Project Documentation:

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I am a developer with interest in backend development and full-stack applications. This project was built as part of learning Flask, database integration, and web application development.

Description:

This project is a Hospital Management System built using Flask. It allows Admin, Doctors, and Patients to log in and manage appointments, treatments, and patient records. The goal is to create a simple, functional healthcare data management tool.

Technologies Used:

- Flask (Python Framework)
- SQLite3
- Jinja2 Templates
- HTML/CSS
- Flask Sessions
- SQL CRUD Operations

These technologies provide a reliable and lightweight stack for web application development.

DB Schema Design:

Users(user_id, name, email, password, role)
Doctors(doctor_id, user_id, name, specialization, email, availability, status)
Patients(patient_id, user_id, name, age, doctor_id, gender, email, address, phone_num)
Appointments(appointment_id, patient_id, doctor_id, date, time, status)
Treatments(treatment_id, appointment_id, diagnosis, prescription, notes)

This schema ensures normalization and maintains clean mapping between entities.

API Design:

APIs include login handling, dashboards, and CRUD endpoints for doctors, patients, appointments, and treatments. They follow REST-like structure using Flask routes and connect with SQLite database.

Architecture and Features:

Controllers are in app.py, templates in /templates/. Features include role-based login, dashboards, CRUD operations, and medical record management.

Video Presentation(link):

https://drive.google.com/file/d/1YL_rl4D6xyDO9ZnbQOpjLIsY5FwIqEe8/view?usp=sharing