

Virtual Doctor

Project Proposal



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Roles in Project

01	Team leader & System Designer
02	Frontend Developer

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1. Introduction

The Virtual Doctor Software is an integrated telemedicine platform that enables patients to report symptoms, receive preliminary diagnoses, book appointments, consult with doctors via chat or video, receive prescriptions, and obtain medication advice. The system uses a modern JavaScript frontend, Node.js backend, and MongoDB (accessed via Djongo-like integration) to deliver a responsive, secure, and scalable healthcare solution.

2. Objective

- Provide an accessible triage tool that suggests possible conditions based on symptoms.
- Enable appointment booking and scheduling with medical professionals.
- Offer virtual consultation channels: secure chat and video calls.
- Generate and store digital prescriptions and medical notes.
- Support medication advice and follow-up reminders.
- Ensure data privacy, regulatory compliance, and high availability.

3. Problem Description

Many patients face barriers to timely medical care: long clinic waits, transportation issues, and limited access to specialists. Early symptom recognition and triage are often inconsistent. There is demand for a reliable digital system that:

- Helps users quickly understand possible causes of their symptoms.
- Connects patients to doctors for remote consultation.
- Maintains secure records of consultations and prescriptions.

4. Methodology

1. Patient and Doctor signs up or logs in.
2. User reports symptoms via guided UI (checkboxes, free-text, duration, severity).
3. Symptom-matching engine performs similarity matching against disease profiles and returns ranked suggestions with confidence scores.
4. User can book an appointment (immediate or scheduled) with available doctors.
5. For appointments, the system supports secure chat and video calls.
6. Doctor records diagnosis and issues digital prescription .
7. Notifications and follow-ups (medicine reminders, next visits, other medication tips).

5. Project Scope

1. User authentication and profile management.
2. Symptom reporting UI (structured + free-text).
3. Symptom and disease matching system
4. Appointment booking system and doctor availability.
5. Real-time chat, video consultation.
6. Digital prescription creation and report generation.
7. Basic notifications and follow-up reminders.
8. Admin dashboard for managing disease database, doctors, and patients.

6. Tools/Technology

Programming Language : JavaScript and React (Frontend), Node.js (Backend)
Database : MongoDB
Development Environment : VS Code , MongoDB GUI,

7. Expertise of the Team Members

The Development team have completed a relevant course in Software Development II and System Analysis and Design Course. We are continuously learning and applying our skills to developed this software. We also know VS Code IDE for coding and MongoDB Compass for database system.

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02	Arman Arafat Rakib
03	MD. Shahid Hossain
04	MD. Samiul Islam
05	Mst. Sadia
06	Ashiqur Rahman