1. Student Details

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About Me: I am a student at IIT Madras BS Degree program with a deep interest in web application development and data-driven technologies. I enjoy building meaningful applications that combine learning, analytics, and user experience.

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2. Project Details

Project Title: Hospital Staff Management App

Problem Statement:

To design and build a web-based application that allows admin patients and doctors of a hospital to **carry out their tasks, and effectively manage booking and management of appointments and treatments**.

Approach:

In this project, Flask has been used as the main backend framework, along with CSS and HTML to properly display the data. Flask -SQLAlchemy extension is used for creating object relational models and SQLite Database has been used to store the models data.

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3. AI/LLM Declaration

I used **ChatGPT (GPT-5)** to assist in writing SQLAlchemy model definitions and improving variable naming consistency.
The extent of AI/LLM usage is around **10–15%**, limited to **code suggestions and documentation formatting**.
All final implementation logic, debugging, and integration were done manually.

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4. Technologies and Frameworks Used

Technology / Library	Purpose
Flask	Core backend web framework
SQLAlchemy	Object Relational Mapper for SQLite database
Jinja2	Template engine for rendering dynamic HTML pages
Bootstrap 5	Frontend styling and responsive design
Flask-Login	User authentication and session management
SQLite	Lightweight local database for storing user data

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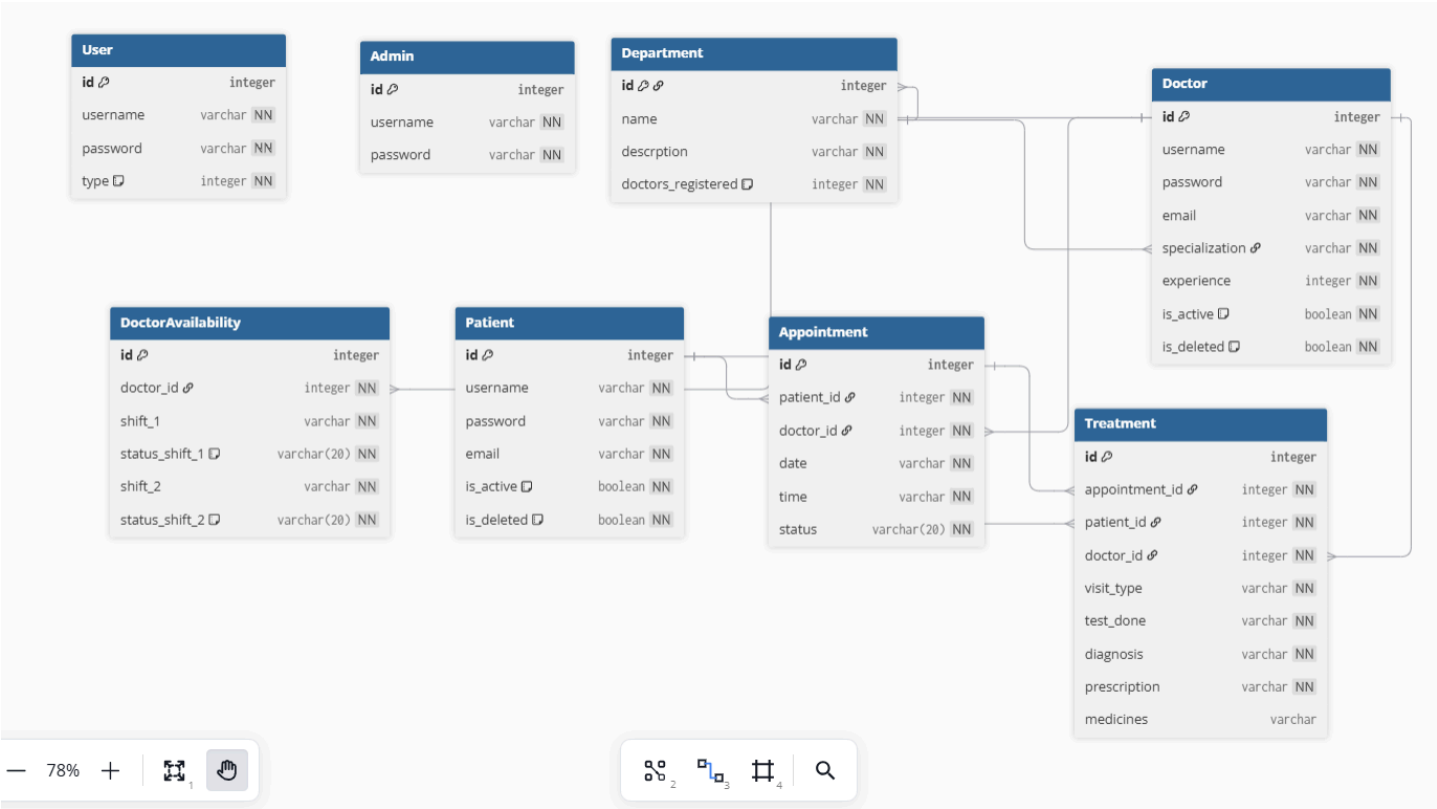
5. Database Schema / ER Diagram

Tables:

1. **User** — stores user profile details (id, username, password,type)
2. **Admin** — logs user activities (id,name,password)
3. **Patient** — stores predefined activity categories (id, name, email)
4. Doctor__ store doctors's details (id, name, password, specialization,experience,email)
5. Department__ stores department details(id, name, info,doctors registered)
6. DoctorAvailability__stores doctor schedule (id,shift1, status1, shit2, status2)
7. Appointment__ stores appointment details(id, doctor id, patient id,date,time,status
8. Treatment__store treatment details(id,app_id,doc_id,pat_id,visit_type,test_done,diagnosis,pres,med)

Relationships:

- One-to-Many → `Department → Doctors`



Video Presentation

Drive Link:
https://drive.google.com/file/d/12aUOdQZ_G4HXNTN8l4QRroCMHolxRr7k/view