Project Design Phase

Proposed Solution

DATE	31 OCTOBER 2025
TEAM ID	NM2025TMID05759
PROJECT NAME	MEDICAL INVENTORY MANAGEMENT
MAXIMUM MARKS	2 MARKS

Proposed Solution Template

S.No.	Parameter	Description
1	Problem Statement (Problem to be solved)	Hospitals and clinics often face challenges managing their medical inventory efficiently. Manual tracking causes stockouts, expired medicines, and overstocking, leading to waste, delays in treatment, and compliance issues.
2	Idea / Solution Description	The proposed system is a Medical Inventory Management application that enables real-time tracking of medicines and supplies. It provides automated low-stock alerts, expiry reminders, and reorder recommendations. The system maintains digital records of all inventory transactions, improving efficiency, accuracy, and accountability.

3	Novelty / Uniqueness	The solution combines AI-powered forecasting and expiry management in one integrated platform. It uses predictive analytics to estimate demand based on historical usage and seasonal trends, helping hospitals maintain optimal stock levels.
4	Social Impact / Customer Satisfaction	This solution ensures hospitals and pharmacies always have essential medicines in stock, reducing delays in patient care. It also minimizes wastage and promotes cost efficiency while supporting compliance with health regulations.
5	Business Model (Revenue Model)	The solution can be offered as a subscription-based SaaS platform to hospitals, clinics, and pharmacies. Additional modules (e.g., supplier integration, analytics dashboards) can be sold as premium upgrades, providing scalable revenue opportunities.
6	Scalability of the Solution	The platform can be scaled to serve multiple branches of hospitals and integrated with supplier and pharmacy systems. It can also be extended for equipment tracking, vaccine management, and automatic order placement with vendors.

CONCLUSION

The project **"Medical Inventory Management System"** effectively addresses the challenges faced by hospitals, clinics, and pharmacies in maintaining accurate stock levels, reducing wastage, and ensuring the timely availability of essential medicines and medical equipment. By automating the inventory process, the system minimizes manual errors, prevents stockouts and overstocking, and enhances operational efficiency within healthcare facilities. This solution improves accountability and transparency in inventory handling by providing real-time tracking, automated alerts for low-stock or expiry dates, and detailed reporting features. It not only streamlines supply chain operations but also ensures that patient care is never compromised due to unavailability of medicines.

Solution Description

The Medical Inventory Management System streamlines the entire lifecycle of medical supplies — from procurement to consumption. It provides real-time updates on stock levels, generates alerts for low or expiring inventory, and automates reordering. By integrating AI-based analytics, it forecasts demand trends and reduces manual effort.

This solution ensures data accuracy, cost savings, and better decision-making, ultimately improving healthcare delivery efficiency. It's reliable, scalable, and adaptable to institutions of any size.

References

1. https://www.ideahackers.network/problem-solution-fit-canvas/

2. https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe