Project Design Phase-II

Technology Stack (Architecture & Stack)
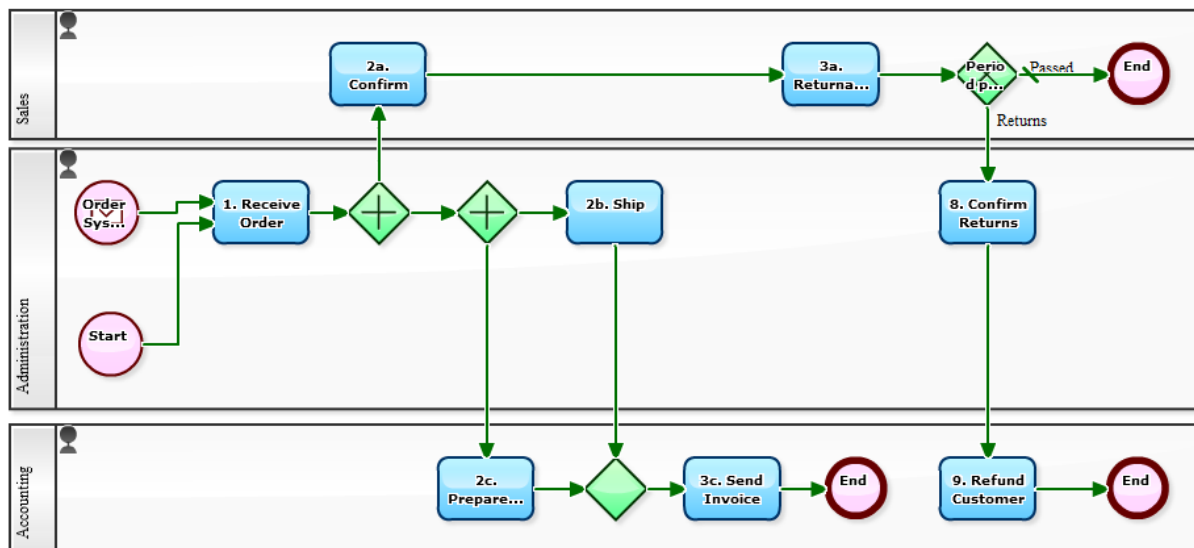
Date	29 October 2025
Team ID	NM2025TMID04224
Project Name	Medical Inventory Management
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: The Medical Inventory Management System uses Salesforce objects to store medicines, suppliers, and order details.

Reference:https://developer.salesforce.com/docs

Table 1: Components & Technologies

S.No	Component	Description	Technology
1	**User Interface**	Users (pharmacists/admins) interact via Salesforce Lightning dashboards and record pages.	Salesforce Lightning UI
2	**Application Logic – 1**	Handles creation, update, and tracking of medicines and stock levels.	Salesforce Apex, Process Builder
3	**Application Logic – 2**	Validates data entries (expiry date, quantity) and triggers alerts for low stock.	Salesforce Validation Rules, Flows
4	**Application Logic – 3**	Automates supplier notifications and stock reorder processes.	Salesforce Flow Builder, Workflow Rules
5	**Database**	Stores all medical item, supplier, and transaction details.	Salesforce Object Database
6	**Cloud Platform**	Managed by Salesforce Cloud infrastructure (SaaS).	Salesforce Cloud
7	**File Storage**	Stores report files and related attachments within Salesforce.	Salesforce File Storage
8	**External API – 1**	Can integrate with third-party ERP or supplier systems for automatic ordering.	Salesforce REST API Integration
9	**External API – 2**	Not currently implemented.	--
10	**Machine Learning Model**	Not applicable in current version but can be integrated for stock prediction.	--
11	**Infrastructure**	Fully hosted and managed by Salesforce Cloud (multi-tenant SaaS).	Salesforce Cloud Infrastructure

Table 2: Application Characteristics

S.No	Characteristics	Description	Technology
1	**Open-Source Frameworks**	Not applicable (Salesforce uses proprietary platform tools).	--
2	**Security Implementations**	Role-based access control, record-level security, and permission sets ensure data protection.	Salesforce Profiles & Permission Sets
3	**Scalable Architecture**	Cloud-based architecture allows horizontal and vertical scalability for large hospitals.	Salesforce Cloud Architecture
4	**Availability**	Highly available, backed by Salesforce multi-region servers ensuring 99.9% uptime.	Salesforce SaaS Infrastructure
5	**Performance**	Optimized via indexed fields, automation flows, and platform caching.	Salesforce Lightning Platform, Apex Optimization