**Functional Requirements**

**3.1 User Authentication**

* **Description**: The system must allow users (patients, doctors, and administrators) to securely log in and authenticate using usernames and passwords.
* **Requirements**:
  + The system must support secure login and two-factor authentication (2FA).
  + User roles must be defined (e.g., patient, doctor, administrator).

**3.2 Appointment Scheduling**

* **Description**: Patients can book appointments with doctors through the system.
* **Requirements**:
  + Patients should be able to view available time slots for doctors.
  + The system should send a confirmation message upon successful booking.
  + Patients should receive appointment reminders via email or SMS 24 hours before the consultation.
* **Requirements**:
  + The system must integrate with video conferencing APIs (e.g., Zoom, WebRTC).
  + The system must ensure encryption and security for patient data during consultations.
  + Doctors and patients should be able to initiate video calls from their dashboards.

**4. Non-Functional Requirements**

**4.1 Performance Requirements**

* The system must support up to [X] simultaneous users.
* The system should load within [Y] seconds for most operations.

**4.2 Security Requirements**

* The system must comply with HIPAA (Health Insurance Portability and Accountability Act) standards for protecting patient data.
* Data encryption must be used for all sensitive patient information, both in transit and at rest.
* The system should include role-based access control (RBAC) to ensure that only authorized users can access certain features.

**4.3 Usability**

* The system must be easy to use for medical professionals and patients with no technical background.