Project Design Phase

Proposed Solution

Date: 03/11/2025
Team ID: NM2025TMID05036
Project Name: Medical Inventory Management
Maximum Marks: 2 Marks

Proposed Solution Template

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	In hospitals and pharmacies, manual tracking of medicines often leads to stock shortages, expired drugs, and errors in record maintenance. This affects patient safety and healthcare efficiency.
2.	Idea / Solution Description	Develop a digital Medical Inventory Management System that automates stock tracking, monitors expiry dates, and generates alerts for low or outdated medicines. The system also maintains real-time records and analytics for better decision-making.
3.	Novelty / Uniqueness	The system combines automated alerts, barcode-based tracking, and expiry-date notifications in a single platform. It provides real-time visibility of inventory and eliminates manual errors using a simple, user-friendly interface.
4.	Social Impact / Customer Satisfaction	Ensures continuous availability of medicines, reduces wastage, and improves patient care quality. Hospitals and pharmacies benefit from reduced human error and increased operational accuracy.
5.	Business Model (Revenue Model)	The system can be implemented as a subscription-based web application for hospitals, clinics, and pharmacies. It helps save time, avoid losses due to expired stock, and improve cost efficiency in inventory operations.
6.	Scalability of the Solution	The solution can be extended to include modules for supplier integration, purchase management, and demand forecasting. It can also scale to handle multiple branches or hospitals within a single network.

Reference:

Infographic created using MidJourney.

Solution Description:

The **Medical Inventory Management System** automates the complete process of tracking, updating, and managing medical stock in hospitals and pharmacies. It allows users to add, update, and remove medicine entries with full visibility on stock quantity and expiry details.

Through smart alerts and data visualization, the system helps healthcare workers respond quickly to shortages and prevents the use of expired medicines. Its web-based design ensures accessibility and scalability, making it suitable for all sizes of medical institutions.

By reducing manual effort and maintaining accurate real-time records, this solution enhances healthcare reliability, reduces waste, and supports safe, efficient medical operations.