Project Design Phase-II

Data Flow Diagram & User Stories

Date	03 November 2025
Team ID	NM2025TMID01909
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Data Flow Diagram (DFD)

Project: *Medical Inventory Management System (MIMS)*

Level 0 – Context Diagram

At the highest level, the MIMS interacts with four main external entities:

External Entities:

- **Admin** – manages users, oversees inventory, and reviews reports

- **Pharmacist** – updates stock, monitors expiry, generates orders

- **Supplier** – receives purchase orders and delivers stock

- **Nurse/Doctor** – requests medicines or items for patient care

Process:
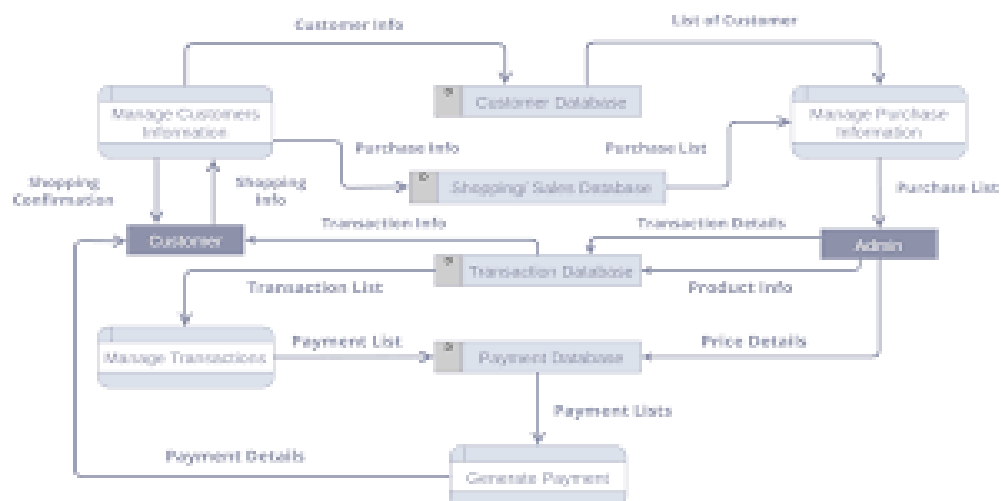**Medical Inventory Management System (MIMS)**

Data Stores:

- Inventory Database

- Supplier Database

- User & Transaction Logs

Data Flow Summary:

1. Admin and Pharmacist enter or update inventory data.

2. System stores item and transaction information in the database.

3. When stock is low or nearing expiry, system sends notifications.

4. Supplier receives purchase orders and sends delivery confirmation.

5. Reports and dashboards are generated for management.

Level 1 – Detailed Process Flow

Process No.	Process Name	Input	Output	Data Store	Description
1.0	User Authentication	Login credentials	Access token / session	User DB	Validates users and assigns roles.
2.0	Manage Inventory	Item details (name, batch, expiry, qty)	Updated stock record	Inventory DB	Add, update, or remove stock entries.
3.0	Track Expiry & Alerts	Item expiry & stock data	Alert message / notification	Inventory DB	Checks thresholds and triggers alerts.
4.0	Purchase Order Management	Low stock items	Purchase order	Supplier DB	Automatically generates POs to suppliers.
5.0	Receive & Update Stock	Delivery details	Updated stock and confirmation	Inventory DB	Updates records when supplier delivers items.
6.0	Generate Reports	Query from admin	Usage, expiry, supplier reports	Inventory DB / Logs	Summarizes data for decision-making.

👤 User Stories

ID	User Role	User Story	Acceptance Criteria
US1	Admin	As an admin, I want to create and manage user accounts with specific roles so that system access remains secure.	Admin can add/edit/delete user accounts and assign roles.
US2	Pharmacist	As a pharmacist, I want to add new medicine details with expiry and batch info so that I can maintain accurate records.	New items are added successfully; details visible in inventory list.
US3	Pharmacist	As a pharmacist, I want to receive automatic alerts when medicines are low in stock or about to expire so that I can reorder in time.	Alerts generated automatically when thresholds are met.
US4	Supplier	As a supplier, I want to receive purchase orders automatically so that I can deliver medicines promptly.	Purchase order sent when stock < reorder level.
US5	Nurse/Doctor	As a nurse, I want to check the availability of a medicine quickly so that I can treat patients without delay.	System displays stock availability instantly.
US6	Admin	As an admin, I want to view detailed reports on inventory usage, waste, and supplier performance so that I can make informed decisions.	Reports generated with accurate data visualization.
US7	Pharmacist	As a pharmacist, I want to scan barcodes of medicines for easy entry and updates so that I can save time and reduce manual errors.	Barcode scanning updates stock automatically.
US8	Auditor	As an auditor, I want to access transaction logs so that I can verify inventory movements.	Transaction log shows who did what and when.