

## Phase 4: Requirement Analysis

### Functional Requirements

Field	Details
Date	9 November 2025
Team ID	NM2025TMID02588
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

#### 1. Functional Requirements

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

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