

# MEDICAL INVENTORY MANAGEMENT

## Requirement Analysis Report

TEAM ID	NM2025TMID07179
PROJECT NAME	MEDICAL INVENTORY MANAGEMENT
TEAM MEMBER NAMES	M. SUDHARSAN (912422104043), R. SUDHARSAN (912422104045), P. SIBIKUMAR (912422104039), PL. SURYA (902422104047).

### 1. Introduction

The **Requirement Analysis Phase** is one of the most important stages of the software development life cycle (SDLC). In this phase, the functional and non-functional requirements of the **Medical Inventory Management System (MIMS)** are gathered, analyzed, and documented. The goal is to clearly understand **what the system should do** and **how it should perform**, ensuring that the Salesforce-based solution aligns with the business objectives of healthcare organizations.

### 2. Objective of Requirement Analysis

The main objectives of the requirement analysis phase are:

- To identify the needs and expectations of users such as hospital administrators, pharmacists, and suppliers.
- To gather detailed **functional requirements** for inventory tracking, order management, and alerts.
- To define **non-functional requirements** such as performance, security, and reliability.
- To prepare a **Software Requirement Specification (SRS)** document that serves as a guideline for the design and development phases.

### 3. Requirement Gathering Techniques

To collect requirements effectively, several methods are used:

- **Interviews and Questionnaires:** Conducted with hospital staff, pharmacists, and inventory managers.
- **Observation:** Studying existing manual or semi-automated inventory processes.
- **Document Review:** Analyzing existing records such as purchase orders, stock logs, and supplier lists.

- **Brainstorming Sessions:** Discussing possible Salesforce-based automation and system integration ideas.

#### 4. Functional Requirements

These requirements describe the specific operations and behaviors of the Medical Inventory Management System.

##### Key Functional Requirements:

##### 1. Inventory Management:

- Add, update, and delete medicine and equipment records.
- Track stock quantity, expiry dates, and batch numbers.

##### 2. Supplier and Purchase Order Management:

- Manage supplier details and purchase orders.
- Automate restock requests when items fall below a threshold.

##### 3. Alerts and Notifications:

- Automatic alerts for low stock and upcoming expiries.
- Email or in-app notifications for purchase order approvals.

##### 4. Reporting and Analytics:

- Generate dashboards showing total stock, purchases, and usage trends.
- View reports filtered by category, supplier, or date range.

##### 5. User Roles and Access Control:

- Admin: Full access to configuration and records.
- Pharmacist: Manage stock and transactions.
- Supplier Manager: Handle supplier and order modules.

#### 5. Non-Functional Requirements

These define the system's performance and quality standards.

##### Key Non-Functional Requirements:

- **Performance:** The system must handle real-time data updates with minimal delay.
- **Scalability:** Should support multiple branches or departments.
- **Security:** Data access should be role-based with field-level permissions.
- **Reliability:** Must ensure accurate and consistent data.

- **Usability:** The interface should be intuitive and accessible for non-technical users.
- **Availability:** As Salesforce is cloud-based, the system should offer 24/7 uptime.

## 6. System Requirements

These requirements define the tools and technologies needed to implement the system.

### Hardware Requirements:

- Internet-enabled devices (PCs, tablets, or smartphones).
- Reliable network connection for Salesforce access.

### Software Requirements:

- Salesforce CRM Platform (Lightning Experience).
- Apex, Visualforce, or Flow Builder for automation.
- Browser (Chrome/Edge) for Salesforce interface.
- Optional Integration APIs for third-party systems.

## 7. Data Requirements

The system must store and manage:

- Medicine details: Name, Category, Batch Number, Expiry Date, Quantity.
- Supplier information: Name, Contact Details, Supply History.
- Purchase Order details: Order ID, Order Date, Status, Total Amount.
- Inventory transactions: Stock-in and stock-out history.

All these will be managed through **Salesforce Custom Objects and Relationships**.

## 8. Output of Requirement Analysis Phase

The outputs of this phase include:

- A complete **Software Requirement Specification (SRS)** document.
- List of **functional and non-functional requirements**.
- Defined **data model and process scope**.
- Identification of **user roles and system constraints**.

## 9. Conclusion

The **Requirement Analysis Phase** forms the backbone of the project by ensuring that the Medical Inventory Management System in Salesforce is developed with a clear understanding of user needs and organizational objectives. By defining and documenting precise requirements, this phase ensures a structured approach for the next stages—**design, development, testing, and deployment**—leading to an efficient, reliable, and automated medical inventory solution.

