**Functional Requirements**

**Patients:**

User Registration:

i. Users should be able to create a new account by providing necessary information such as email and password or sign-in with Google.

ii. The system must validate unique usernames and email addresses during registration via two step authentication.

Login Authentication:

1. Users should authenticate their identity through secure login credentials.
2. Implement password encryption for security.
3. Enable password recovery options, such as email verification or security questions.

Profile Management:

1. Users can create and manage their profiles with personal details, contact information, emergency contacts, and insurance information.
2. Provide options for users to set communication preferences and notification settings.

Virtual Consultation Booking:

1. Users should be able to search for healthcare professionals, view their profiles, and book virtual consultations.
2. Schedule appointments based on the availability of healthcare professionals.
3. Receive confirmation notifications and reminders for booked appointments.
4. Allow users to reschedule or cancel appointments.
5. Access a virtual waiting room before the start of virtual appointments.
6. Secure video conferencing with end-to-end encryption for virtual consultations.

Offline Appointment Scheduling:

1. Users can search for nearby healthcare facilities, view real-time appointment availability, and schedule in-person appointments.
2. Receive appointment reminders and real-time updates.
3. Allow users to reschedule or cancel appointments.

Payment Processing:

1. Make secure financial transactions for services, or other applicable transactions.
2. Implement a secure payment gateway for users to make secure financial transactions for services, or other applicable transactions via multiple options such as through debit or credit cards or UPI.
3. Maintain a transaction history for users to track their payments.

Medical Records Management:

1. Digitize and securely store comprehensive medical records, including diagnoses, test results, prescriptions, and medical histories.
2. Maintain access controls to ensure privacy.

Healthcare Facility Information:

1. Access a comprehensive database of healthcare facilities.
2. View detailed information about services, location, contact details, and peer reviews.

Medication Reminders:

1. Patients can set reminders for multiple medications with dosage instructions.

Reviews and Forum Interaction:

1. Users can leave reviews and ratings for healthcare facilities and professionals.
2. Engage in discussions and share experiences through a user forum.

Multi-Language Support:

1. Users can select their preferred language for the platform.
2. The platform should support multiple languages.

Help and Navigation:

1. Users should have access to help content and FAQs.
2. Intuitive navigation for a user-friendly experience.

Voice Command Interaction:

1. Users can interact with the platform using voice commands.
2. Navigate through the platform using voice recognition features.

Accessibility Features:

1. Ensure compatibility with screen readers.
2. Implement adjustable font sizes and keyboard accessibility.

Disease Catalog Access:

1. Access a comprehensive repository with information on symptoms, causes, treatments, and preventive measures for various health conditions.

Logout Functionality:

1. Provide a secure logout option to terminate the user session.

**Medical Professionals:**

Professional Registration:

1. Healthcare professionals can register by providing necessary credentials and certifications.
2. Validation of professional credentials by admin during registration.

Login Authentication:

1. Secure authentication for healthcare professionals.
2. Password encryption for security.

Profile Management:

1. Healthcare professionals can create and manage their profiles with details on specialties, qualifications, languages spoken and availability.
2. Set preferences for communication and appointment notifications.

Virtual Consultation Availability:

1. Set availability for virtual consultations.
2. Accept or decline virtual consultation requests.

In-Person Appointment Availability:

1. Set availability for in-person appointments.
2. Receive and manage appointment requests.

Communication Tools:

1. Secure messaging system for communicating with patients and other healthcare professionals.

Payment Processing:

1. Healthcare professionals can receive payments securely for services.
2. Access a transaction history for financial tracking.

Prescription Management:

1. Allergies alerts to prevent prescription errors.

Access to Patient Medical Records:

1. Access patient medical records during consultations.
2. Contribute to updating and maintaining accurate medical records.

Healthcare Facility Information:

1. Update information about the healthcare facility.
2. Respond to patient reviews and feedback.

Logout Functionality:

1. Provide a secure logout option to terminate the professional session.

**Administrators:**

Admin Credentials:

i. Admins should have secure login credentials with password encryption.

User and Professional Account Management:

i. Admins can view and manage user and professional accounts.

ii. Enable account suspension or termination when necessary.

Platform Configuration:

i. Admins can configure platform settings, including language support and accessibility features.

ii. Manage database configurations and backups.

Review and Forum Moderation:

i. Monitor and moderate user reviews and forum discussions.

ii.Respond to user queries or issues.

iii. ***Periodic reviews of feedback to implement changes and enhancements.***

Healthcare Facility Information Management:

i. Admins can manage and update information about healthcare facilities.

ii.Ensure accurate and up-to-date facility details.

Transaction Monitoring:

i. Monitor financial transactions on the platform.

ii. Address payment-related issues or discrepancies.

Disease Catalog Module:

i. Administer updates to the disease catalog module. ii. Ensure the content's accuracy and reliability.

Data Privacy and Security:

1. Ensure compliance with healthcare data privacy regulations.
2. Implement security measures to protect user data.
3. Compliance with standards like ***HIPAA, GDPR, and other relevant healthcare*** regulations.

Notification and Communication Management:

i. Enable administrators to manage system-wide notifications.

ii. Facilitate communication with users for updates and important announcements.

Help and Navigation:

i. Admins can access and update help content and FAQs. ii. Provide assistance to users and professionals.

System Updates and Maintenance:

i. Admins are responsible for system updates and maintenance. ii. Ensure the platform's smooth operation.

User and Professional Support:

i. Admins can provide support to users and professionals. ii. Address user issues, inquiries, or escalations.

Accessibility Features Management:

i. Admins can configure and manage accessibility features. ii. Ensure inclusivity for users with diverse needs.

Logout Functionality:

i. Provide a secure logout option to terminate the admin session.