

Project Design Phase-5

Data Flow Diagram & User Stories

Date: 2nd November 2025

Project Name: Medical Inventory Management

Maximum Marks: 4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a visual representation of the information flow within the Medical Inventory Management system. It helps understand how data moves between users, processes, and databases. In this project, DFDs illustrate how medical stock requests, approvals, and updates are handled across the hospital departments.

The system involves three main actors: the Administrator, the Department User, and the Pharmacy/Inventory Manager. The DFD shows how users initiate stock requests, how approvals are processed, and how inventory quantities are updated.

Example:

1. The Department User requests an item from the inventory.
2. The system validates the item's availability and forwards the request for approval.
3. The Inventory Manager approves or rejects the request.
4. If approved, the stock quantity is updated and notification is sent to the user.
5. Reports and dashboards reflect real-time stock levels and transactions.

User Stories:

User stories describe the needs and goals of different users in a concise, action-oriented format. They ensure that all key processes such as stock tracking, approval, and alerts are implemented correctly.

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance Criteria | Priority / Release |
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| Department User | Request Management | USN-1 | As a department user, I want to request medical items from inventory so that I can get the required supplies on time. | System should allow users to create item requests and validate stock availability. | High / Sprint-1 |
| Inventory Manager | Approval Workflow | USN-2 | As an inventory manager, I want to review and approve item requests so that only valid requests are processed. | System should allow managers to approve or reject requests and update stock accordingly. | High / Sprint-1 |
| System (Automation) | Stock Update & Alerts | USN-3 | As a system, I must update stock levels automatically after approval and trigger low-stock alerts. | Stock quantity must reduce automatically, and alerts should trigger when below threshold. | High / Sprint-2 |
| Administrator | Inventory Configuration | USN-4 | As an administrator, I want to configure item categories, locations, and thresholds for efficient inventory management. | System should allow configuration of categories, locations, and threshold values for alerts. | Medium / Sprint-2 |

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| Department User | Reporting & Visibility | USN-5 | As a department user, I want to view request history and item status for better tracking. | System should display all past requests and their approval status in a dashboard view. | Low / Sprint-3 |
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These user stories ensure all stakeholders — including department staff, inventory managers, and system administrators — can efficiently manage and monitor medical inventory in real time, improving accuracy and reducing wastage.

Data Flow Diagram



