Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	2 November 2025
Team ID	NM2025TMID00728
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

Functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement / Story (Story / Sub-Task)
FR-1	Supplier Management	Add new supplier with name, contact, address, GST/registration details. FR-1.2: Edit supplier details. FR-1.3: View supplier list and search supplier by name/ID.
FR-2	Product / Medicine Master	Create product record with name, category, unit, MRP. FR-2.2: Add batch number, manufacturing & expiry date, purchase price. FR-2.3: Update product details.
FR-3	Purchase Order Management	Create purchase order with supplier, product, quantity, expected delivery date. FR-3.2: Approve / reject PO. FR-3.3: Receive goods against PO and record received quantity & batch.
FR-4	Stock Management	Update stock on receipt and on issuance. FR-4.2: Maintain stock by batch with FIFO support. FR-4.3: View current stock level per product and per batch.
FR-5	Expiry Monitoring & Alerts	Scheduled job to scan product batches and flag those nearing expiry (configurable threshold). FR-5.2: Generate alerts to Admin/Pharmacist and show in dashboard. FR-5.3: Auto-mark expired batches as unusable.

FR-6	Issue / Dispense Module	Create issue transactions recording product, batch, quantity, recipient. FR-6.2: Prevent issuing if batch is expired or insufficient quantity. FR-6.3: Update stock on successful issue.
FR-7	Reports & Dashboards	Generate stock report (by product/category). FR-7.2: Generate expiry report (batches expiring in X days). FR-7.3: Purchase order and supplier performance reports.
FR-8	User & Role Management	Create Admin, Inventory Manager, Pharmacist user roles. FR-8.2: Assign permission sets and profiles to restrict actions (e.g., only Admin can delete supplier).
FR-9	Audit & Transaction History	Maintain history of stock changes (who, when, what). FR-9.2: Provide audit report for selected period.
FR-10	Integration	Ability to import supplier/product list via CSV. FR-10.2: Expose REST endpoint for external systems to query stock status (optional).

Non-functional requirements:

Following are the non-functional requirements of the proposed solution

NFR No.	Non-Functional Requirement	Description
NFR-1	Performance	The system should return product list and search results within 3 seconds for up to 10,000 product records (use selective queries & indexing).
NFR-2	Availability	The application should be available during business hours with minimal downtime; scheduled maintenance must be communicated.
NFR-3	Security	Role-based access control must be implemented. Sensitive operations (delete, approve PO) require appropriate

		profile/permission. Data must follow Salesforce security best practices.
NFR-4	Data Integrity	Prevent negative stock or inconsistent batch records by using validation rules and transactional updates (atomic operations).
NFR-5	Scalability	Design must support increase in records (products, batches, transactions) without major redesign — use indexed fields and efficient queries.
NFR-6	Usability	UI forms for quick add/update should be simple with mandatory fields and meaningful error messages; compact layouts for mobile use.
NFR-7	Maintainability	Business logic should be modular (Flows, Trigger handlers) and documented to ease future changes and debugging.
NFR-8	Auditability	Field history tracking enabled for critical fields (stock quantity, expiry date, PO status) to generate audit reports when needed.
NFR-9	Reliability	Scheduled expiry check must run reliably and not miss batches; implement retries and error logging.
NFR-10	Interoperability	CSV import/export and REST API endpoints should follow common standards (JSON/CSV) to allow integration with accounting or supplier systems.