Solution Requirements

Date	03 February 2026
Team ID	LTVIP2026TMIDS24613
Project Name	DocSpot: Seamless Appointment Booking for Health
Maximum Marks	4 Marks

Solution Requirements for the **DocSpot** application, summarizing both functional and non-functional aspects clearly for documentation are as follows :

1. Functional Requirements

These describe what the system must do:

- **User Authentication**
    - Secure registration and login for patients, doctors, and admins
    - JWT-based session management
    - Role-based access control
- **Doctor Discovery**
    - Patients can search and filter doctors by specialization, location, and availability
    - View detailed doctor profiles before booking
- **Appointment Management**
    - Book, cancel, and reschedule appointments with real-time availability sync
    - Track appointment status (Pending, Approved, Completed, Cancelled)
- **Document Upload**
    - Patients can upload prescriptions and reports during booking
    - Doctors can view patient-uploaded files
- **Reminders and Notifications**
    - Email or SMS alerts for appointment confirmations, reschedules, and reminders
- **Admin Panel**
    - Approve or reject doctor registrations
    - Monitor platform activity
    - Manage users and complaints
- **Teleconsultation (Optional/Future)**
    - Video call integration for remote consultations
- **Review System**
    - Patients can rate and review doctors after appointments

2. Non-Functional Requirements

These describe how the system must perform:

- **Scalability**
    - Built using the MERN stack to scale for future feature expansion
- **Security**
    - Passwords hashed using bcrypt
    - JWT authentication and role validation
    - Secure file uploads and access
- **Performance**
    - API response times under 500ms in typical use
    - Optimized MongoDB queries for fast data access
- **Reliability**
    - Proper error handling for failed requests
    - Backup and recovery strategies for data protection
- **Responsiveness**
    - Mobile-friendly design with consistent behavior across devices
- **Usability**
    - Clean, intuitive UI for all roles
    - Visual feedback for user actions (e.g., loading, success/failure)