TECHNOLOGY STACH TEMPLATE

Date	23 Octobar 2025
Team ID	3FFAE7436D2189BAAD14CC03A02C48A9
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Technology Stack:

The technical architecture of the Medical Inventory Management System integrates various cloud-based and web technologies to automate and manage hospital inventory operations efficiently. The architecture ensures secure data flow, seamless communication between modules, and real-time tracking of medicines, suppliers, and stock levels. Using automation tools and databases, the system enables item management, billing, and reporting with high accuracy. APIs allow integration with other healthcare systems such as Hospital Management Software (HMS) and billing platforms, providing scalability, security, and data integrity.

Tables 1: Component & Technology

S.No	component / Module	Technology / Tool Used and Description
1	Medicine & Equipment Management	MySQL / Cloud Database — Manages all medical item details including batch number, quantity, expiry date, and supplier data
2	Supplier & Purchase Module	API Integration & Cloud Storage — Handles supplier records, purchase orders, and delivery

		updates with secure data exchange
3	Inventory Tracking & Alerts	Automation Scripts & Cron Jobs — Automates stock level tracking, expiry alerts, and low-stock notifications purchase invoices, manages billing history, and ensures compliance reporting
4	Billing and Audit Modul	Server-Side Logic (Node.js / Python) — Generates Server-Side Logic (Node.js / Python) — Generates
5	User Interface (Web Dashboard)	React.js / HTML / CSS — Provides user-friendly dashboards for real-time inventory management and analytics.
6	Reporting & Analytics	Power BI / Tableau / Google Data Studio — Displays graphical reports for stock consumption, supplier performance, and cost trends.
7	Security & Access Control	Role-Based Access Control (RBAC), OAuth 2.0 — Protects data access through role permissions and encrypted connections