M HealthCare

Web Application Requirements (High level)

M HealthCare is a robust and comprehensive healthcare management system designed to streamline communication and appointment processes between patients, doctors, and administrators. The system incorporates cufting-edge technologies such as NodeJS, Express, Prisma, WEB RTC (via Agora.io), and PostgreSQL for eficient and secure data management.

# Technologies

* **NodeJS and Express:** Used for server-side application development.
* **WEB RTC (Agora.io):** Third-party service for real-time communication between doctors and patients.
* **Prisma:** ORM (Object-Relational Mapping) tool for database management.
* **PostgreSQL:** Database management system.
* **Nextjs**: A React Framework for building applications.

# User Roles and Functionalities

## Admin

* + - Account Management
      * Create and manage doctor accounts.
    - Appointment Management
      * Create schedule slots
      * Manage doctor appointment slots (Change status of appointment).
    - Access to Information
      * View appointment history and details.
      * Access and manage doctor profiles.
      * View metadata

## Doctor

* + - Appointment Management
      * View upcoming appointments.
      * Set appointment slots
      * Take appointments.
    - Patient Profile
      * Access patient profiles and medical history
      * View uploaded diagnostic test reports of patients.
      * View previous prescriptions (if any).
    - Prescription Management
      * Generate prescriptions for patients during and after consultations.
      * Send prescriptions to patients through email by using the system.
      * Aftach additional medical notes and instructions to prescriptions.

## Patient

* + - Account Management
      * Register a new account during the first visit.
      * Leverage features for password recovery and account security.
    - Appointment Booking
      * Schedule appointments with available time slots.
      * Book appointments with specific doctors.
    - Medical Record Management
      * Manage personal profile data.
      * Maintain medical history.
      * Upload diagnostic test reports.
    - Prescription Access
      * Access and view prescriptions.
      * Receive prescriptions through the platform.
      * Additionally, prescriptions are emailed to the patient for easy access and reference.
    - Payment and Confirmation
      * Pay consultation fees when booking appointments.
      * Receive an email confirmation with an invoice after successful payment.
      * Appointments are confirmed only after payment.
      * If payment is not made within 30 minutes of booking, the booking will be automatically canceled.
    - Reviews
      * Provide reviews with ratings for consulting doctors.
      * Include a comment section for additional feedback.
      * View and manage previously submifted reviews.

## System Features

* Real-time communication through WEB RTC.
* Secure user authentication and authorization.
* Seamless appointment scheduling and management.
* Comprehensive patient profiles and medical records.
* Seamless integration for patients to pay consultation fees securely.
* Automated email notifications for appointment confirmations, invoices, and prescription delivery.
* Doctors can generate detailed prescriptions during and after consultations.

## Single-Page Application (SSR)

* Landing Page: Provides information about the PH HealthCare system.
* Doctor Profile: Displays detailed information about doctors.