TECHNOLOGY STACK TEMPLATE

Date	2 November 2025
Team ID	NM2025TMID02665
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Technical Architecture:

The technical architecture integrates Salesforce modules for 3-tier logical architecture Presentation Tier, Application Tier, Data Tier. It Manages the deployment, scaling, and operation of micro services. Manages the deployment, scaling, and operation of micro services.
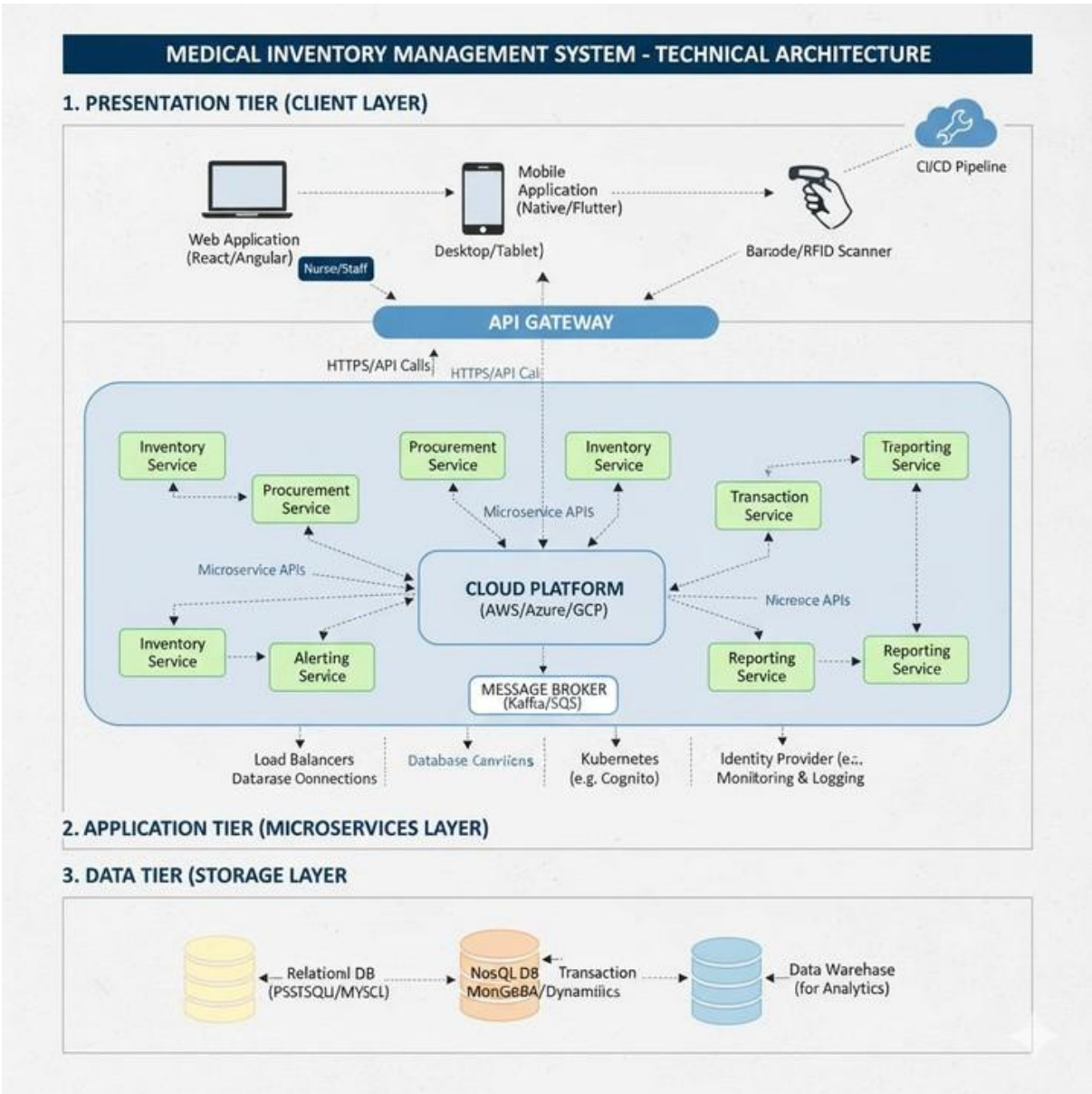
TECHNOLOGY STACK TEMPLATE

Table-1 : Components&Technologies :

These industry-specific clouds offer tailored data models and features essential for healthcare, including objects for Products, Product Items (which represent inventory at a specific location), Location, Product Fulfillment Location, and Serialized Product. May be used if the scope includes a full e-commerce experience for ordering supplies or for complex order fulfillment processes.

S.No	Component/Module	Technology/Tool Used	Description
1.	Data Model & Objects	Salesforce standard or Health Cloud objects	The master record representing a medical item (e.g., Pacemaker Model X, Sterile Gloves, Surgical Kit). Represents where the inventory is stored.
2.	Automation and Logic	Customization Flow & Process Builder (Salesforce Automation Tools)	Generating a Product Transfer request when stock drops below a reorder point. Sending alerts to a manager for low-stock or expiring inventory Updating the Quantity On Hand after a product item is consumed.
3.	Integration & Data	Connecting Salesforce to other systems	Salesforce's integration platform, often used to connect Salesforce to ERP (Enterprise Resource Planning) systems or WMS (Warehouse Management Systems) to synchronize master data and stock movements.
4.	User Experience & Analytics	Lightning Web Components (LWC) & Aura Components	Used to build custom, user-friendly interfaces (e.g., a fast, mobile-responsive component for scanning and consuming products).

Table-2 : ApplicationCharacteristics:

The Medical Inventory Management exhibits key characteristics such as Real-time Inventory

TECHNOLOGY STACK TEMPLATE

Visibility, Lot andSerial Number Tracking,ExpirationDate Management,Automated Replenishment & Reordering, User Security and Access Control, Seamless Integration ensuring efficient and intelligent management of Medical operations.

S.No	Characteristics	Description
1.	Real-time Inventory Visibility	The application must provide an immediate, accurate view of stock levels, location, and movement across multiple sites (warehouses, clinics, hospitals, field service vehicles).
2.	User Securityand Access Control	Leveraging Salesforce's robust security model (Profiles, Permission Sets, Sharing Rules) to ensure that users can only access inventory data relevant to their role and location.
3.	Data Protection and Privacy	The platform must meet high-level data security standards to protect sensitive inventory and related patient/provider data.
4.	SeamlessIntegration	The application must integrate with other critical healthcare and business systems such as: EHRs/EMRs (Electronic Health/Medical Records) ERP (Enterprise Resource Planning) systems for financial and procurement data. Vendor/Supplier systems for electronic ordering and tracking.
5.	Customizationand Scalability	Built on the Salesforce Platform, the application must be highly customizable to map to unique medical workflows and scalable to handle growth in inventory volume and locations.
6.	Reporting and Analytics (Tableau/CRM Analytics)	Provides tools to analyze inventory trends, demand forecasting, stock turnover rates, cost analysis, and identify opportunities for optimization.