

Project Design Phase

Solution Architecture

Date	01 November 2025
Team ID	NM2025TMIDO1112
Project Name	CRM application for Jewel Management App System
Maximum Marks	4 Marks

Goals of the Architecture

The goal of the solution architecture is to design a **robust, scalable, and integrated Salesforce-based system** that effectively manages all core operations of a jewelry business — including customer handling, inventory management, and billing. The architecture aims to unify these processes into a single, cloud-based environment that enhances accuracy, automation, and decision-making. By incorporating Salesforce features such as **Custom Objects, Relationships, Flows, and Dashboards**, the system ensures seamless connectivity between data, processes, and users. The ultimate objective is to create an application that simplifies daily operations, improves transparency, and supports data-driven business growth for jewelry stores and manufacturers.

Goals:

- To establish a **centralized database** for storing and managing jewelry items, customer details, and pricing information.
- To implement **automated workflows and triggers** that eliminate repetitive manual tasks and ensure data consistency.
- To provide **real-time visibility** of business performance through interactive reports and dashboards.
- To design a **secure access model** using roles, profiles, and permissions for different user types such as Goldsmiths and Workers.
- To ensure **scalability**, enabling future enhancements such as supplier or repair tracking modules.
- To support **efficient data relationships** between customer and item records for accurate billing and stock management.

Component	Description
Jewel Customer Object	Stores customer details such as name, contact, and purchase history with validation and duplicate prevention rules.
Item Object	Manages jewelry stock details like item type, material, price, and quantity available.
Price Object	Maintains dynamic pricing information linked with items to ensure accurate billing and profit tracking.
Billing & Invoice Object	Automates billing, generates invoices, and records payment details for each transaction.
Flows (Automation Layer)	Automates updates for stock levels, billing confirmation, and customer notifications.
Apex Trigger	Calculates total billing amount and applies discounts or taxes automatically during record creation.
Reports & Dashboards	Displays insights on sales, top customers, and stock performance for better decision-making.
Profiles & Roles	Controls user permissions and access levels for admins, sales staff, and managers to ensure data security.
Profiles & Roles	Define access levels for managers and service staff to maintain system security.

Solution Architecture Description:

The **Salesforce CRM Application for Jewel Management** follows a **layered architecture** designed to enhance data flow, automation, and usability. The **data layer** forms the foundation, consisting of custom objects like *Jewel Customer*, *Item*, and *Price*, which are interconnected through lookup and master-detail relationships. This ensures that all business data is properly linked and accessible across the system. The **process layer** manages the business logic through **Apex Triggers** and **Flows**, which handle automatic updates, validations, and calculations whenever data changes occur. The **presentation layer** provides an intuitive user interface through **Lightning Apps, Tabs, and Page Layouts**, making navigation and record management simple for end users.

To maintain security and controlled access, a **role-based security layer** defines permissions for users, ensuring that only authorized personnel can modify specific data. Finally, the **analytics layer** uses **Reports and Dashboards** to visualize critical business metrics such as total sales, top-selling items, and customer trends.

This architectural design ensures that the entire jewelry management process is automated, accurate, and scalable — transforming traditional manual operations into an efficient, data-driven workflow powered by Salesforce.

Example – Solution Architecture Diagram



