

Project Design Phase

Data Flow Diagram & User Stories

Date	01 NOV 2025
Team ID	NM2025TMID02942
Title	Medical Inventory System
Maximum Marks	4 Marks

A. Level 0 – Context Diagram

Description:

At this level, the entire Medical Inventory System is represented as a single process that interacts with external entities.

External Entities:

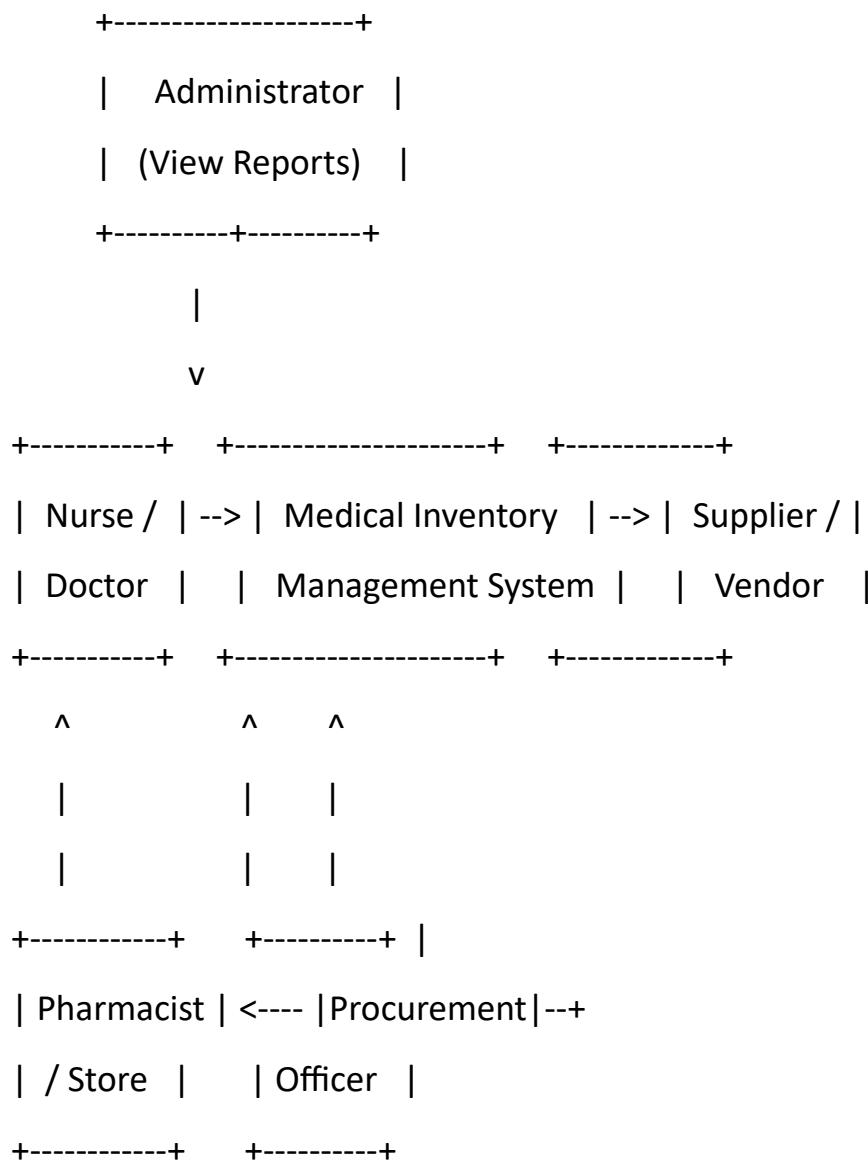
- Pharmacist / Store Manager – adds, updates, and monitors inventory.
- Procurement Officer – handles purchase orders and supplier communication.
- Nurse / Doctor – requests or consumes medical items.
- Administrator – monitors reports, audits, and compliance.
- Supplier / Vendor – receives orders and delivers goods.

Data Flows:

- Inventory Requests → from Nurses/Doctors to System
- Stock Updates → from Pharmacist to System
- Purchase Orders → from System to Supplier
- Delivery Information → from Supplier to System
- Reports / Alerts → from System to Administrator



Level 0 DFD (Text-Based Representation)



B. Level 1 – Detailed DFD

Processes:

1. Manage Stock
 - o Add new items, update quantities, record usage.
2. Track Expiry & Alerts
 - o Monitor expiry dates, generate notifications.
3. Generate Purchase Orders
 - o Automatically create restock requests when inventory drops below threshold.

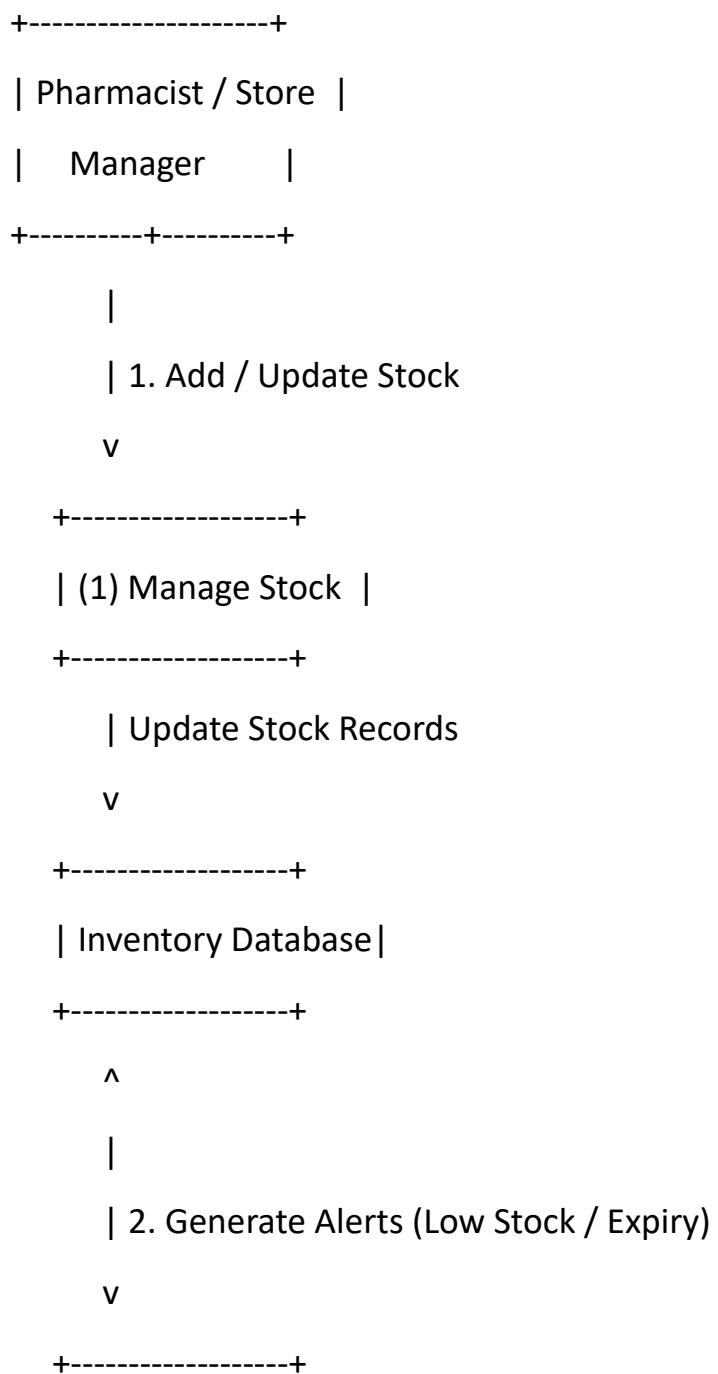
4. Receive Supplies

- Update inventory after supplier delivery.

5. Generate Reports

- Provide analytics, usage reports, and audit logs.
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Level 1 DFD (Text-Based Representation)



| (2) Alert System |

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| Notification Logs |

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| (3) Generate Purchase |

| Orders & Send to |

| Supplier |

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+-----+

| Supplier |

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| (4) Receive |

| Supplies |

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2. User Stories (Agile Format)

User stories describe how users interact with the system and what value they gain.

They follow the format:

As a [user role], I want to [goal] so that [benefit].

A. Pharmacist / Store Manager

ID	User Story	Acceptance Criteria
US01	As a pharmacist, I want to add new medical items with batch number and expiry date so that I can track stock accurately.	Item added appears in inventory list with correct details.

ID	User Story	Acceptance Criteria
US02	As a pharmacist, I want to receive alerts when stock levels are low so that I can reorder items before they run out.	Notification triggered when item < reorder level.
US03	As a pharmacist, I want to update quantities after each issue or delivery so that inventory levels remain accurate.	Stock levels auto-update in database.
US04	As a pharmacist, I want to generate a report of expired medicines so that I can safely dispose of them.	Expiry report generated with item names and dates.

B. Procurement Officer

ID	User Story	Acceptance Criteria
US05	As a procurement officer, I want to receive automatic purchase orders for low-stock items so that restocking is faster.	Purchase orders generated automatically.
US06	As a procurement officer, I want to track supplier deliveries so that I can confirm receipt and update stock.	Delivery record matches supplier shipment.

C. Nurse / Doctor

ID	User Story	Acceptance Criteria
US07	As a nurse, I want to request specific medicines or equipment from inventory so that I can access what I need for patient care.	Request logged and approved by pharmacist.
US08	As a doctor, I want to check stock availability of certain drugs before prescribing them so that treatment isn't delayed.	System displays availability in real time.

D. Administrator

ID	User Story	Acceptance Criteria
US09	As an administrator, I want to view summary dashboards showing stock levels, expiry status, and usage trends so that I can make informed decisions.	Dashboard updates dynamically with latest data.
US10	As an administrator, I want to download audit and compliance reports so that I can meet regulatory requirements.	Reports exported in PDF/Excel formats.