**REQUIREMENT ANALYSIS**

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| --- | --- |
| Date | 29-05-2025 |
| Team ID | LTVIP2025TMID28829 |
| Project Name | Medical Inventory Management |
| Maximum Marks | 4 Marks |

**3.2 Solution Requirements**

**Overview**

This section outlines the complete solution requirements essential for developing the Medical Inventory Management System on Salesforce. It covers two primary areas:

* **Functional Requirements**: What the system should do.
* **Non-Functional Requirements**: How the system should behave in terms of performance, security, usability, and scalability.

These requirements have been derived from empathy mapping, journey mapping, stakeholder analysis, and ideation sessions.

**3.2.1 Functional Requirements**

**A. Inventory Management**

* **FR1**: Maintain master records of inventory items, including name, category, batch number, expiry, quantity, and supplier.
* **FR2**: Display real-time stock levels per department.
* **FR3**: Track expiry dates with automated alerts 30/60/90 days in advance.
* **FR4**: Allow inventory transfers between departments.
* **FR5**: Log all stock-in/stock-out movements for auditing.

**B. Procurement Workflow**

* **FR6**: Generate and submit purchase requisitions.
* **FR7**: Route requisitions for approval via Salesforce Flow.
* **FR8**: Auto-generate purchase orders after approval.
* **FR9**: Track vendor responses, expected delivery dates, and confirmation.
* **FR10**: Allow item receipt entry and auto-update stock upon delivery.

**C. Vendor Management**

* **FR11**: Maintain detailed vendor profiles (contact, item categories, ratings).
* **FR12**: Link vendors with past transactions and POs.
* **FR13**: Evaluate vendors based on delivery time, product quality, and pricing trends.

**D. Reporting & Dashboards**

* **FR14**: Generate reports: current stock, stock history, expiry reports, procurement summaries.
* **FR15**: Support downloadable reports in Excel/PDF format.
* **FR16**: Visual dashboards for inventory KPIs and budget tracking.

**E. Notifications & Alerts**

* **FR17**: Send automated alerts for low stock, expiry, and procurement actions.
* **FR18**: Enable role-based notification customization.

**F. User Roles & Access Control**

* **FR19**: Role-specific permissions: Admin, Inventory Manager, Procurement Officer.
* **FR20**: Allow Admin to manage user roles and restrict sensitive actions.

**3.2.2 Non-Functional Requirements**

**A. Usability**

* **NFR1**: User-friendly interface with intuitive navigation.
* **NFR2**: Mobile responsiveness for use on tablets and phones.
* **NFR3**: Include tooltips and step-by-step wizards for new users.

**B. Performance**

* **NFR4**: Dashboards and pages must load within 3 seconds under normal conditions.
* **NFR5**: Alert notifications should be delivered within 10 seconds of triggering.

**C. Security**

* **NFR6**: Use Salesforce Profiles, Roles, and Permission Sets for secure access control.
* **NFR7**: Log all user actions on inventory, procurement, and vendor data.
* **NFR8**: Sensitive operations (e.g., deleting records) must require admin confirmation.

**D. Availability & Reliability**

* **NFR9**: The system must offer 99.9% uptime, leveraging Salesforce’s cloud hosting.
* **NFR10**: All records and logs must be backed up daily.

**E. Scalability**

* **NFR11**: Support multiple departments, facilities, and future hospital branches.
* **NFR12**: Handle up to 1 million inventory transactions without performance degradation.

**F. Maintainability**

* **NFR13**: System changes (e.g., new workflows, items, thresholds) should be manageable via Salesforce Setup.
* **NFR14**: All automation must be documented using Salesforce Flow and version-controlled.

**Requirement Prioritization Summary**

| **Priority** | **Area** | **Key Features** |
| --- | --- | --- |
| High | Inventory Tracking | Real-time stock, expiry alerts, batch info |
| High | Procurement Automation | Approval routing, PO generation, delivery logs |
| Medium | Vendor Evaluation | Delivery SLAs, rating system |
| High | Reporting & Auditing | Dashboard insights, compliance logs |
| Medium | Mobile Access | Responsive UI for inventory on-the-go |

**Conclusion**

This structured requirement set is the backbone for designing an efficient, scalable, and user-friendly Medical Inventory Management System using Salesforce. These requirements ensure:

* Streamlined workflows
* Enhanced transparency
* Reduction of manual errors
* Improved audit-readiness
* Greater operational resilience

These defined requirements now guide the **Project Design** phase — including architecture, data model, automation strategy, and interface planning.