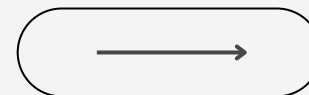# HOSPITAL MANAGEMENT SYSTEM

A DBMS Project for connecting DB and the Frontend designs

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PRESENTED BY

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ABSTRACT

- Modern healthcare facilities rely heavily on the Hospital Management System to manage numerous administrative and clinical tasks effectively.
- Systems that are both reliable and complete are desperately needed in order to improve patient care, optimize organizational efficiency, and streamline operations.
- This project proposes a website-based HMS to address these challenges.
- The main features, functions, and advantages of the HMS are highlighted in this project report, which provides a thorough overview of the system's development, implementation, and evaluation.
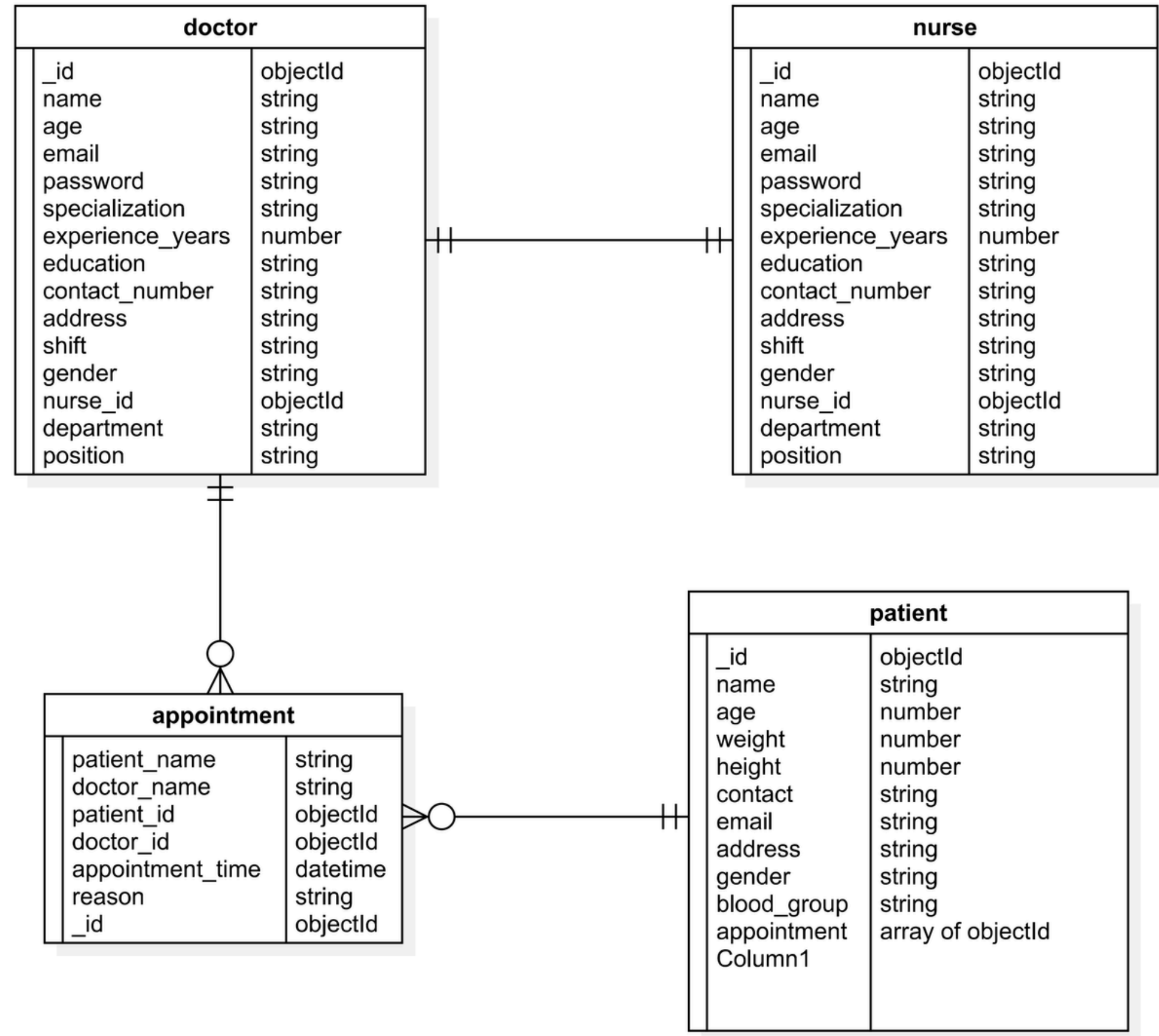
Modules

- CRUD Operations for Patients
- CRUD Operations for Staff
- CRUD Operations for Patient
- Schedule Appointments
- Check Ward Availability

- CRUD Operations: Simplifies patient and staff record management for better access and updates.
- Appointment Scheduling: Streamlines appointment booking for patients and avoids conflicts for doctors.
- Ward Availability: Enables real-time tracking of available beds for efficient patient allocation.

ERD Diagram

The ERD serves as a blueprint for developers building the HMS. It fosters communication between stakeholders (hospital staff, developers) by providing a shared understanding of how data flows and interacts within the system. This reduces errors and ensures the final HMS functions as intended, meeting the needs of both patients and hospital staff.

doctor

_id	objectId
name	string
age	string
email	string
password	string
specialization	string
experience_years	number
education	string
contact_number	string
address	string
shift	string
gender	string
nurse_id	objectId
department	string
position	string

nurse

_id	objectId
name	string
age	string
email	string
password	string
specialization	string
experience_years	number
education	string
contact_number	string
address	string
shift	string
gender	string
nurse_id	objectId
department	string
position	string

appointment

patient_name	string
doctor_name	string
patient_id	objectId
doctor_id	objectId
appointment_time	datetime
reason	string
_id	objectId

patient

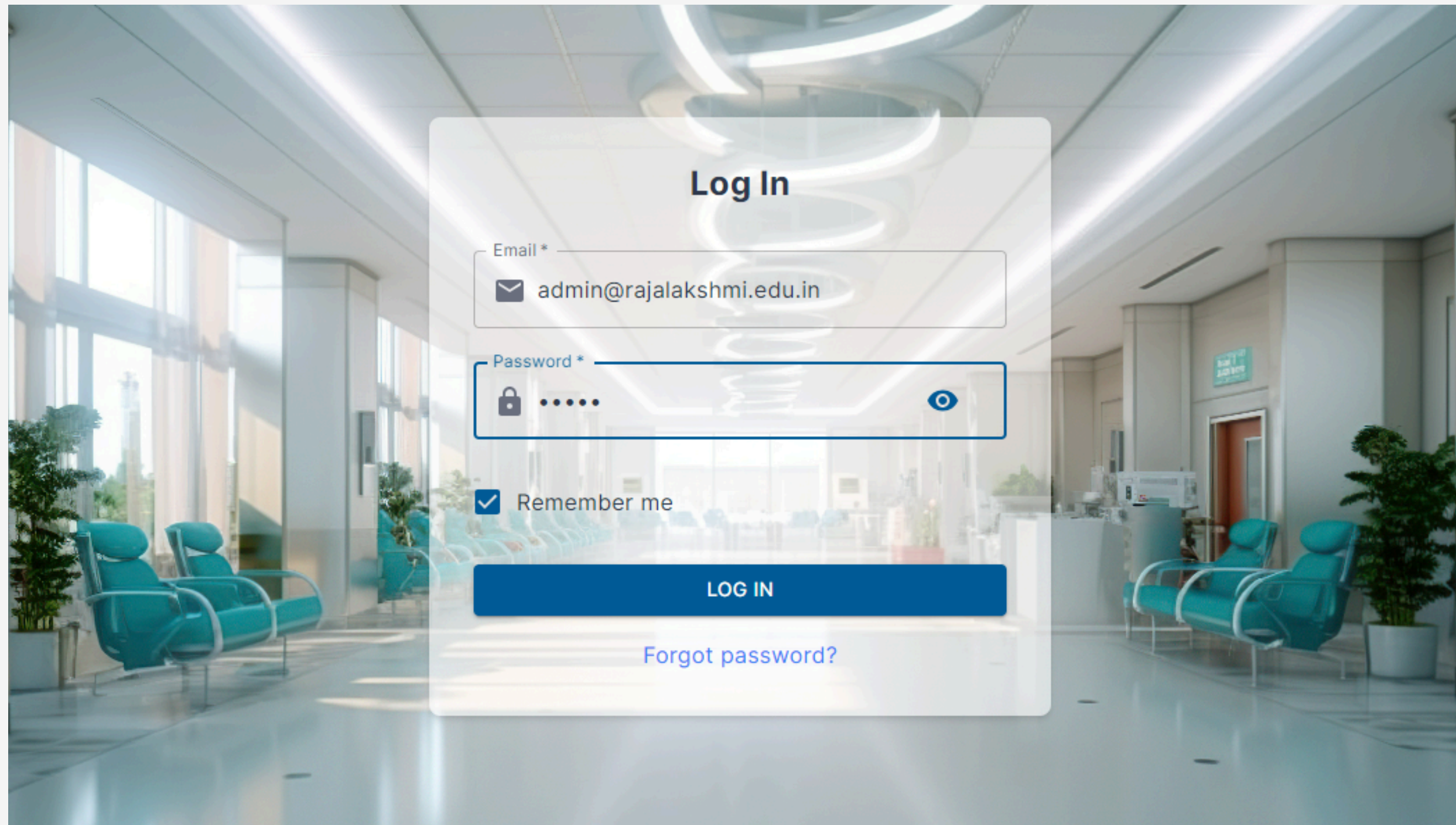| _id	objectId
name	string
age	number
weight	number
height	number
contact	string
email	string
address	string
gender	string
blood_group	string
appointment	array of objectId
Column1	

Objective

- The primary goal of a Hospital Management System is to enhance the efficiency, accuracy, and quality of healthcare delivery while improving patient satisfaction and outcomes;
- By providing instant access to patient information, facilitating seamless communication between the healthcare providers and automating routine tasks, an HMS enables hospitals to delivery timely and effective care to patients, thereby saving efforts for both healthcare providers and patients alike.
- It manages all the information about doctors, nurses, appointments, admission details, room availability.
- This project is totally built at administrative end and this only the administrator is guaranteed the access.
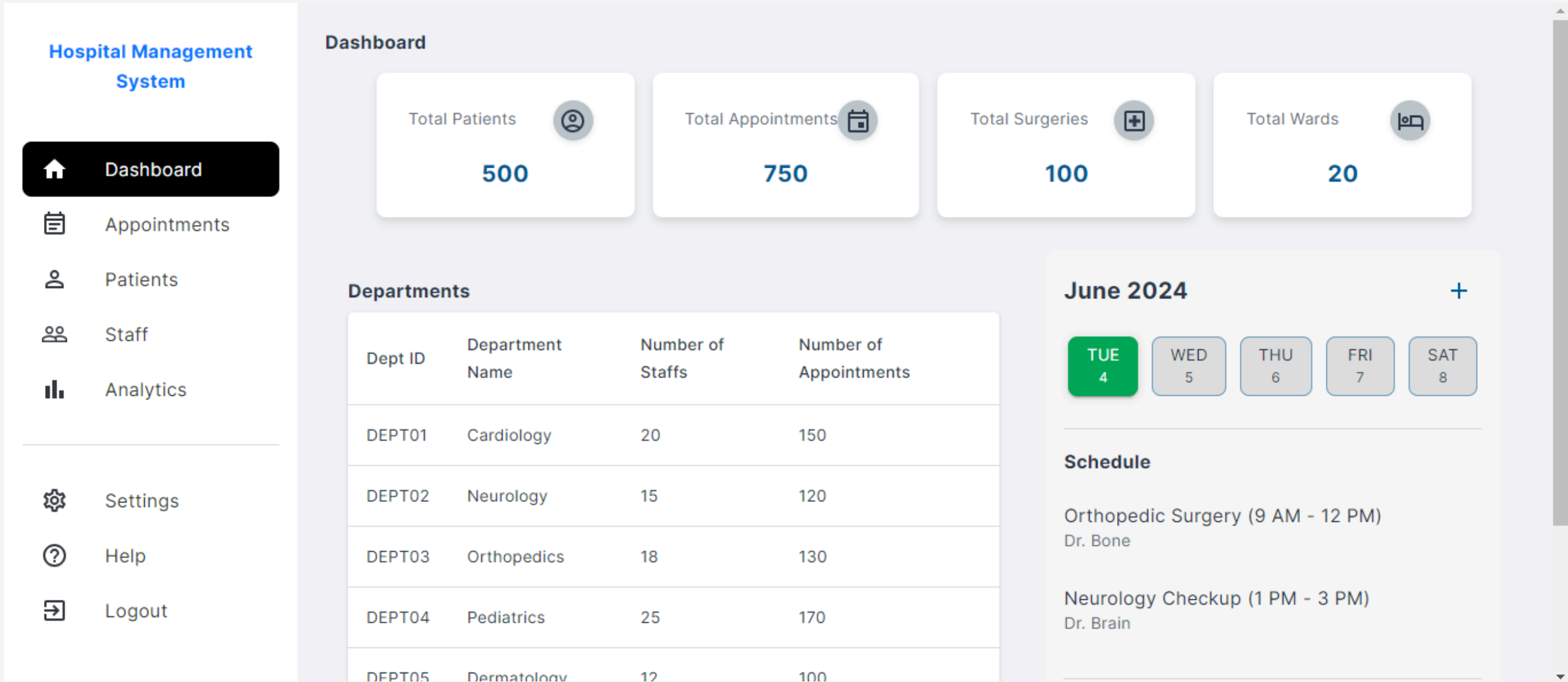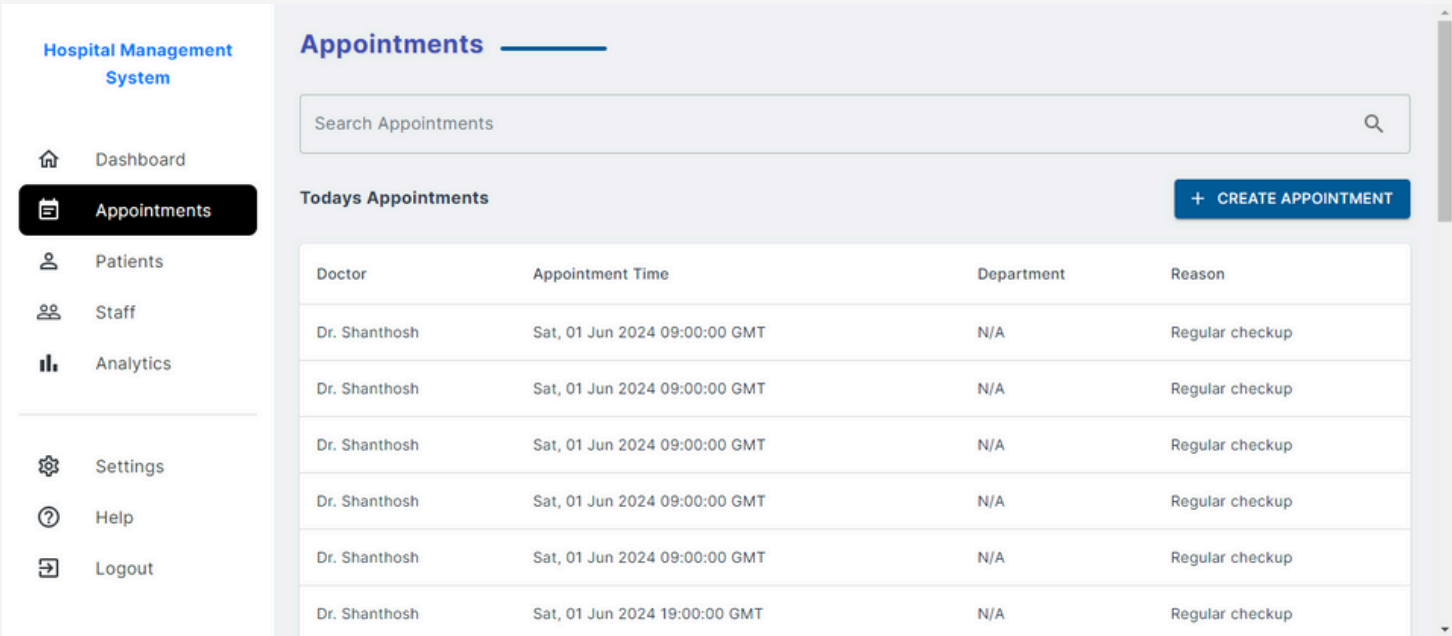
Project Outcome

The Login Page of the hospital management system serves as the gateway to the administrative functionalities, ensuring that only authorized personnel can access sensitive information and perform critical tasks.

The Dashboard provides an overview of the hospital's operations, displaying scheduled appointments, pending tasks, and key notifications, enabling the admin to manage and monitor activities efficiently.
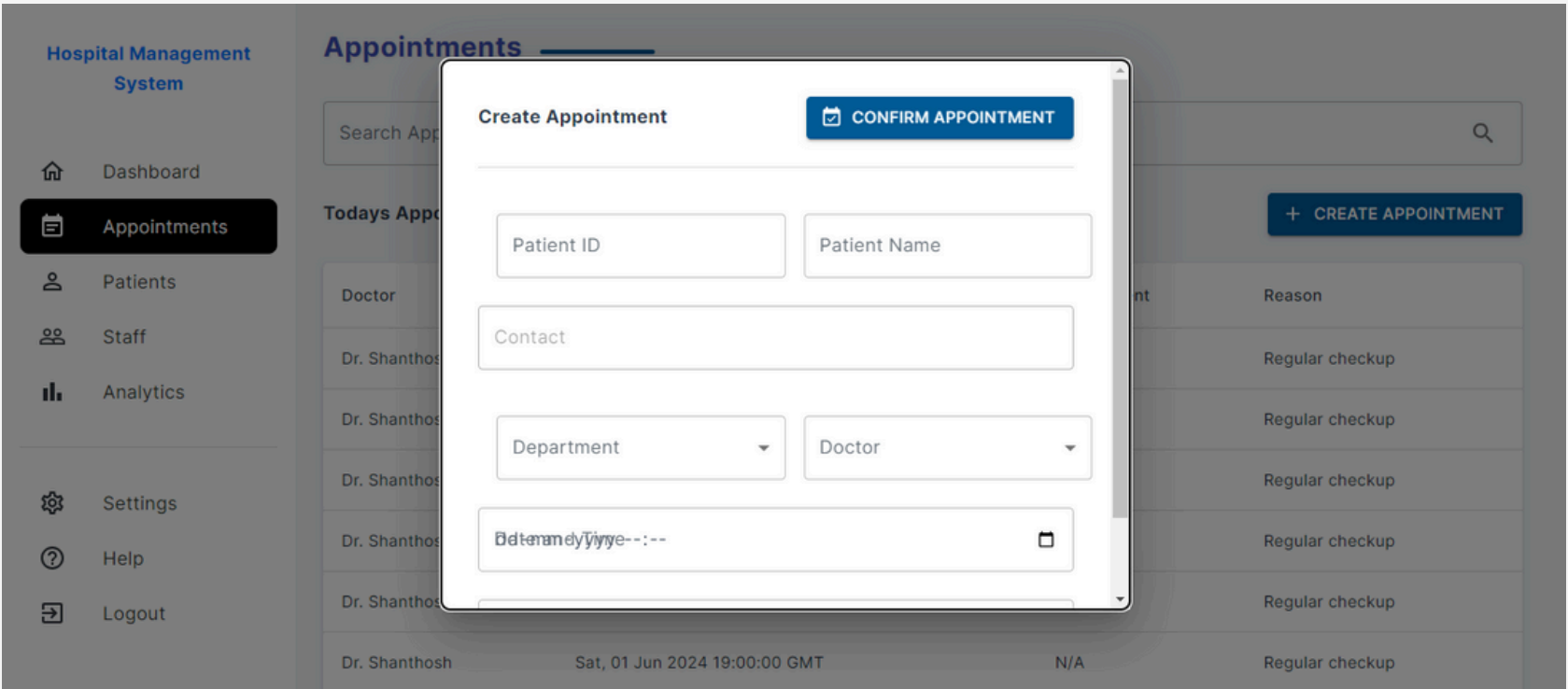
Dashboard

Hospital Management System

🏠 Dashboard

📋 Appointments

👤 Patients

👥 Staff

📊 Analytics

⚙️ Settings

❓ Help

🔙 Logout

Dashboard

Total Patients 👤	Total Appointments 📅	Total Surgeries ➕	Total Wards 🛏️
500	**750**	**100**	**20**

Departments

Dept ID	Department Name	Number of Staffs	Number of Appointments
DEPT01	Cardiology	20	150
DEPT02	Neurology	15	120
DEPT03	Orthopedics	18	130
DEPT04	Pediatrics	25	170
DEPT05	Dermatology	12	100

June 2024 ＋

TUE 4	WED 5	THU 6	FRI 7	SAT 8

Schedule

Orthopedic Surgery (9 AM - 12 PM)
Dr. Bone

Neurology Checkup (1 PM - 3 PM)
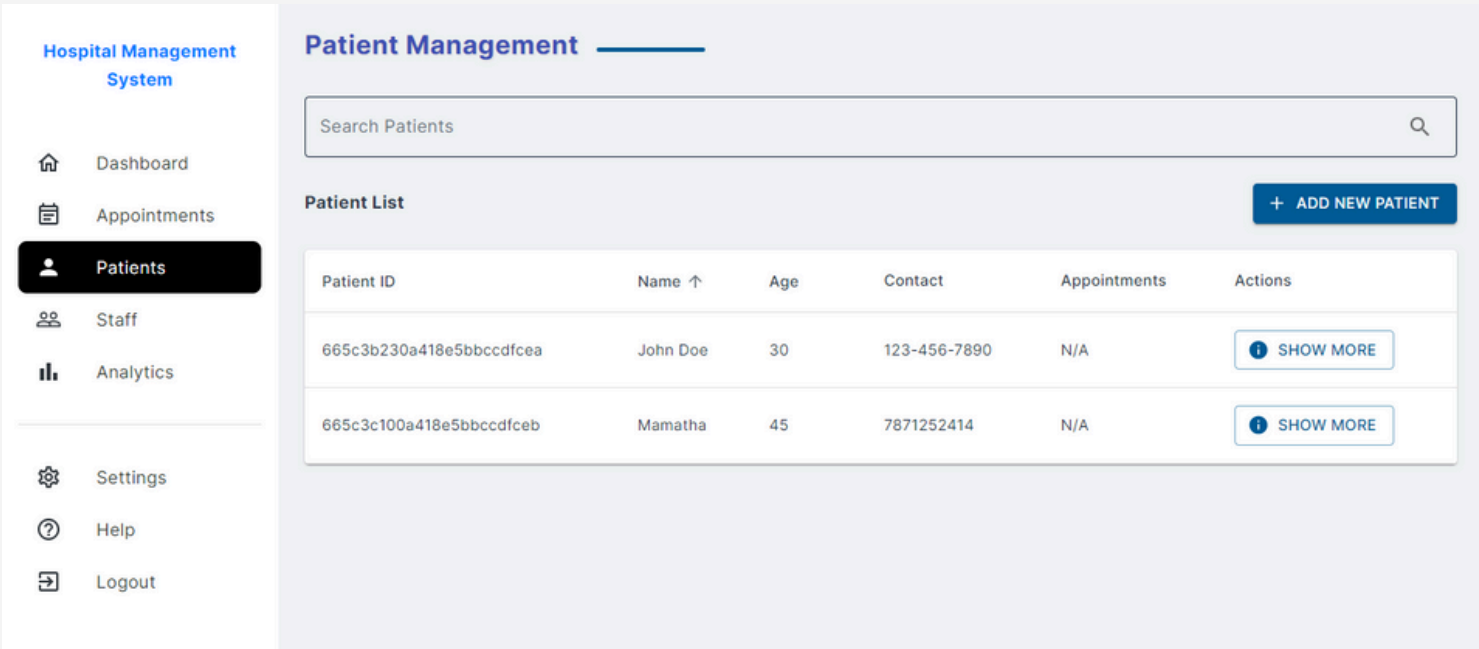Dr. Brain

Appointment Page
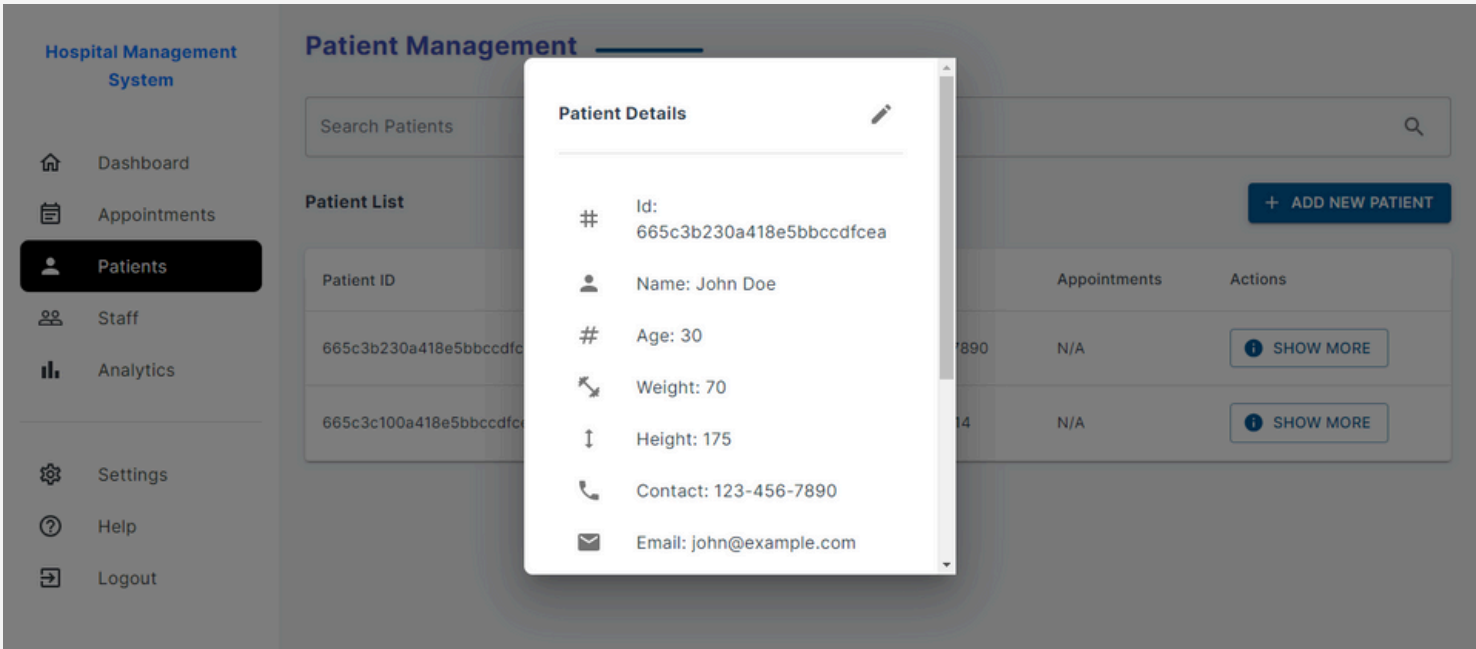

Create Appointment

The Appointment Page allows the admin to schedule, reschedule, and cancel patient appointments with doctors, offering a calendar view of doctors' availability and ensuring efficient management of appointment slots.
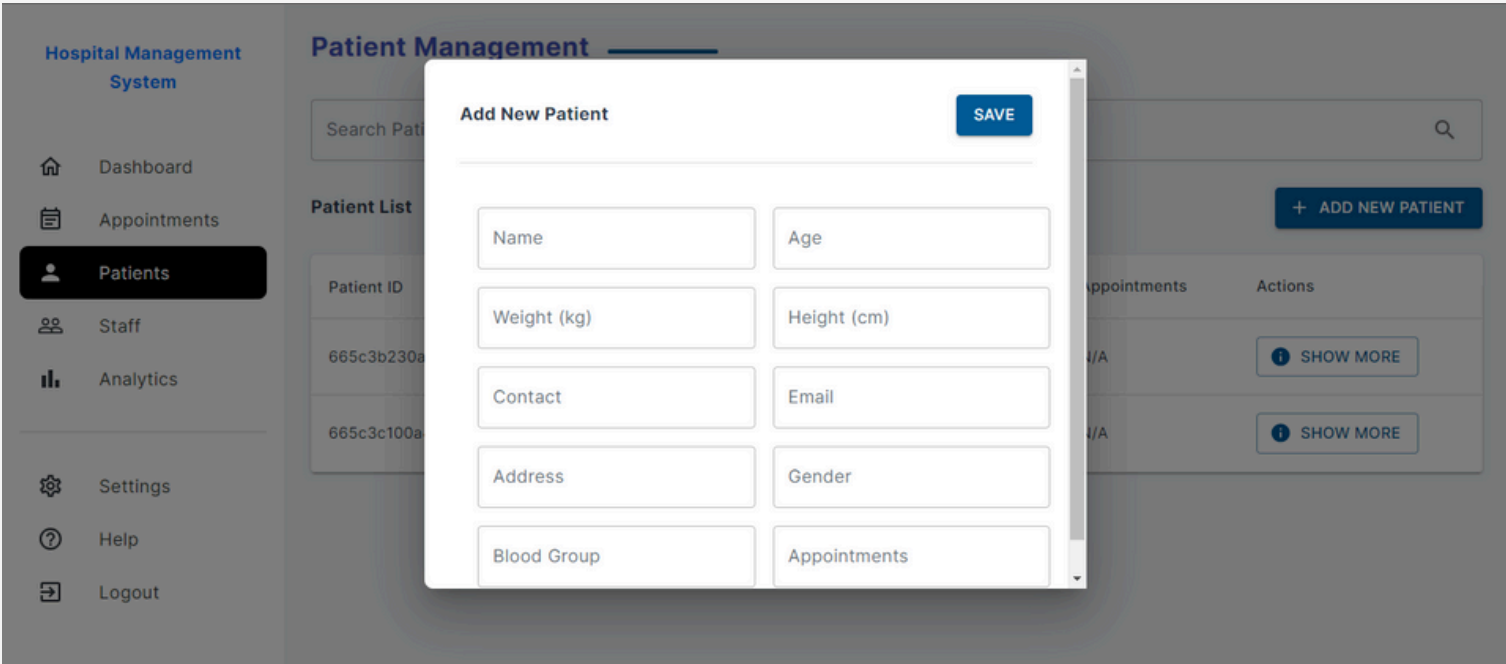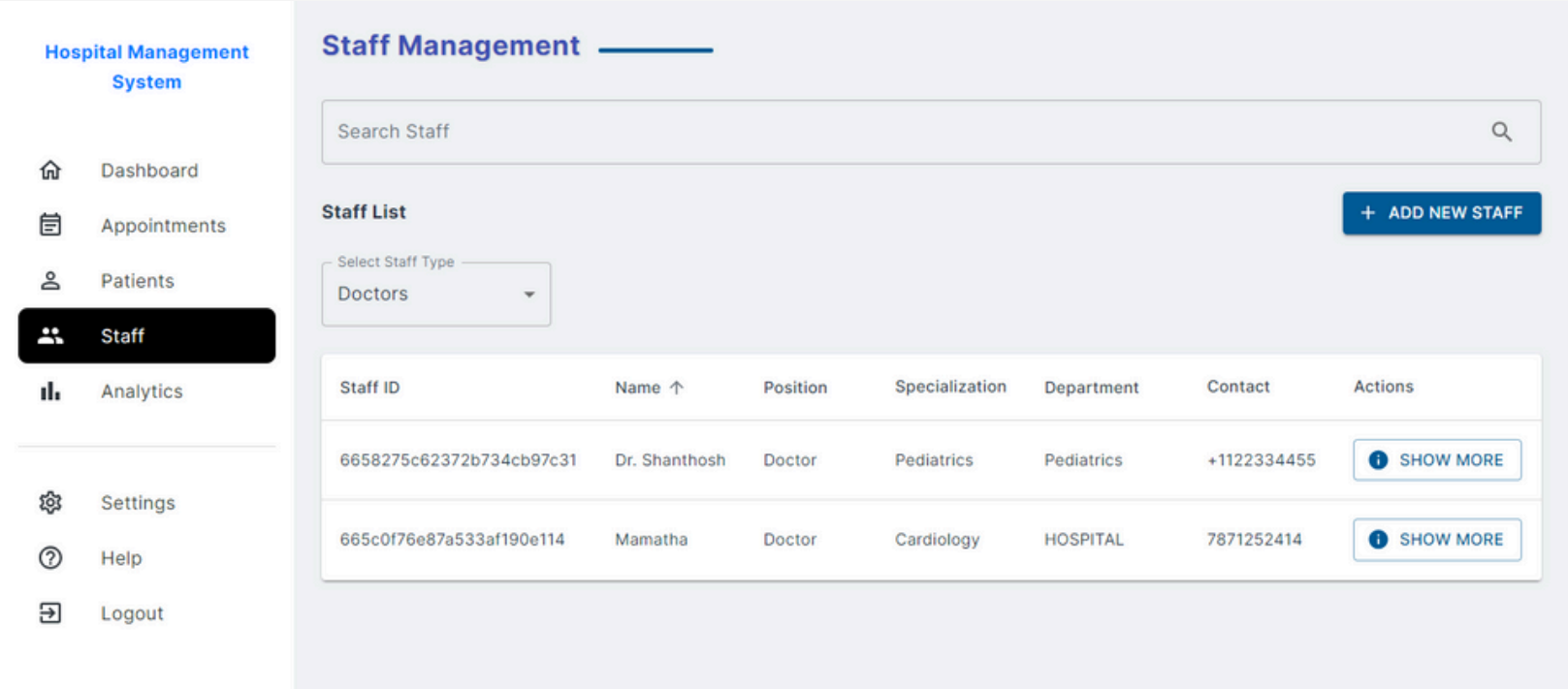
Patient Page

Patient Details
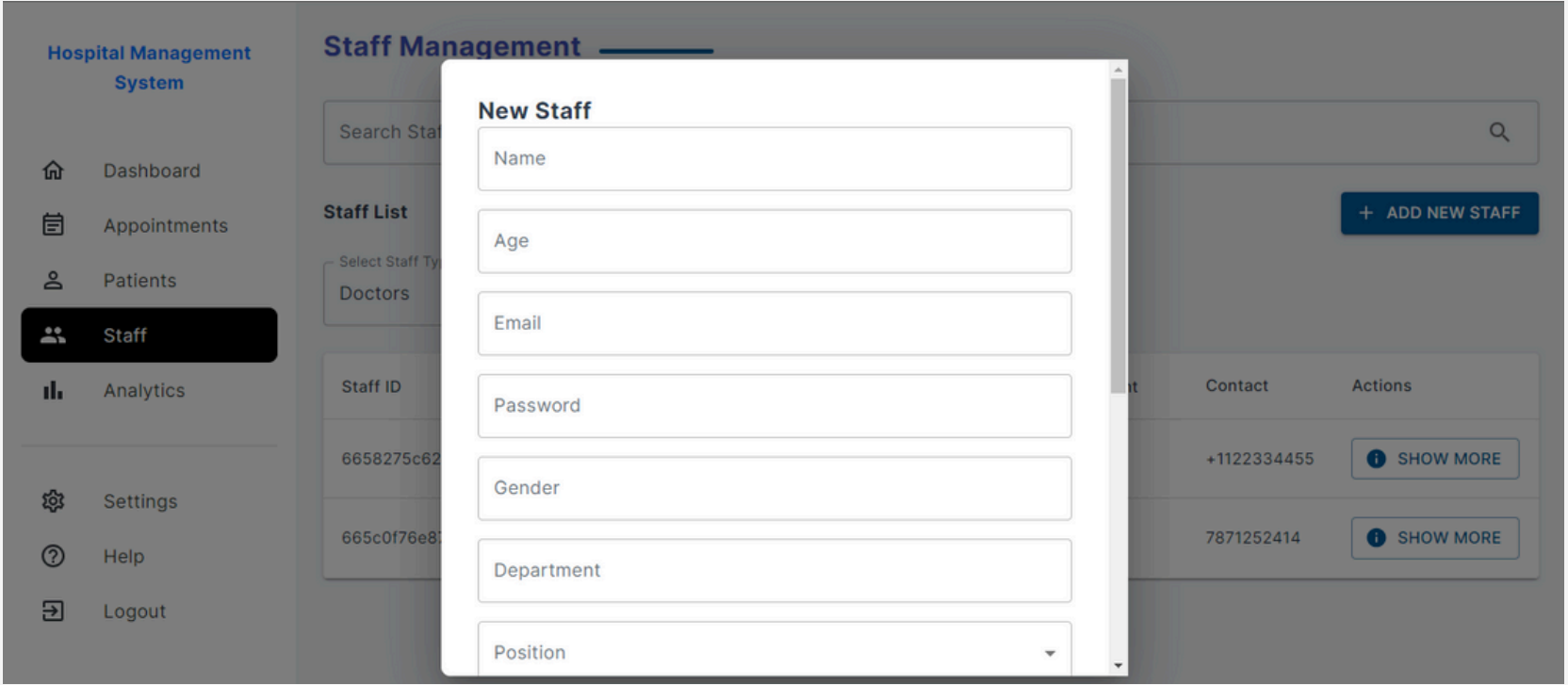

Add new Patient

The Patient Page enables the admin to perform CRUD operations on patient records, providing a comprehensive view of patient details, medical histories, and documents, with an integrated search function for easy access.

Staff Page

Add New Staff

The Staff Page allows the admin to manage doctor and nurse records, including performing CRUD operations and assigning roles, with a search function to quickly locate and update staff information.

Staff Details