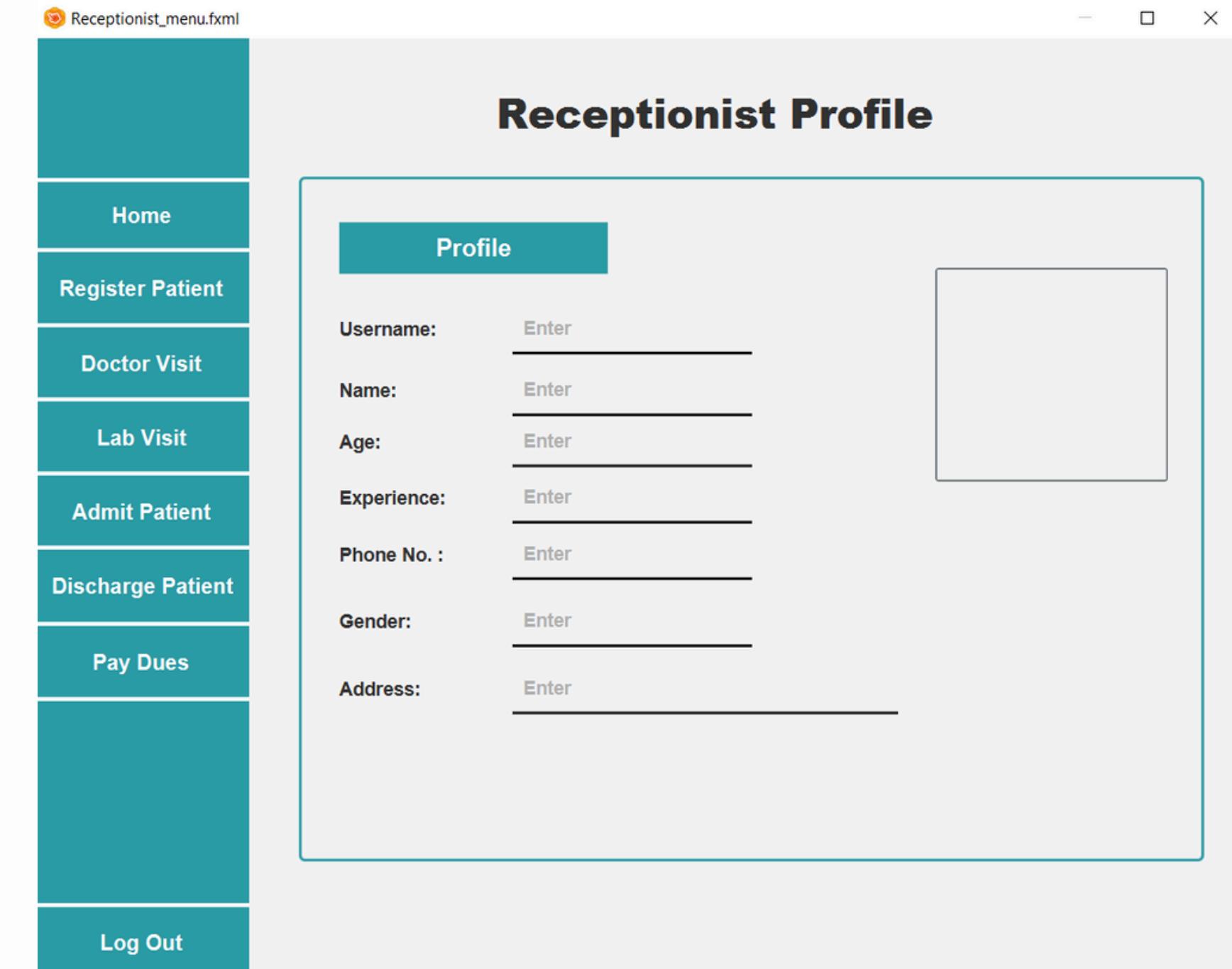
## Billing and Staff Management

- Billing and Invoicing
- Staff Scheduling
- Staff Management

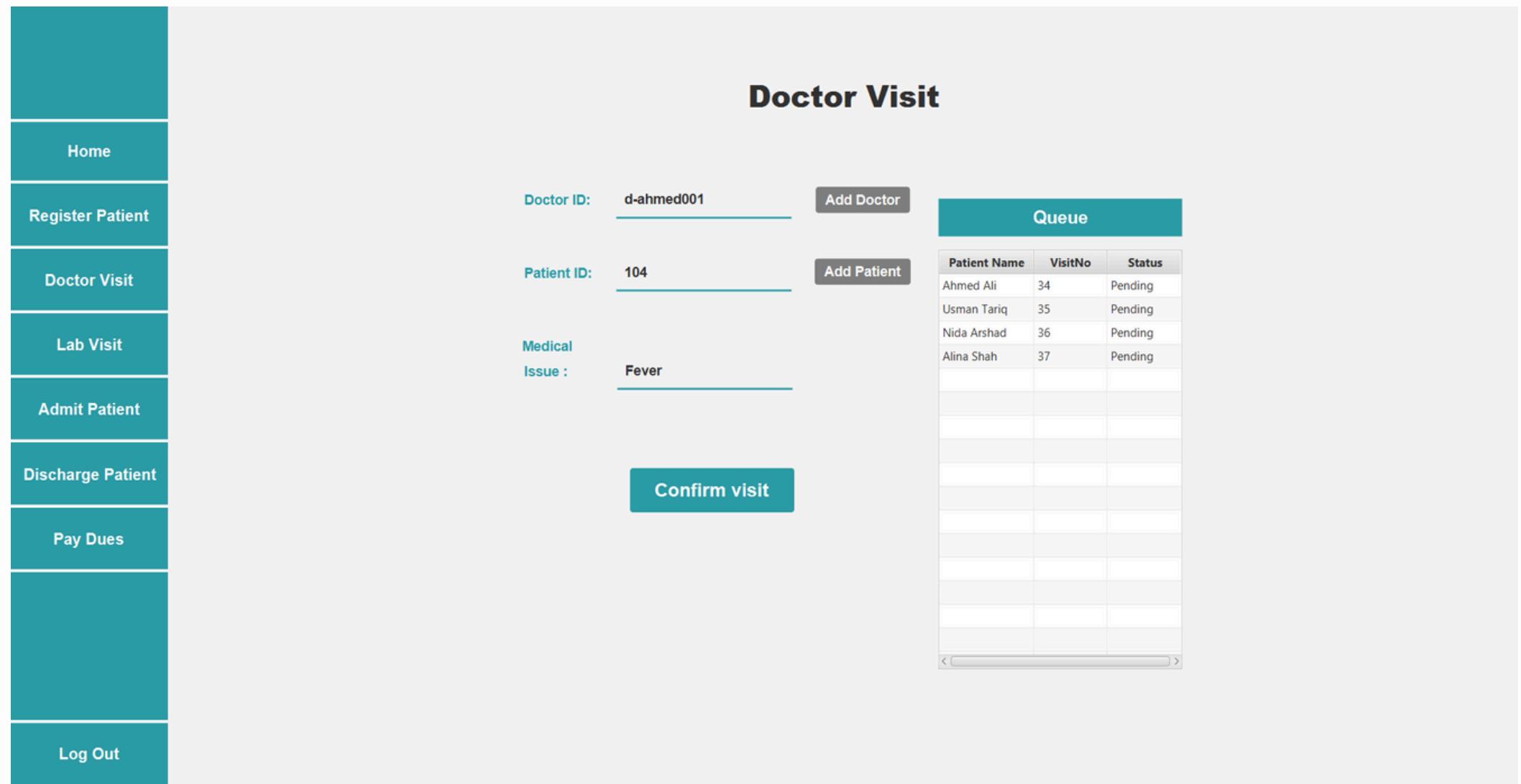
# User Interface Overview



# Receptionist Main Menu



# Appointment Management



# Billing and Invoice Management

The image shows a screenshot of a medical billing software application. On the left, there is a vertical sidebar menu with the following options:

- Home
- Register Patient
- Doctor Visit
- Lab Visit
- Admit Patient
- Discharge Patient
- Pay Dues

The main window is titled "Bed Allocation" and has a sub-section titled "Pay Dues". It displays a table of "Bed Allocations" with the following data:

Description	Price	Date	Status
Bed charges	3000.0	2024-11-17 09:45:00	Unpaid
Medicine charges	2700.0	2024-11-17 10:15:00	Paid
Nursing charges	4000.0	2024-11-17 10:45:00	Unpaid
Injection Charges	2000.0	26-Nov-2024 9:51 AM	Pending

At the bottom of the main window, there are two buttons: "Save" and "Mark as Paid".

# Search Patient From DataBase

Search Patient

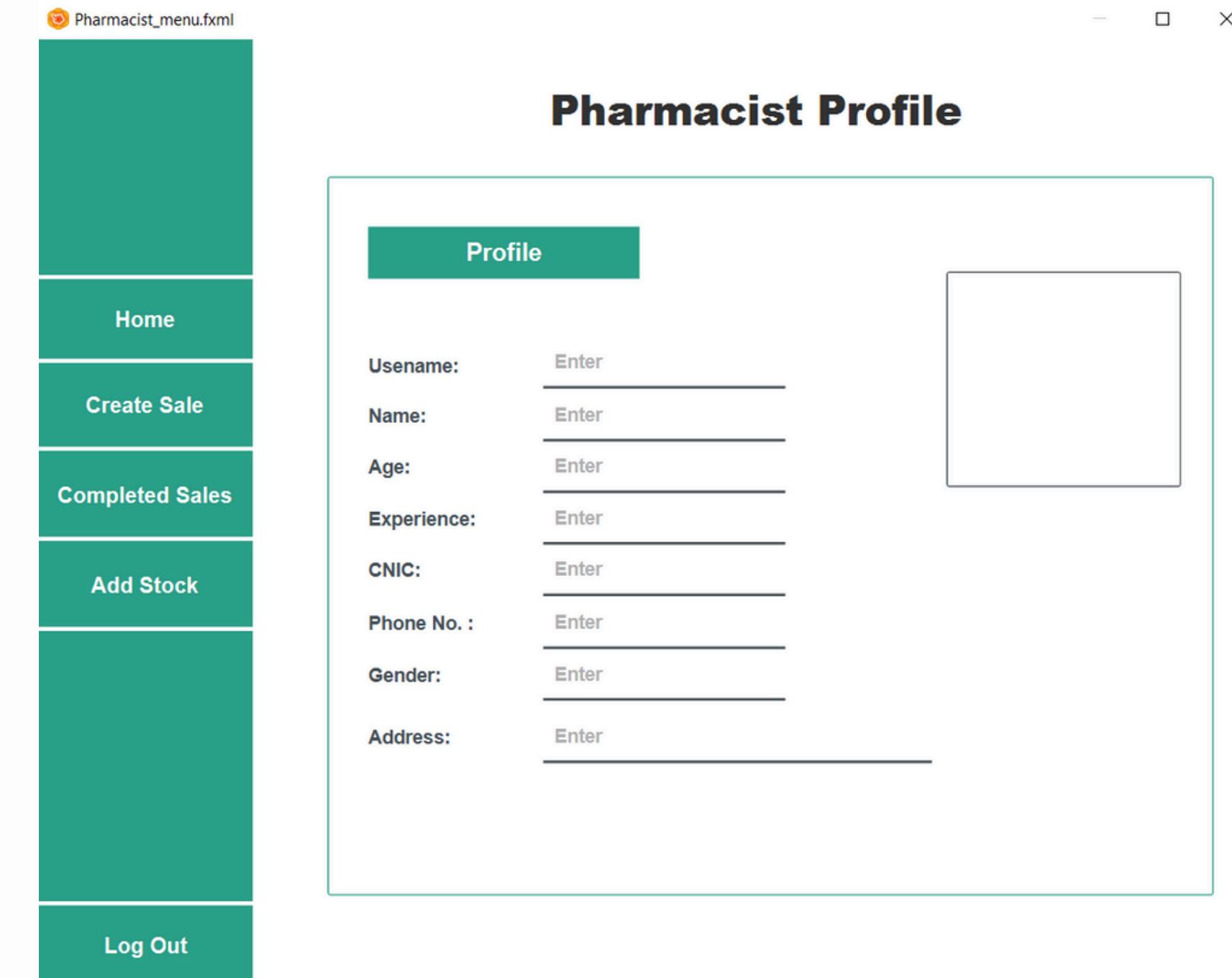
Patient Name:

Search

Patients				
Name	CNIC	Gender	Age	BloodGroup
Ali Khan	101	Male	30	B+
Ayesha Siddiqui	102	Female	25	O+
Ahmed Ali	103	Male	40	A+
Sara Malik	104	Female	28	AB+
Usman Tariq	105	Male	35	B-
Fatima Noor	106	Female	22	O-
Hamza Rafiq	107	Male	32	A-
Zara Shahid	108	Female	29	B+
Bilal Ahmed	109	Male	27	AB-
Mehwish Javed	110	Female	24	O+
Shahid Anwar	111	Male	38	A+

Confirm Selection

# Pharmacist Main Menu



# Medicine Sales

**Create Sale**

Medicine Name:  Search

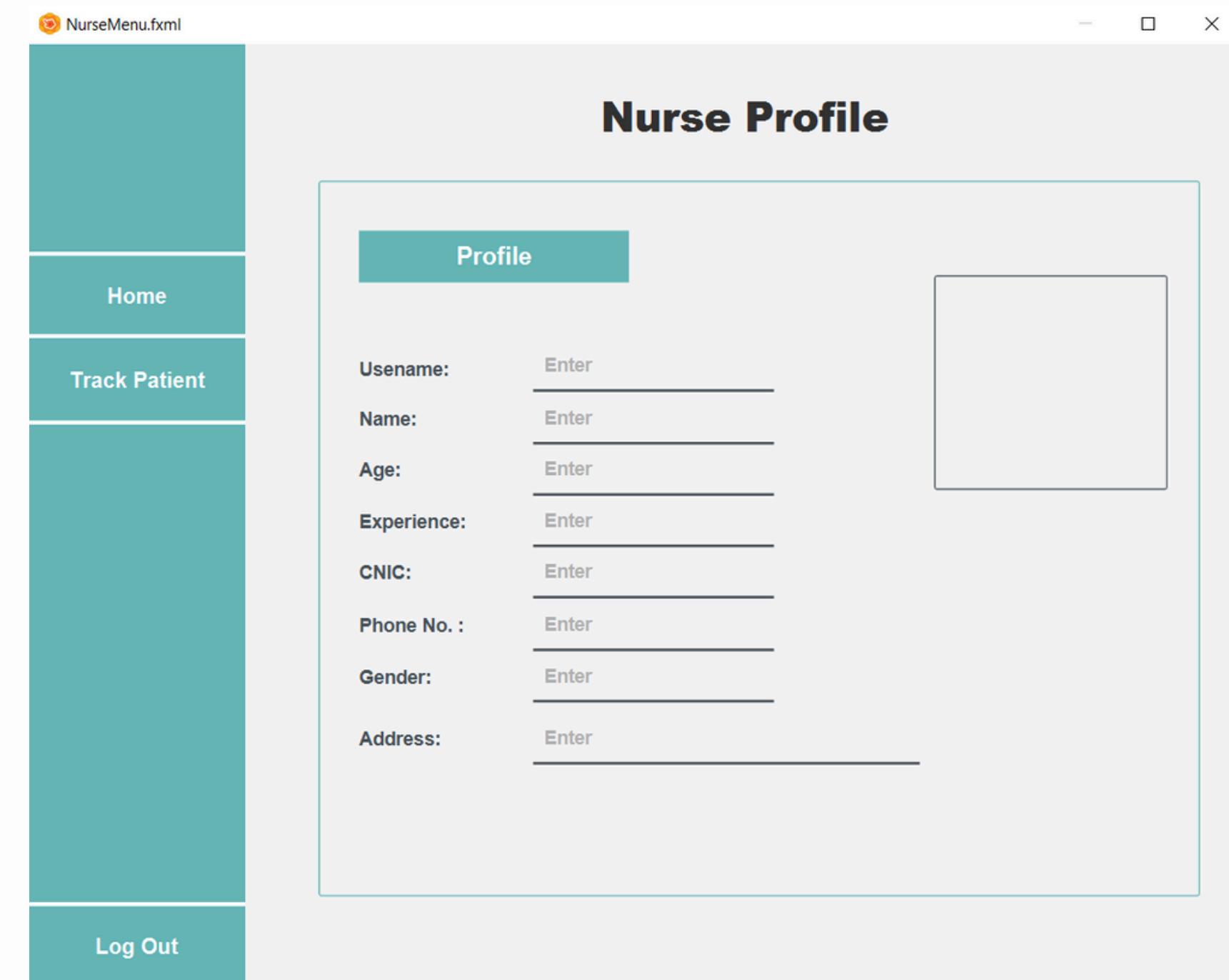
Medicines			
ID	Name	Quantity	Price
M001	Panadol	490	20.0
M002	Disprin	367	15.0
M003	Brufen	275	50.0
M004	Flagyl	225	30.0
M005	Cefspan	190	90.0
M006	Augmentin	290	80.0
M007	Calpol	485	25.0
M008	Zentel	145	40.0
M009	Ventolin	96	60.0
M010	Buscopan	114	35.0
M011	Aspirin	450	18.0
M012	Ibuprofen	295	55.0

Bill			
ID	Name	Quantity	Price
M001	Panadol	10	200.0
M003	Brufen	5	250.0
M007	Calpol	5	125.0
M009	Ventolin	4	240.0
M010	Buscopan	6	210.0

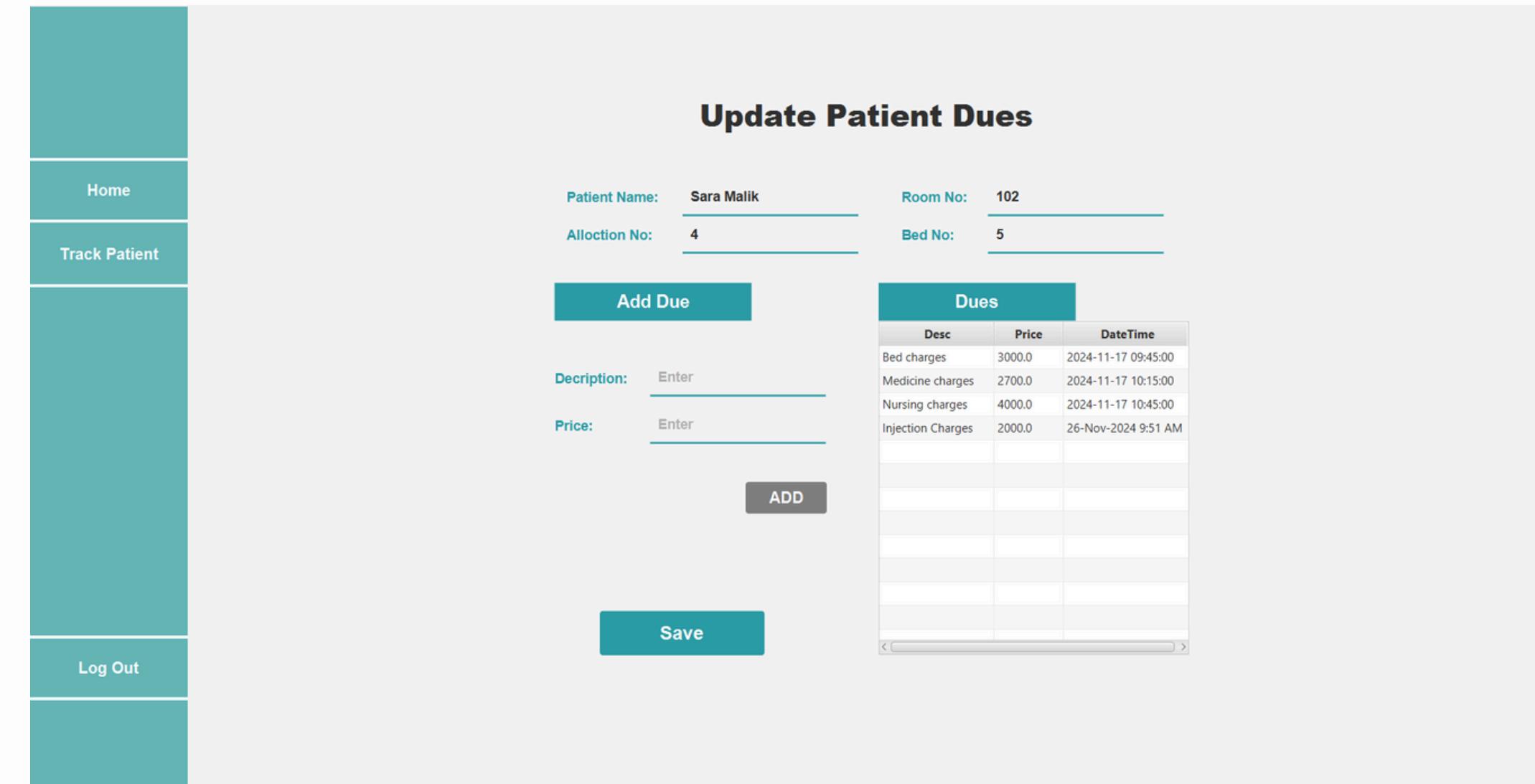
Quantity:  Add Remove Medicine Total:

Confirm Sale

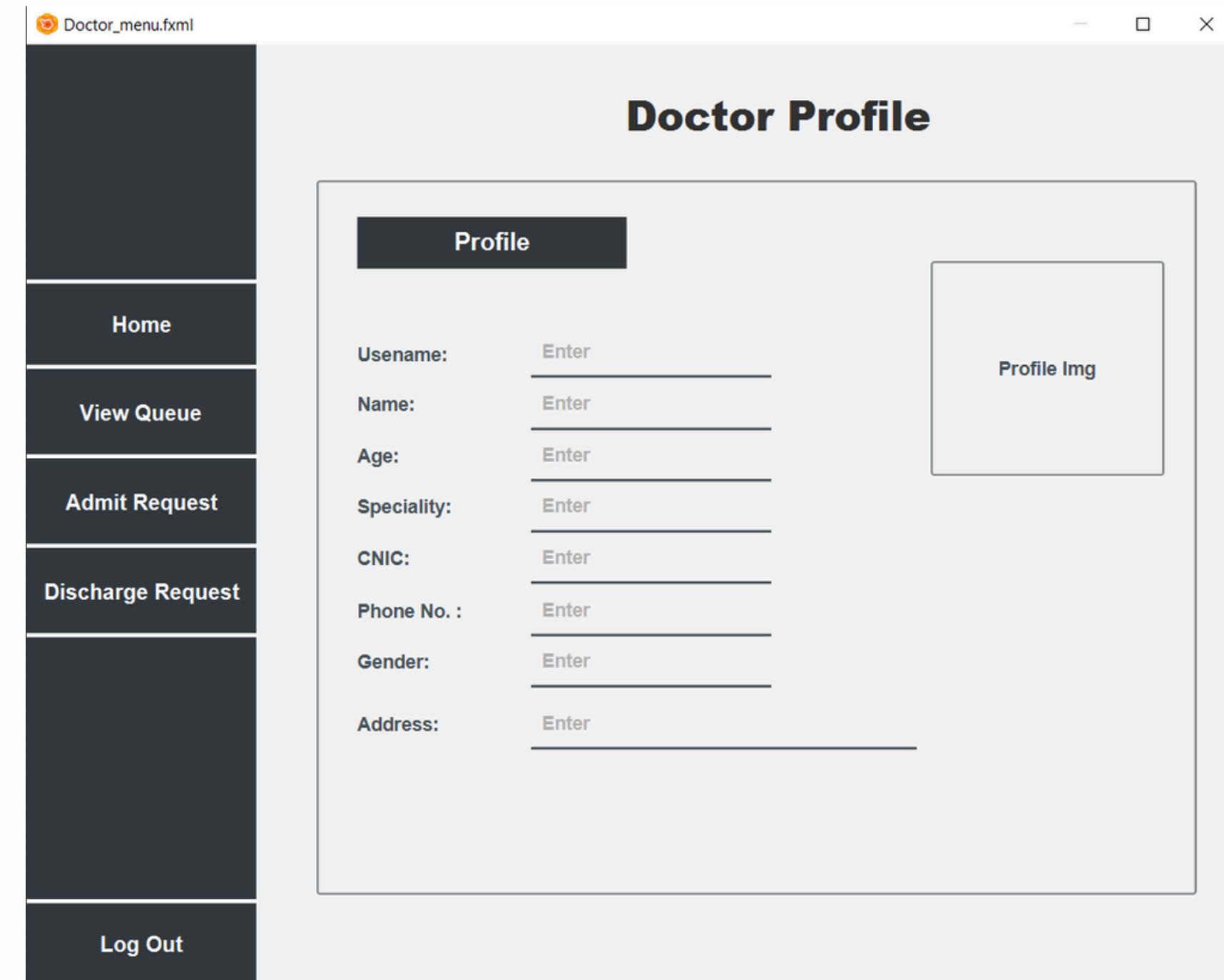
# Nurse Main Menu



# Track and update Patient Dues



# Doctor Main Menu



# Generate Admit Request

The screenshot shows a Windows application window titled "Admit Request". On the left is a vertical dark grey sidebar menu with white text links: "Home", "View Queue", "Admit Request" (which is bolded), "Discharge Request", and "Log Out". The main content area has a light grey background. At the top right is a search bar with the placeholder "Patient Name: Enter" and a "Search" button. Below the search bar is a table titled "Patients" with columns: Name, CNIC, Gender, Age, and BloodGroup. The table contains 12 rows of patient data. At the bottom right is a large black button with the text "Generate Request".

Name	CNIC	Gender	Age	BloodGroup
Ali Khan	101	Male	30	B+
Ayesha Siddiqui	102	Female	25	O+
Ahmed Ali	103	Male	40	A+
Sara Malik	104	Female	28	AB+
Usman Tariq	105	Male	35	B-
Fatima Noor	106	Female	22	O-
Hamza Rafiq	107	Male	32	A-
Zara Shahid	108	Female	29	B+
Bilal Ahmed	109	Male	27	AB-
Mehwish Javed	110	Female	24	O+
Shahid Anwar	111	Male	38	A+

# Start Checkup

**Check UP**

Patient:	Ahmed Ali	Doctor:	Dr Ahmed Khan
Age:	40	Date Time:	27-Nov-2024 4:56 PM
CNIC:	103	Medical Issue:	Temprature

[Check Previous Visits](#)

Prescription:

[Print](#) [Save](#)

- Home
- View Queue
- Admit Request
- Discharge Request
- Log Out

# Admin Main Menu

AdminMenu.fxml

## Doctor Management Hub

Name	Username
No content in table	

Username:

Password:

Name:

Age:

Speciality:

CNIC:

Phone No. :

Address:

Gender:

Working Days:

<input type="checkbox"/> MON	<input type="checkbox"/> THUR
<input type="checkbox"/> TUE	<input type="checkbox"/> FRI
<input type="checkbox"/> WED	<input type="checkbox"/> SAT
<input type="checkbox"/> SUN	

Doctor

Nurse

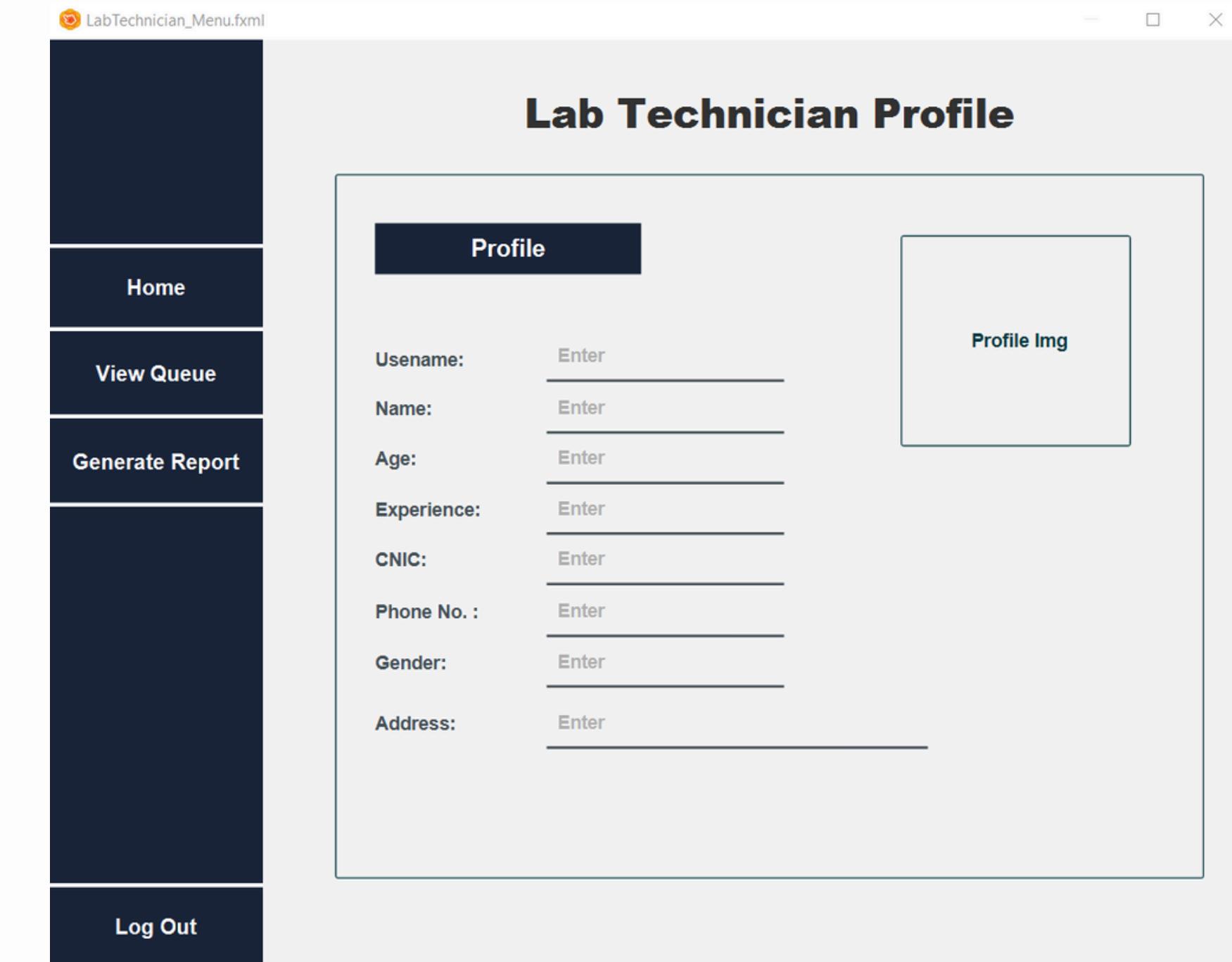
Lab Technician

Pharmacist

Receptionist

Log Out

# Lab Technician Main Menu



# Lab Reports

## Lab Reports

Patient Name:  Search

Visits			
Visit No	Patient Name	Test	Patient Visit Date
1	Ali Khan	Blood Test	2024-11-01 09:00:00
2	Ayesha Siddiqui	X-ray	2024-11-01 10:00:00
3	Ahmed Ali	Urine Test	2024-11-01 11:00:00
4	Sara Malik	CT Scan	2024-11-02 09:00:00
5	Usman Tariq	Blood Sugar Test	2024-11-02 10:00:00
6	Fatima Noor	ECG	2024-11-02 11:00:00
7	Hamza Rafiq	Liver Function Test	2024-11-03 09:00:00
8	Zara Shahid	Blood Pressure Test	2024-11-03 10:00:00
9	Bilal Ahmed	Chest X-ray	2024-11-03 11:00:00
10	Mehwish Javed	Kidney Function Test	2024-11-04 09:00:00
11	Shahid Anwar	Thyroid Function Test	2024-11-04 10:00:00
12	Iqra Asif	X-ray	2024-11-04 11:00:00
13	Tahir Hussain	Urine Test	2024-11-05 09:00:00

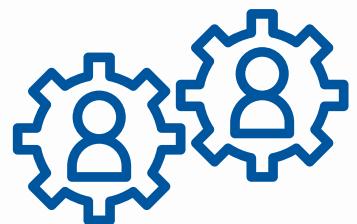
[Open Report](#)

# Three-Layer Structure



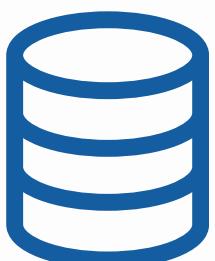
## Presentation Layer

User interface using FXML and Controllers.



## Business Layer

Core functionalities like classes and their Functions.



## Data Layer

SQL database for data storage and retrieval.

# Conclusion

- The HMS aims to significantly improve hospital operations by automating key processes, ensuring accurate data handling, and enhancing patient care.
- With its user-friendly interface and robust architecture, the HMS is adaptable to various hospital sizes and needs.



**Ice Berg Solutions**

# **THANK YOU!**

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**Muhammad Umar Hassan (22i-0941)**

