Doctor Appointment Booking System (स्वास्थ्यmitra)

**SwasthyaMitra** is a Nepal-focused doctor appointment booking system developed using the MERN Stack, integrated with **Next.js** for server-side rendering and **Tailwind CSS** for modern responsive UI design.

The platform helps patients discover and book appointments with doctors based on specialty, hospital, and location. Doctors can manage their schedules and availability, while hospitals can register their services and link affiliated doctors. An admin panel ensures smooth management and verification.

This project aims to bridge the healthcare access gap in Nepal by making doctor discovery and appointment booking **simple, fast, and accessible** to everyone.

**Tech Stack:** MERN Stack with Tailwind.css & Next.js

## **Feature-wise Breakdown**

### **1. User Authentication (All Roles)**

* Signup/Login for Patients, Doctors, and Hospitals
* Secure password encryption (bcrypt)
* Email/phone verification
* Forgot password / reset

**2. Patient Dashboard**

* Book, view, or cancel appointments
* See doctor history
* Upload medical reports (PDF, image)
* Manage profile (name, age, gender, contact)
* Favorite doctors/hospitals
* Notifications & reminders

### **3. Hospital Management**

* Add hospitals with:
  + Logo, photos
  + Address with map
  + Department list
  + Emergency contacts
  + OPD and specialty services
* Assign or invite doctors
* View booking stats

**4. Doctor Dashboard**

* Manage profile
* Set availability calendar
* Accept/reject appointments
* Start video consultation
* Upload prescription (PDF/notes)
* Track patient history
* Earnings summary

**5. Search System**

* 🔍 Search by doctor name, hospital, specialty, location
* Filters:
  + Gender
  + Available now
  + Consultation type (Online/Offline)
  + Hospital
* Autocomplete suggestions
* Sorting by rating, fee, or nearest

**6. Appointment Booking System**

* Live time slot booking with availability
* Select consultation type
* Approved confirmation Email/SMS
* Cancel or reschedule (with policy)
* Auto-remove booked slots from availability or unable to select

### **7. Reviews & Ratings**

* Patients can rate and write feedback
* Display average doctor/hospital ratings
* Doctor reply to reviews (optional)
* Admin moderation tools

### **8. Online Video Consultation**

* GoogleMeet or Zoom integration
* Doctors can accept "online" bookings
* Secure one-on-one video chat
* Launch directly from dashboard

### **9. AI Doctor Recommendation**

* Suggest doctors based on:
  + Symptoms
  + Specialty
  + Location
* Optionally integrate with chatbot

### **10. Emergency Quick-Access Button**

* One-tap button for:
  + Nearest hospital with emergency
  + Ambulance contact
  + Emergency hotline

### **11. Blog & Health Education Section**

* Articles posted by admin/doctors
* Topics like: mental health, diet, first aid
* SEO-friendly URLs and search filter
* Optional comment system

### **12. Multilingual Support**

* Switch language between:
  + English 🇬🇧
  + Nepali 🇳🇵
* Patient-friendly UI with simple terms

### **13. Accessibility Features**

* Dark mode

### **14. Mobile Responsive + Future App Ready**

* Fully mobile-first design
* App-like layout for PWA

### **15. Admin Dashboard**

* + **Doctor Profile Management**
    - Name, gender, photo, license upload
    - Specialization, years of experience, education
    - Consultation fee (online/offline)
    - Hospital affiliations
    - Available timings
    - Ratings and reviews
* View all users, doctors, hospitals
* Approve/Reject doctor/hospital applications
* Manage reviews, complaints
* Update specialties, districts, pricing ranges
* Analytics (appointments/week, most searched specialties)

### **16. Geo-Based Features (Google Maps API)**

* Doctors/hospitals shown on map
* “Doctors near me” feature
* Location auto-detect
* Click to open in Google Maps for navigation

### **17. Secure Document Handling**

* Doctors and patients can upload:
  + Reports
  + Prescriptions
  + Licenses (doctors)

**18. Notifications & Reminders**

* Appointment confirmation via email/SMS
* Reminder before appointment (customizable)

## **Feature Assignment**

| Team Member | Role | Assigned Module |
| --- | --- | --- |
| Ardev | Frontend + Backend | User Authentication, Doctor Profile Management, Doctor Dashboard, AI Doctor Recommendation, Mobile Responsive + Future Ready, Geo-Based Feature, Search System, Reviews & Ratings, Admin Dashboard |
| Sneha | Frontend + Backend | Patient Dashboard, Hospital Management, Mobile Responsive + Future Ready, Emergency Quick-Access Button, Ready, Geo-Based Feature, Search System, Reviews & Ratings |
| Nisma | Frontend + Backend | Notification and Remainders, Secure Document Handling, Mobile Responsive + Future Read, Blog & Health Section, Online Video Consultation, Multilingua Support, Accessibility Features |