Project Proposal:

Online Appointment and Record System

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# Problem statement:

Digital advancements are rapidly transforming the medical industry. The ever-increasing demand for digitization highlights the need for control and management over timekeeping tasks and of medical record keeping. Without these features, both patients and doctors will encounter scheduling conflicts due to lack of centralized appointment tracking.

Furthermore, digitization allows for convenient control and secure access of medical documents. Unlike physical records, which are susceptible to destruction, becoming lost, and above all, theft, a centralized portal with a secure database can provide security, and quick retrieval of medical documents by both the patients and doctors.

# Proposed Features:

### Ample documentation:

The proposed web application will provide ample documentation. Such as control diagrams, a system design document (6/16/2025), and a working protype (06/22/2025). These documents will aid in delivery expectations, as well as defining the outline for functionality of the web application.

All documentation supporting the project can be found in the project repository under the ‘docs’ folder found here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Secure and remote access portal:

The proposed web application will use a protected database hosted by Supabase, utilizing their PostgreSQL tables to store all user, doctor, prescription, and appointment data. By using a trusted database provider, we guarantee document and patient security.

### Ability to add users to database without admin:

The proposed web application will provide autonomous features such as a sign-up portal. This feature will dynamically add patients to the remote database and allow them to interact with the web application. There will be no need for admin approval of users, it will be automatic.

### User ability to retrieve digitally stored medical documents:

The proposed web application will allow doctors to access and make changes to patients submitted documents. Registered patients will be able to remotely access these documents for their personal use. Patients WILL ONLY be able to view, and retrieve documents registered under their user profile in the database. This guarantees the information safety of web application users.

### Users to schedule appointments with doctors via a portal:

The proposed web application will allow patients to schedule appointments that will be administered to doctors based on availability. There will not be a need to confirm appointments. Patients will be able to submit appointments from a portal that will file the appointment event date into the database, then assigning a doctor.

### Admin panel:

The proposed web application will be supplemented with an admin panel (Supabase), to control the web application database. Additionally, the web application code repository will be delivered with the final web application. This admin panel will also provide feedback on quantitative uses of the application such as time of usage, commonly used features etc.

# Tech Stack:

### User Interface (Front-End):

The proposed web application will have a user interface designed in HTML and styled using CSS. User interactions within the UI will be handled accordingly via JavaScript and PHP depending on the purpose of the function. However, UI features requesting data will invoke the service-handler functions.

### Service-Handler (Middle-Layer):

The proposed web application will use a middle-layer service handler to request database information. This will consist of both PHP and JavaScript languages as well as Supabase API functions. The service-handler will be responsible for returning data and handing it to the UI, which will support user interaction.

### Database (Back-End):

The proposed web application will use a database hosted by Supabase. This choice allows for security overhead to be easily implemented, as well as providing an API for our service-handler to request information. The database will utilize tables, accessed with PostgreSQL queries to fetch and validate information.

# Targeted Users:

### Medical Clinics:

The proposed application will be primitive. However, it will provide enough functionality for small medical clinics seeking a digital record-keeping system and a digital appointment scheduling system. Due to medical licensing issues and legal issues, the proposed application cannot be applied to large scale operations such as hospitals.

### Misc. Users:

The proposed application will be subtly implemented to support a medical clinic interface. However, the application can be assumed as a shell for record keeping needed niches, and scheduling. Additional users may include teachers seeking to store student records, and scheduling tutoring. Mechanics can utilize the database features to store car information as well as schedule maintenance via the scheduling portal. This demonstrates the flexibility of the proposed application.