

# Project Design Phase

## Solution Architecture

### Solution Architecture

#### Goals of the Architecture

- Ensure **data integrity** across Customer, Item, and Billing records.
- Automate operations using Salesforce **Flows and Business Rules**.
- Prevent manual errors in price calculation, stock tracking, and customer details.
- Provide a **scalable, modular CRM architecture** suitable for jewellery business needs.

#### Key Components

- **Customer Object (Custom)** – Stores customer details, purchase history, and contact info.
- **Jewellery Item Object (Custom)** – Maintains gold/silver item details, making charges, and pricing logic.
- **Billing / Order Object (Custom)** – Handles real-time billing, amount calculation, and linking of customer and item records.
- **Automation Components –**
  - **Flows:** Automate field updates (e.g., total price, tax, and net amount).
  - **Validation Rules:** Ensure required fields (like rate, quantity) are filled accurately.
  - **Business Rules (Triggers or Record-Triggered Flows):** Prevent inconsistent deletions or incomplete data updates.

### Development Phases

1. **Create custom objects** – Customer, Item, and Billing.
2. **Define relationships** – Lookup and master-detail fields to link modules logically.
3. **Implement automation** – Validation rules, Flows, and Record-Triggered Logic.
4. **Testing and validation** – Verify correct data flow for all transactions. **Error prevention** – Restrict deletion of linked records and ensure field dependencies are maintained.

## Solution Architecture Description:

The **CRM Jewel Management (Developer)** architecture is built on **Salesforce's cloud platform**, focusing on secure, automated, and accurate jewellery business management.

It integrates **Customer, Item, and Billing modules** through relational data models, ensuring every purchase or transaction is traceable and consistent. Business logic is implemented through **Flows, Validation Rules, and Business Rules (Triggers)** that ensure correct calculations and prevent data loss or accidental record deletion.

When a billing record is generated, the system automatically calculates the total cost using the item's rate and quantity. Any invalid data entry is blocked instantly, ensuring accuracy and reliability. This architecture eliminates the need for manual monitoring, enhances transparency, and ensures smooth CRM operation from customer creation to billing completion. It also supports future scalability for online jewellery stores, inventory integration, and analytics dashboards.

## Example – Solution Architecture Diagram

**Solution Architecture Diagram: CRM Jewel Management System**

