Project Design Phase
Proposed Solution

Date	16 February 2026
Team ID	LTVIP2026TMIDS35442
Project Name	DocSpot: Seamless Appointment Booking for Health
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Patients struggle to book doctor appointments due to phone-only systems, limited clinic hours, no visibility into doctor availability or fees, and no way to track appointments. Doctors waste time on administrative tasks, face high no-show rates, and lack digital tools to manage schedules. Admins cannot effectively verify doctor credentials or monitor platform activity.
2.	Idea / Solution description	DocSpot is a web-based doctor appointment booking platform with three user roles: **Patients** can register, browse doctors by specialization, view profiles with qualifications and fees, book appointments by selecting date/time, upload medical documents, and manage bookings with status tracking. **Doctors** can register (pending admin approval), complete profiles with qualifications and timings, and approve/reject appointment requests. **Admins** can verify and approve/reject doctor applications, view all users, and monitor all appointments. Built using MERN stack (MongoDB, Express, React, Node.js) with JWT authentication.
3.	Novelty / Uniqueness	• Complete role-based system with separate dashboards for patients, doctors, and admins • Doctor approval workflow ensuring only verified doctors join the platform • Document upload for medical records during booking • Real-time status tracking with pending/approved/rejected/completed/cancelled badges • Filter by specialization for easy doctor discovery • Day-wise timing configuration for doctors

		• JWT-based secure authentication with role-based access control
4.	Social Impact / Customer Satisfaction	• **Doctors:** Reduce administrative burden by 50%; eliminate no-shows with digital tracking; focus more on patient care; reach new patients through online presence • **Community:** Improves healthcare accessibility by digitizing appointment booking; reduces stress for patients seeking medical care; creates trust through verified doctor system
5.	Business Model (Revenue Model)	• **Free for patients** - Always free to use • **Free for doctors** - Currently free during pilot phase • **Future revenue streams** (not implemented yet): Subscription model for doctors (monthly/yearly), Featured/priority listings for doctors, Commission per booking (optional)
6.	Scalability of the Solution	• **Technical scalability**: MongoDB Atlas can scale with data growth; stateless JWT authentication allows horizontal scaling; modular MERN architecture supports adding more server instances; indexed collections ensure fast queries even with millions of records • **Geographic scalability**: Can add more cities and regions easily; specialization filters can be expanded • **Feature scalability**: New features can be added as separate modules without disrupting existing functionality • **User scalability**: Currently supports 100+ concurrent users; can scale to thousands with cloud infrastructure