SOLUTION REQUIREMENTS

Date	23 October 2025
Team ID	NM2025TMID04944
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Functional Requirements:

These define the specific capabilities and features of the system. The functional requirements such as Inventory Management Core, Procurement and Reordering, Expiry and Quality Control, User and Access Management, Reporting and Analytics. These features ensure efficient workflow automation and accurate record handling within the Medical Inventory Management using salesforce Tools.

S.No	User Role	Description / Acceptance criteria
1.	**Inventory Management Core**	The system must allow real-time tracking of all inventory items by Item ID, Location (e.g., Main Store, Ward A), and Quantity on Hand. The system must support tracking of multiple Lot Numbers for a single item.
2.	**Procurement and Reordering**	The system must allow setting a Reorder Point (Minimum Stock Level) and a Maximum Stock Level for every item. The system must automatically trigger a "Low Stock Alert" when the quantity on hand falls to or below the Reorder Point.
3.	**Expiry and Quality Control**	The system must capture and store the Expiration Date for every received lot. The system must issue a critical "Expiry Alert" for items with an expiration date within a configurable window (e.g., 90 days).
4.	**User and Access Management**	The system must support role-based access control (RBAC) for roles such as Administrator, Inventory Manager, and Nurse/Department Staff. The system must maintain an unalterable Audit Log of every transaction (creation, edit, deletion, movement, usage) with a timestamp and User ID.
5.	**Reporting and Analytics**	The system must generate a Stock Valuation Report showing the current quantity, cost, and total value of inventory. The system must generate a detailed Item Usage Report filterable by date range, department, and item category.

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Non-Functional Requirements:

The non-functional requirements focus on quality attributes and constraints of the solution such as Performance**,** Security, Usability, Reliability, Integration. They ensure the Medical Inventory Management Project runs reliably, protects data, and remains adaptable to future business growth while maintaining a smooth user experience.

S.No	Requirements	Description
1.	Performance	The system must load critical inventory screens and process transactions (e.g., issuing an item) in under 3 seconds during peak usage hours.
2.	Security	All sensitive data, including cost information and patient linkage (if any), must be encrypted both in transit and at rest.
3.	Usability	The interface for core functions (scanning, issuing) must be mobile-friendly and require no more than three clicks to complete a transaction.
4.	Reliability	The system must have a scheduled daily data backup and a documented disaster recovery plan to ensure an uptime of at least 99.9%.
5.	Integration	The system must provide an API for potential future integration with the hospital's Electronic Health Record (EHR) and financial systems.