Solution Requirements

Date	03 February 2026
Team ID	LTVIP2026TMIDS24078
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)