## **Solution Requirements**

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| Team ID | LTVIP2025TMID55161 |
| Project Name | Docspot |
| 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)