

## Phase 4: Requirement Analysis

### Non-Functional Requirements

Field	Details
Date	9 November 2025
Team ID	NM2025TMID02588
Project Name	Medical Inventory Management System
Maximum Marks	2 Marks

#### Non-Functional Requirements

- **Security:**
  - **Role-Based Access Control (RBAC):** Access to functions (e.g., approving a purchase order, performing an inventory adjustment) must be restricted based on the user's role (e.g., Nurse, Pharmacy Tech, Supply Chain Manager).
  - **Data Encryption:** All sensitive data (at rest and in transit) must be encrypted.
- **Performance:**
  - **Response Time:** Key actions (e.g., barcode scan lookup, issuing an item) must complete in under **2 seconds** during peak usage.
  - **Scalability:** The system must be able to handle projected growth in inventory volume, transaction volume, and number of users over a defined period (e.g., next 5 years).
- **Usability:**
  - **User Interface (UI):** The interface must be **intuitive and simple**, designed for fast, error-free input, especially in clinical environments.
  - **Mobility:** Must support mobile devices (e.g., handheld scanners, tablets) for use at the point-of-use (bedside, OR).
- **Reliability & Availability:**
  - **Uptime:** Target system availability must be high (e.g., **99.9%**).

- **Disaster Recovery:** A formal plan for data backup and system restoration in case of failure.
- **Integration:**
  - **EHR/EMR:** Seamless, real-time integration with the Electronic Health Record for billing, patient charge capture, and consumption analysis.
  - **Financial/ERP:** Integration with the main financial system for vendor invoicing, General Ledger postings, and budget reconciliation.