

Phase 4: Requirement Analysis

Functional Requirements

Field	Details
Date	9 November 2025
Team ID	NM2025TMID00719
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

1. Functional Requirements

Area	Key Requirements
Inventory Tracking	* Real-Time Visibility: The system must provide current stock levels across all locations (e.g., central warehouse, department closets, procedure carts).
	* Multi-Location/Bin Management: Ability to track items by specific location (bin/shelf) and allow transfers between locations.
	* Unique Identification: Support for scanning barcodes (e.g., GS1, UDI) or RFID tags for fast, accurate item identification.
Lot & Expiration Control	* Lot/Batch Tracking: Must record and track items by Lot Number and Serial Number for full traceability (critical for recalls).
	* Expiration Date Management: Must record expiration dates and generate proactive alerts for items nearing expiry (e.g., 90, 60, 30 days out).

Area	Key Requirements
	<ul style="list-style-type: none"> * FEFO/FIFO Logic: Enforce First-Expired, First-Out (FEFO) or First-In, First-Out (FIFO) rules during issuing.
Procurement & Reordering	<ul style="list-style-type: none"> * Automated Reordering: The system must automatically generate purchase requisitions when stock hits a predefined Reorder Point (ROP) or Par Level.
	<ul style="list-style-type: none"> * Supplier Management: Track vendor details, contract pricing, lead times, and historical performance.
	<ul style="list-style-type: none"> * Receiving: Allow for accurate recording of received goods against a Purchase Order, including discrepancy handling.
Usage & Issuance	<ul style="list-style-type: none"> * Consumption Recording: Must allow staff (e.g., nurses, technicians) to quickly log the use of an item, linking it to a patient ID, procedure, or cost center.
	<ul style="list-style-type: none"> * Kitting/Procedure Packs: Ability to manage inventory used in pre-defined procedure kits (e.g., a specific surgery tray).
Reporting & Analytics	<ul style="list-style-type: none"> * Usage Analysis: Generate reports on consumption trends, variance analysis, and stock movement velocity.
	<ul style="list-style-type: none"> * Cost & Valuation: Provide accurate inventory valuation methods (e.g., Average Cost, FIFO) and cost center reports.
	<ul style="list-style-type: none"> * Auditing & Cycle Counting: Facilitate and track cycle counting processes and provide reports on inventory discrepancies.