

HealthCare

Web Application Requirements (High level)

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

1. 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.

2. User Roles and Functionalities

2.1 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

2.2 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.
 - After additional medical notes and instructions to prescriptions.

23 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 submitted reviews.

3. 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.

4. Single-Page Application (SSR)

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

