

OXFORD ENGINEERING COLLEGE

**DEPARTMENT
OF**

.TECH(INFORMATION TECHNOLOGY)

**PROJECT TITTLE : CRM APPLICATION
FOR JEWEL MANAGEMENT**

SUBMITTED BY

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**PLATFORM: Salesforce developer
Date of submission: 05-11-2025**

1. INTRODUCTION

1.1 Project Overview:

This project involves the development of a CRM-based Jewel Management System using Salesforce. It streamlines operations like inventory tracking, price updates, billing, and customer management for a jewellery business. The project leverages Salesforce Lightning Platform to design custom objects, automate processes using Flows, and generate actionable insights via dashboards and reports.

1.2 Purpose:

The purpose is to replace manual processes with an automated, cloud-based Salesforce CRM that enables real-time stock updates, dynamic pricing, customer billing, and order tracking. The system enhances customer experience, operational accuracy, and business decision-making.

The purpose of this project is to design and implement a Salesforce-based CRM solution specifically for jewel businesses to:

- Centralize customer information and communication.
- Track and manage jewellery inventory (gold and silver).
- Enable personalized marketing and offers.
- Facilitate efficient order processing and billing.
- Improve customer retention through engagement automation.
- Generate detailed reports on sales, trends, and staff performance.

2. IDEATION PHASE

2.1 Problem Statement:

Traditional jewellery shops face problems like manual stock maintenance, lack of customer records, and inefficiencies in pricing and billing. There's also no integrated view of customer interactions. This leads to errors, delayed decision-making, and customer dissatisfaction.

Many small to mid-sized jewellery retailers struggle with managing customer relationships, tracking sales, handling special orders, and maintaining inventory. Current manual systems or generic software often fall short of addressing the industry's unique needs.

2.2 Empathy Map Canvas:

Think & Feel

- “Are we missing out on leads because we’re not following up?”
- “I need to know who our high-value customers are.”

Hear

- “The customer wasn’t happy with the delay in their custom order.”
- “Can we send reminders for anniversaries and birthdays?”

See

- Registers with scribbled orders.
- Multiple Excel sheets for billing and inventory.

Say &Do

- “Call them about the pendant order tomorrow.”
- “Print out last year’s top customers list.”

Pain

- Losing customers due to lack of follow-up.
- No real-time inventory tracking.

Gain

- Higher customer satisfaction.
- More repeat purchases via automation.

2.3 Brainstorming:

The brainstorming phase focused on collecting diverse ideas from stakeholders—including jewel store owners, sales representatives, developers, and end-users—to define potential solutions and functionalities required in the CRM application. This collaborative ideation process aimed to understand the operational bottlenecks in the jewelry business and how Salesforce's cloud ecosystem could streamline them.

Ideas collected during brainstorming:

- Use of custom objects for Items, Billing, Orders, and Customers.
- Automate stock management with flows.
- Dashboard for daily performance insights.
- Notifications for low inventory.
- Implement record-triggered and scheduled flows.
- Introduce validation rules to prevent data inconsistencies.
- Plan separate dashboards for different roles (sales, inventory, admin).

3. Requirement Analysis:

3.1 Customer Journey Map:

The customer journey map outlines the stages a customer experiences, from the first interaction to post-purchase engagement. It helps identify gaps and opportunities where the CRM can automate and enhance customer experience.

Awareness Stage

- Customer browses website or social media.
- CRM captures leads using Web-to-Lead forms.

Consideration Stage

- Customer visits the store or requests a catalog.
- Salesforce auto-assigns a sales representative.
- Email/SMS with product recommendations is triggered.

Purchase Stage

- Customer places an order (in-store or online).
- CRM logs order and creates a sales opportunity.
- Invoice is generated using built-in templates.

Delivery Stage

- Customer receives order.
- CRM sends order tracking notifications and confirmations.

Post-Purchase Stage

- Customer receives feedback form.
- Loyalty points are updated.
- Follow-up reminders for anniversaries, birthdays, etc.

3.2 Solution Requirements:

Defines both the functional (what the system should do) and non-functional (how the system performs) needs to fulfill business goals.

- Real-time item stock tracking
- Dynamic pricing management
- Billing with automated tax calculations
- Comprehensive dashboards and reports
- Data security and accessibility
- Integration with communication tools (email/SMS)
- Record ownership for audit and traceability

3.3 Data Flow Diagrams:

DFD illustrates how data moves between the system's components. This helps developers visualize dependencies and database interaction points.

Main Entities & Data Flow Points:

1. Customer submits a product inquiry.

2. Data flows to CRM Interface (Form or App).
3. CRM creates or updates Customer Object.
4. CRM logs sale and updates Sales Record.
5. Inventory count is adjusted in the Inventory Object.
6. Reports are updated to reflect real-time sales and stock.

3.4 Technology Stack:

Defines the tools and platforms used to develop, deploy, and manage the CRM system in Salesforce.

- Platform: Salesforce Lightning Experience.
- Logic: Apex Triggers, Validation Rules, Flow Builder.
- UI: Lightning Tabs, Pages, Reports, Dashboards.
- Database: Salesforce Standard & Custom Objects.
- Integration: Email Templates, Scheduled Flows, Approval Processes.

4.PROJECT DESIGN

4.1 Problem Solution Fit:

Problem: Manual processes and lack of centralized tracking

Solution: Salesforce CRM system automating every major jewelry workflow

4.2 Proposed Solution:

Five major custom objects: Item__c, Price__c, Jewel_Customer__c, Customer_Order__c, Billing__c

- Lightning app with navigation tabs
- Automated flows for inventory, billing, and notifications
- Dashboards visualizing sales, stock, and revenue performance

4.3: Solution Architecture:

Objects and Relationships:

- Jewel_Customer__c ↔ Customer_Order__c ↔ Billing__c ↔ Item__c ↔ Price__c
- Lookup and Master-Detail fields used to link records
- Formula fields for auto-calculations (e.g., total billing amount)
- Validation rules for quantity and price limits
- Record Types to distinguish Gold, Silver, and Diamond workflows

5. PROJECT PLANNING AND SCHEDULING

5.1 Project Planning:

The planning and scheduling phase involves defining the project's timeline, scope, team responsibilities, tools, and milestones. It ensures the project stays on track and aligns with business goals while delivering the CRM application in an efficient, scalable, and phased manner.

- Week 1: Requirement gathering, Use case and ER Diagrams
- Week 2: Custom object creation, Page Layouts and Tab Setup
- Week 3: Flows and Automation Setup, Validation Rules
- Week 4: Reports and Dashboards, Testing and Review
- Week 5: Final Deployment, Documentation and User Training

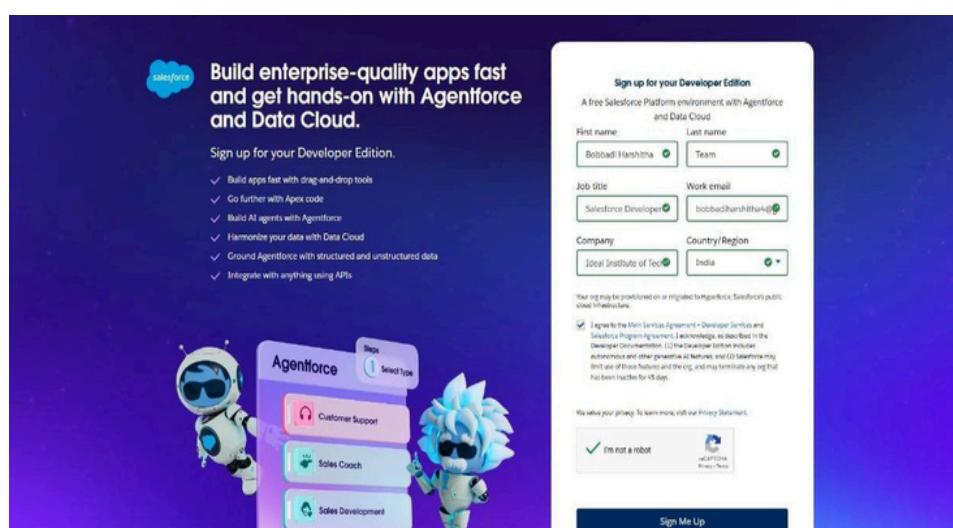
6. PROJECT DEVELOPMENT PHASE - SALESFORCE GUIDED PROJECT

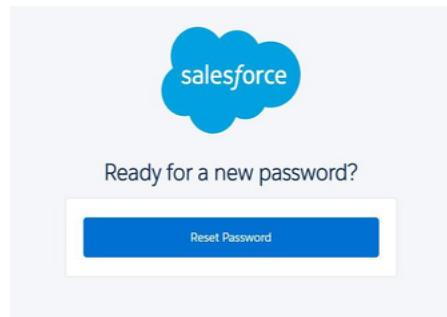
The development phase is the backbone of the CRM application, where core functionalities were implemented using Salesforce's declarative tools and programmatic capabilities. This phase was conducted in iterative sprints, following Agile methodology, and broken into several key activities.

6.1 Developer Environment Setup:

- Create Salesforce Developer Org via developer.salesforce.com/signup

Fill the required information, verify email, set password, and access Salesforce Setup.



A screenshot of a Salesforce password change page. The page title is "Change Your Password". It includes instructions: "Enter a new password for streetcause178@sb.com. Make sure to include at least:" followed by a list of requirements with green checkmarks: "8 characters", "1 letter", and "1 number". There are four input fields: "New Password" containing "....." with a "Good" status indicator, "Confirm New Password" (empty), "Security Question" with a dropdown menu showing "In what city were you born?", and "Answer" (empty). A note at the bottom states "*=required". A large grey button at the bottom right says "Change Password". At the very bottom, a small note says "Password was last changed on 6/20/2025, 3:59 AM."

6.2 Custom Object Creation:

We create five main custom objects for Jewel Customer, Item, Customer Order,

Price, Billing.

1. Jewel Customer

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The main title is 'Jewel Customer'. On the left, a sidebar lists various configuration options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The 'Details' tab is selected. The main content area displays the 'Details' section for the 'Jewel Customer' object. It includes fields for Description, API Name (Jewel_Customer__c), Singular Label (Jewel Customer), Plural Label (Jewel Customers), Enable Reports (checked), Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and a link to the Standard salesforce.com Help Window.

2. Item

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The main title is 'Item'. The left sidebar is identical to the previous screenshot, listing the same configuration options. The 'Details' tab is selected. The main content area displays the 'Details' section for the 'Item' object. It includes fields for Description, API Name (Item__c), Singular Label (Item), Plural Label (Items), Enable Reports (checked), Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and a link to the Standard salesforce.com Help Window.

3. Customer Order

The screenshot shows the Salesforce Setup interface with the following details:

Customer Order

Details

Description

API Name: Customer_Order_c

Custom: ✓

Singular Label: Customer Order

Plural Label: Customer Orders

Enable Reports: ✓

Track Activities

Track Field History

Deployment Status: Deployed

Help Settings: Standard salesforce.com Help Window

Edit | **Delete**

Object Manager

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters
- Search Layouts
- List View Button Layout

4. Price

The screenshot shows the Salesforce Setup interface with the following details:

Price

Details

Description

API Name: Price_c

Custom: ✓

Singular Label: Price

Plural Label: Prices

Enable Reports: ✓

Track Activities

Track Field History

Deployment Status: Deployed

Help Settings: Standard salesforce.com Help Window

Edit | **Delete**

Object Manager

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters
- Search Layouts
- List View Button Layout

5. Billing

SETUP > OBJECT MANAGER
Billing

Details

Description

API Name
Billing__c

Custom
✓

Singular Label
Billing

Plural Label
Billings

Enable Reports
✓

Track Activities

Track Field History

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Edit Delete

6.3 Creation of Tabs

We create five main custom tabs for Jewel Customer, Item, Customer Order, Price, Billing.

1. Jewel Customer

Q: tabs

User Interface

Rename Tabs and Labels

Tabs

Didn't find what you're looking for?
Try using Global Search.

Custom Object Tab
Jewel Customers

Below is the information for the custom tab. Click Edit to change the custom tab.

Custom Tab Definition Detail

Tab Label	Jewel Customers	Edit	Delete
Object	Jewel Customer	Tab Style	
Description		Splash Page Custom Link	Aero
Created By	Bobadil Harshita Team 6/22/2025, 8:13 AM	Modified By	Bobadil Harshita Team 6/22/2025, 8:13 AM

2. Item

The screenshot shows the Salesforce Setup interface. In the left sidebar, under 'User Interface' > 'Rename Tabs and Labels' > 'Tabs', there is a search bar with 'Q tabs' and a note: 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'Custom Object Tab Items' and displays a single row for a 'Custom Tab Definition Detail'. The tab is labeled 'Tabs' and is associated with the object 'Lead'. It has a 'Tab Style' of 'Alarm clock' and was created by 'Bobbadi Harshitha Team' on 6/22/2025, 8:17 AM.

Tab Label	Object	Tab Style
Tabs	Lead	Alarm clock

Created By: Bobbadi Harshitha Team 6/22/2025, 8:17 AM Modified By: Bobbadi Harshitha Team 6/22/2025, 8:17 AM

3. Customer Order

The screenshot shows the Salesforce Setup interface. In the left sidebar, under 'User Interface' > 'Rename Tabs and Labels' > 'Tabs', there is a search bar with 'Q tabs' and a note: 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'Custom Object Tab Customer Orders' and displays a single row for a 'Custom Tab Definition Detail'. The tab is labeled 'Customer Orders' and is associated with the object 'Customer Order'. It has a 'Tab Style' of 'Deli' and was created by 'Bobbadi Harshitha Team' on 6/22/2025, 8:19 AM.

Tab Label	Object	Tab Style
Customer Orders	Customer Order	Deli

Created By: Bobbadi Harshitha Team 6/22/2025, 8:19 AM Modified By: Bobbadi Harshitha Team 6/22/2025, 8:19 AM

4. Price

The screenshot shows the Salesforce Setup interface. In the top navigation bar, 'Setup' is selected. On the left sidebar, under 'User Interface', 'Rename Tabs and Labels' is expanded, and 'Tabs' is selected. A search bar at the top right contains the query 'tabs'. The main content area displays a 'Custom Object Tab' record for 'Prices'. The tab details are as follows:

Tab Label	Prices
Object	Price
Description	
Created By	Dabbadi Harshitha Team
Modified By	Dabbadi Harshitha Team

Below the table, it says 'Tab Style' and shows a 'Fan' style. There are 'Edit' and 'Delete' buttons at the top of the table.

5.Billing

The screenshot shows the Salesforce Setup interface. In the top navigation bar, 'Setup' is selected. On the left sidebar, under 'User Interface', 'Rename Tabs and Labels' is expanded, and 'Tabs' is selected. A search bar at the top right contains the query 'tabs'. The main content area displays a 'Custom Object Tab' record for 'Billings'. The tab details are as follows:

Tab Label	Billings
Object	Billing
Description	
Created By	Dabbadi Harshitha Team
Modified By	Dabbadi Harshitha Team

Below the table, it says 'Tab Style' and shows a 'Bill' style. There are 'Edit' and 'Delete' buttons at the top of the table.

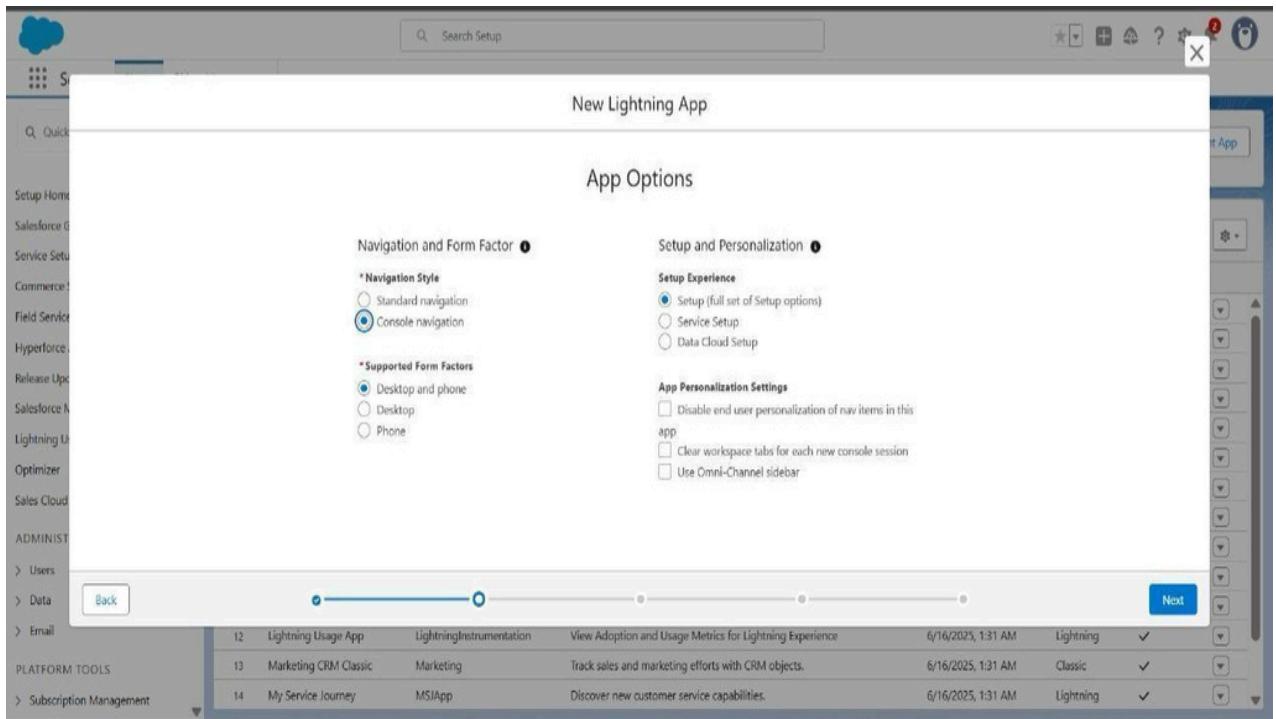
So we get the required all custom tabs as below

The screenshot shows the Salesforce Setup interface with the 'Tabs' page selected. The left sidebar has a search bar and navigation links for 'User Interface' (Rename Tabs and Labels, Tabs). A message says 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'Custom Tabs' and contains two sections: 'Custom Object Tabs' and 'Web Tabs'. The 'Custom Object Tabs' section lists five entries with icons and descriptions: Billings (Boat), Customer Orders (Bell), Items (Alarm clock), Jewel Customers (Airplane), and Prices (Fan). The 'Web Tabs' section says 'No Web Tabs have been defined'.

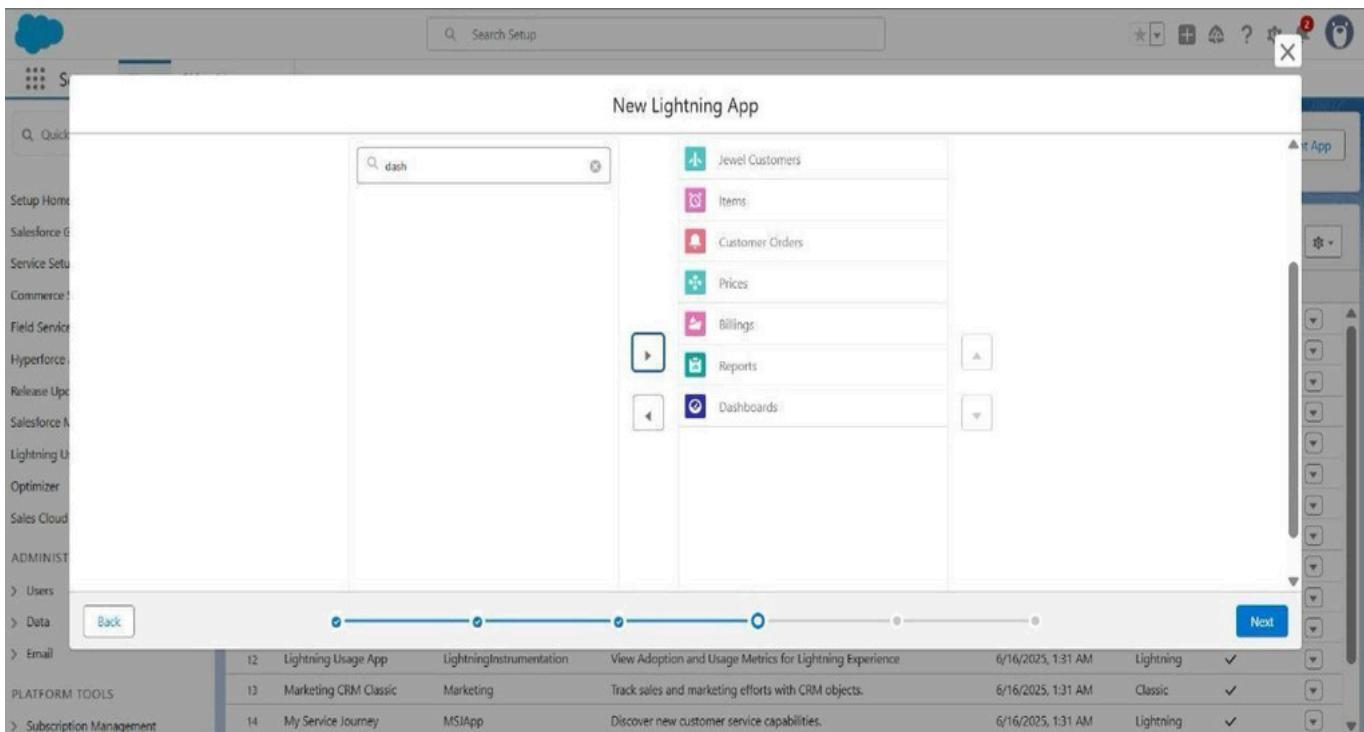
6.4 Creation of Lightning App

App Name: Jewelry Inventory System

The screenshot shows the Lightning App Builder's 'App Details & Branding' page. The left sidebar has a 'App Settings' menu with 'App Details & Branding' selected. The main area shows the app details: 'App Name' is set to 'Jewelry Inventory System', 'Developer Name' is 'jewelry_Inventory_System', and 'Description' is 'Elevate your look with elegance'. There is a 'Image' field with a placeholder 'Upload' button and a 'Primary Color Hex Value' field set to '#0070D2'. Under 'Org Theme Options', there is a checkbox for 'Use the app's image and color instead of the org's custom theme'. At the bottom, there is an 'App Launcher Preview' section showing a blue icon with 'jl' and the app name.



Navigation Items



6.5 Creation of Fields

1. Creating lookup relationship

To Create a relationship between Jewel Customer & Customer Order Objects.

The screenshot shows the Salesforce Setup interface for creating a new relationship. The left sidebar lists various object settings like Details, Fields & Relationships, Page Layouts, and Lightning Record Pages. The main area is titled "Customer Order New Relationship" and "Step 3. Enter the label and name for the lookup field". It includes fields for Field Label ("Customer"), Field Name ("Customer"), Description, and Help Text. Below these are options for Child Relationship Name ("Customer_Orders"), Required status, and what to do if the lookup record is deleted. At the bottom, there are checkboxes for "Auto add to custom report type" and "Add this field to existing custom report types that contain this entity". A "Lookup Filter" section is also visible at the bottom.

The screenshot shows the continuation of the setup process. The main area is titled "Customer Order New Relationship" and "Step 6. Add custom related lists". It displays the configuration for a related list named "Customer Orders". The "Field Label" is set to "Customer", "Data Type" to "Lookup", and "Field Name" to "Customer". The "Description" field is empty. Below this, it asks to specify the title for the related list in all layouts. The "Related List Label" is set to "Customer Orders". It then lists page layouts associated with the object, with "Jewel Customer Layout" selected. There are checkboxes for "Append related list to users' existing personal customizations" and "Add Related List - Page Layout Name". Buttons at the bottom include "Previous", "Save & New", "Save", and "Cancel".

2. Creating a Master-Detail Relationship

Creating Master-Detail Relationship between Item & Customer Order Object.

The screenshot shows the Salesforce Setup interface for creating a new relationship. The left sidebar lists various setup options under 'Customer Order'. The main area is titled 'Customer Order New Relationship' and 'Step 5. Add reference field to Page Layouts'. It shows a field configuration for 'Item' (Master-Detail) and a list of page layouts where the field will be included. A note states: 'These are the page layouts that will include this field. Because this is a Master-Detail relationship, the field is required.' A checkbox for 'Customer Order Layout' is checked. Navigation buttons at the bottom right include 'Previous', 'Next', 'Cancel', and 'Help for this Page'.

The screenshot shows the Salesforce Setup interface for creating a new relationship, continuing from the previous step. The left sidebar lists various setup options under 'Customer Order'. The main area is titled 'Customer Order New Relationship' and 'Step 6. Add custom related lists'. It shows a field configuration for 'Item' (Master-Detail). A note states: 'Specify the title that the related list will have in all of the layouts associated with the parent.' A 'Related List Label' field contains 'Customer Orders'. A checkbox for 'Item Layout' is checked. A note below says: 'These are the page layouts that will include this field. Because this is a Master-Detail relationship, the field is required.' A checkbox for 'Append related list to users' existing personal customizations' is checked. Navigation buttons at the bottom right include 'Previous', 'Save & Next', 'Save', and 'Cancel'.

3. Creating Text Field in Jewel Customer Object

Setup | Home | Object Manager

SETUP > OBJECT MANAGER
Jewel Customer

New Custom Field

Step 2. Enter the details Step 2 of 4

Field Label: City

Please enter the maximum length for a text field below:
Length: 20

Field Name: City

Description:

Help Text:

Required: Always require a value in this field in order to save a record

Unique: Do not allow duplicate values

External ID: Treat "ABC" and "abc" as duplicate values (case insensitive) Treat "ABC" and "abc" as different values (case sensitive)

Auto add to custom report type: Add this field to existing custom report types that contain this entry

Help for this Page

Previous Next Cancel

Setup | Home | Object Manager

SETUP > OBJECT MANAGER
Jewel Customer

New Custom Field

Step 4. Add to page layouts Step 4 of 4

Field Label: City
Data Type: Text
Field Name: City
Description:

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.

To change the location of this field on the page, you will need to customize the page layout.

Add Field Page Layout Name
 Jewel Customer Layout

When finished, click Save & New to create more custom fields, or click Save if you are done.

Help for this Page

Previous Save & New Save Cancel

4. Creating the Phone field in object Jewel Customer

The screenshot shows the Salesforce Setup interface for creating a new custom field named 'Phone' for the 'Jewel Customer' object. The 'Fields & Relationships' tab is selected. The 'New Custom Field' page is displayed, showing the field details: Field Label 'Phone', Data Type 'Phone', Field Name 'Phone', and Description. Step 4 of 4 is shown, titled 'Add to page layouts'. Under 'Page Layouts', the 'Jewel Customer Layout' is selected. The 'Save' button is visible at the bottom right.

5. Creating the Email field in object Jewel Customer

The screenshot shows the Salesforce Setup interface for creating a new custom field named 'Email' for the 'Jewel Customer' object. The 'Fields & Relationships' tab is selected. The 'New Custom Field' page is displayed, showing the field details: Field Label 'Email', Data Type 'Email', Field Name 'Email', and Description. Step 4 of 4 is shown, titled 'Add to page layouts'. Under 'Page Layouts', the 'Jewel Customer Layout' is selected. The 'Save' button is visible at the bottom right.

6. Creating the number field in Item object

SETUP > OBJECT MANAGER

Item

New Custom Field

Step 4 of 4

Step 4. Add to page layouts

Field Label: Purity
Data Type: Number
Field Name: Purity
Description:

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.

To change the location of this field on the page, you will need to customize the page layout.

Add Field - Page Layout Name
 Item Layout

When finished, click Save & New to create more custom fields, or click Save if you are done.

Previous Save & New Save Cancel

7. Creating Picklist Field in Item Object

SETUP > OBJECT MANAGER

Item

New Custom Field

Step 4 of 4

Step 4. Add to page layouts

Field Label: Item Type
Data Type: Picklist
Field Name: Item_Type
Description:

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.

To change the location of this field on the page, you will need to customize the page layout.

Add Field - Page Layout Name
 Item Layout

When finished, click Save & New to create more custom fields, or click Save if you are done.

Previous Save & New Save Cancel

8. Creating Currency Field in Price Object

Setup > OBJECT MANAGER

Price

New Custom Field

Step 3 of 4

Field Label: Gold Price
Data Type: Currency
Field Name: Gold_Price
Description:

Select the profiles to which you want to grant edit access to this field via field-level security. The field will be hidden from all profiles if you do not add it to field-level security.

Profile	Visible	Read-Only
Analytics Cloud Integration User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Analytics Cloud Security User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Anypoint Integration	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contract Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cross Org Data Proxy User	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom: Marketing Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom: Sales Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custom: Support Profile	<input checked="" type="checkbox"/>	<input type="checkbox"/>

9. Creating Formula Field(Cross Object) in Item Object

Setup > OBJECT MANAGER

Item

Fields & Relationships

Simple Formula Advanced Formula

Enter your formula and click Check Syntax to check for errors. Click the Advanced Formula subtab to use additional fields, operators, and functions.

Example: Gross Margin = Amount - Cost | More Examples...

Quick Tips

- Getting Started
- Operators & Functions

Functions

ABS
ACOS
ADDMONTHS
AND
ASCII
ASIN

Insert Selected Function

Gold Price (Currency) = (Sales Price - Cost) / 10

New Custom Field

Step 5. Add to page layouts

Field Label: Gold Price
 Data Type: Formula
 Field Name: Gold_Price
 Description:

Select the page layouts that should include this field. The field will be added as the last field in the first 2-column section of these page layouts. The field will not appear on any pages if you do not select a layout.

To change the location of this field on the page, you will need to customize the page layout.

Add Field Page Layout Name
 Item Layout

When finished, click Save & New to create more custom fields, or click Save if you are done.

10. Creating Remaining Fields in Objects

Creating remaining fields in the objects

1.Jewel Customer : State, Street, Country, Zip/Postal code

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
City	City__c	Text(20)		
Country	Country__c	Text(15)		
Created By	CreatedById	Lookup(User)		
Customer Name	Name	Text(80)		✓
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone	Phone__c	Phone		

2.Price : Silver Price

The screenshot shows the Salesforce Setup interface with the following details:

- Object Manager:** Price
- Fields & Relationships:** 6 items, Sorted by Field Label
- Table Headers:** FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, INDEXED
- Table Data:**

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Gold Price	Gold_Price__c	Currency(8, 5)		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Price Id	Name	Auto Number		✓
Silver Price	Silver_Price__c	Currency(8, 5)		

3.Item : Field Label-Customer Name, Ornament, Weight, Stone Weight, Percentage, Stone/Other Price, Expected Days of Return, Priority, Silver Price, Purity Gold Price, Total weights, Amount, KDM, Making Charges.

The screenshot shows the Salesforce Setup interface with the following details:

- Object Manager:** Item
- Fields & Relationships:** 23 items, Sorted by Field Label
- Table Headers:** FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, INDEXED
- Table Data:**

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Currency)		
Created By	CreatedBy	Lookup(User)		
Customer Name	Customer_Name__c	Lookup(Jewel Customer)		✓
Expected Days Of Return	Expected_Days_Of_Return__c	Picklist	Priority	
Gold Price	Gold_Price__c	Formula (Currency)		
Item Id	Name	Auto Number		✓
Item Type	Item_Type__c	Picklist		
KDM	KDM__c	Formula (Currency)		

4.Customer Order: Order Status

The screenshot shows the Salesforce Setup interface with the following details:

- Header:** Search Setup, Home, Object Manager
- Breadcrumb:** SETUP > OBJECT MANAGER
- Section:** Customer Order
- Left Sidebar:**
 - Details
 - Fields & Relationships** (selected)
 - Page Layouts
 - Lightning Record Pages
 - Buttons, Links, and Actions
 - Compact Layouts
 - Field Sets
 - Object Limits
 - Record Types
 - Related Lookup Filters
 - Search Layouts
 - List View Button Layout
- Table:** Fields & Relationships (6 items)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer	Customer__c	Lookup(Jewel Customer)		✓
Customer Order Id	Name	Auto Number		✓
Item	Item__c	Master-Detail(Item)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Order Status	Order_Status__c	Picklist		

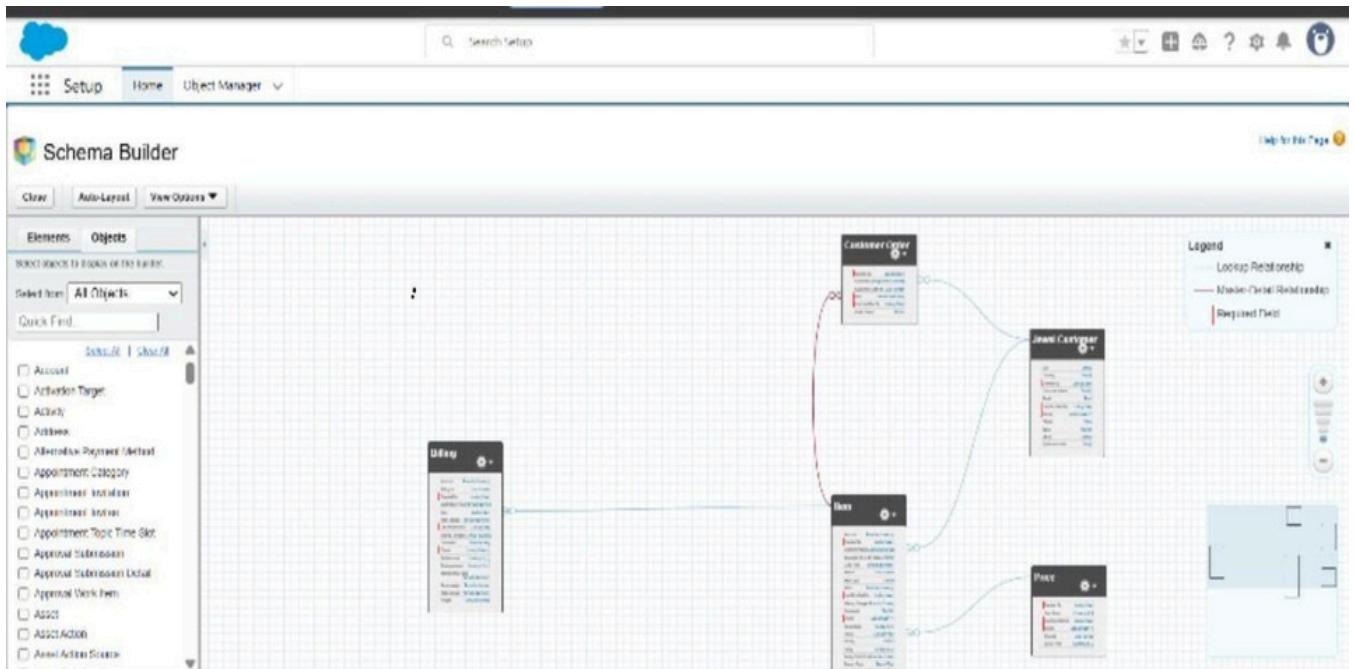
5.Billing: Field Label-Item, Ornament, Stone Weight, Weight, Amount, Gold/Silver Price, KDM Charge, Making Charges,Stone/Other Price, Total Amount.

The screenshot shows the Salesforce Setup interface with the following details:

- Header:** Search Setup, Home, Object Manager
- Breadcrumb:** SETUP > OBJECT MANAGER
- Section:** Billing
- Left Sidebar:**
 - Details
 - Fields & Relationships** (selected)
 - Page Layouts
 - Lightning Record Pages
 - Buttons, Links, and Actions
 - Compact Layouts
 - Field Sets
 - Object Limits
 - Record Types
 - Related Lookup Filters
 - Search Layouts
 - List View Button Layout
- Table:** Fields & Relationships (16 items)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Currency)		
Billing Id	Name	Auto Number		✓
Created By	CreatedById	Lookup(User)		
Gold/Silver Price	Gold_Silver_Price__c	Formula (Currency)		
Item	Item__c	Lookup(Item)		✓
KDM Charge	KDM_Charge__c	Formula (Currency)		
Last Modified By	LastModifiedById	Lookup(User)		
Making Charges	Making_Charges__c	Formula (Currency)		

11. Creation of Schema Builder



12. Creation of Field Dependencies

Action	Controlling Field	Dependent Field	Modified By
Edit Del	Priority	Expected Days Of Return	Bobodadi Harsitha Team, 6/23/2025, 6:03 AM

13. Creation of Validation Rules

The screenshot shows the 'Jewel Customer Validation Rule' configuration in the Salesforce Object Manager. The validation rule is named 'Postal_Code' and is active. The error condition formula is set to AND/OR logic, checking if the postal code length is less than 6 or if it does not match the regex pattern '(0|9){5}'. The error message is 'Must contain 6 digits'. The rule was created by 'Bobbadil Harshitha Team' on 6/23/2025 at 6:58 AM and modified by the same team on the same date and time.

Validation Rule Detail

Rule Name	Postal_Code	Status
Error Condition Formula	AND(OR(LEN(Zip_Postal_code__c) < 6, NOT(REGEX(Zip_Postal_code__c, "(0 9){5}"))), NOT(ISBLANK(Zip_Postal_code__c)))	Active ✓
Error Message	Must contain 6 digits	Error Location Zip/Postal code
Description	Created By Bobbadil Harshitha Team, 6/23/2025, 6:58 AM	Modified By Bobbadil Harshitha Team, 6/23/2025, 6:58 AM

The screenshot shows the 'Jewel Customer Validation Rule' configuration in the Salesforce Object Manager. The validation rule is named 'ValidationRule_Por_JewelCustomerObject' and is active. The error condition formula is set to OR logic, checking if any of the required fields (City, Country, Phone, State, Street) are blank. The error message is 'Please fill Required fields'. The rule was created by 'Bobbadil Harshitha Team' on 6/23/2025 at 7:00 AM and modified by the same team on the same date and time.

Validation Rule Detail

Rule Name	ValidationRule_Por_JewelCustomerObject	Status
Error Condition Formula	OR(ISBLANK(City__c), ISBLANK(Country__c), ISBLANK(Phone__c), ISBLANK(State__c), ISBLANK(Street__c))	Active ✓
Error Message	Please fill Required fields	Error Location Top of Page
Description	Created By Bobbadil Harshitha Team, 6/23/2025, 7:00 AM	Modified By Bobbadil Harshitha Team, 6/23/2025, 7:00 AM

6.6 Creation of Profiles

We create the goldsmith profile and the worker profile

The screenshot shows the Salesforce Setup interface under the 'Profiles' section. A specific profile named 'Worker Profile' is selected. The profile detail table includes fields for Name, User License, Description, Created By, and Modified By. Under 'Page Layouts', there are sections for Standard Object Layouts and Location Group Assignment. The 'Standard Object Layouts' table lists Global, Email Application, Home Page Layout, and Account layouts with their respective assignments.

	Global	Email Application	Home Page Layout	Account	Lead	Location	Location Group	Location Group Assignment
Global Layout	[View Assignment]	Not Assigned	[View Assignment]	Account Layout	[View Assignment]	[View Assignment]	[View Assignment]	[View Assignment]
Lead Layout	[View Assignment]							
Location Layout	[View Assignment]							
Location Group Layout	[View Assignment]							
Location Group Assignment Layout	[View Assignment]							

6.7 Creation of Roles

The screenshot shows the Salesforce Setup interface under the 'Roles' section. A tree view displays roles assigned to the 'Ideal Institute of Technology' organization. The roles listed include CEO, CFO, COO, Gold Smith, Worker, SVP, Customer Service & Support, Customer Support, International, and Customer Support, North America. Each role has edit, delete, and assign options.

6.8 Creation of Users

6.9 Creation of Page Layouts

We create the page layouts for gold and silver items

Creation of

6.10 Record Types

We create the gold an silver records

Record Type Label	Description	Active	Modified By
Gold	Gold items information	✓	Bobbadi Harshitha Team, 6/25/2025, 4:27 AM
Silver	Silver items information	✓	Bobbadi Harshitha Team, 6/23/2025, 12:15 PM

6.11 Creation of Permission Sets

Didn't find what you're looking for?
Try using Global Search.

API Name	Per_to_Worker
Namespace Prefix	
Created By	Bobbadi Harshitha Team, 6/23/2025, 12:18 PM
Last Modified By	Bobbadi Harshitha Team, 6/23/2025, 12:22 PM

Trigger

6.12 Creation of

The screenshot shows the Salesforce IDE interface with the code editor open. The file is named `UpdatePaidAmountTriggerHandler.apxc`. The code implements a trigger handler for the `Billing__c` object. It contains a static method `handleBeforeInsert` that loops through a list of new `Billing__c` records and sets the `Paid_Amount__c` field to the value of the `Paying_Amount__c` field.

```
1 public class UpdatePaidAmountTriggerHandler {
2
3     public static void handleBeforeInsert(List<Billing__c> newBillings) {
4
5         for (Billing__c billing : newBillings) {
6
7             billing.Paid_Amount__c = billing.Paying_Amount__c;
8
9         }
10    }
11 }
12
13 }
```

The screenshot shows the Salesforce Developer Console in a web browser window. The URL is `orgfarm-bf8eee1d18-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The code editor displays a trigger definition for the `UpdatePaidAmountTrigger` on the `Billing__c` object, triggered before insert or update. The trigger logic calls the `handleBeforeInsert` and `handleBeforeUpdate` methods of the `UpdatePaidAmountTriggerHandler`.

```
1 trigger UpdatePaidAmountTrigger on Billing__c (before insert, before update) {
2
3     if (Trigger.isInsert) {
4
5         UpdatePaidAmountTriggerHandler.handleBeforeInsert(Trigger.new);
6
7     } else if (Trigger.isUpdate) {
8
9         UpdatePaidAmountTriggerHandler.handleBeforeUpdate(Trigger.oldMap, Trigger.new);
10    }
11 }
12
13 }
```

User Adoption

6.13 Creation of

We create item,price, customer orders,jewel customers and billing

The screenshot shows a list view titled "Recently Viewed" under the "Prices" tab. The list contains 10 items, each with a checkbox and a price ID. The items are numbered 1 through 10. The interface includes standard CRM navigation and search tools.

Price Id
1 Price-10
2 Price-09
3 Price-08
4 Price-07
5 Price-06
6 Price-05
7 Price-04
8 Price-03
9 Price-02
10 Price-01

The screenshot shows a list view titled "Recently Viewed" under the "Jewel Customers" tab. The list contains 10 items, each with a checkbox and a customer name. The items are numbered 1 through 10. The interface includes standard CRM navigation and search tools.

Customer Name
1 Arjun
2 Joshua
3 Anand
4 Krishna
5 Sita
6 Nani
7 Shyamala
8 Manasa
9 Ravi
10 Devi

Reports

6.14 Creation of Reports

The screenshot shows the Microsoft Power BI Reports interface. The top navigation bar includes a cloud icon, a search bar, and various navigation icons. The main area is titled "jewelry Inventory Sy..." and shows a list of reports under the "Recent" category. The list includes:

Report Name	Description	Folder	Created By	Created On	Subscribed
Billings with Items and Customer Order		Private Reports	Bobbadi Harshitha Team	6/25/2025, 10:44 AM	
New Item with Billings Report		Private Reports	Bobbadi Harshitha Team	6/25/2025, 10:43 AM	
New Prices Report		Private Reports	Bobbadi Harshitha Team	6/25/2025, 9:56 AM	

On the left sidebar, there are filters for "Recent", "Created by Me", "Private Reports", "Public Reports", and "All Reports". There are also sections for "FOLDERS" (All Folders), "FAVORITES" (All Favorites), and a timestamp "As of Jun 27, 2025, 6:43 AM".

6.15 Creation of Dashboards

Dashboard 1

The screenshot shows the Microsoft Power BI Dashboard 1. The top navigation bar includes a cloud icon, a search bar, and various navigation icons. The dashboard title is "Dashboard1" and it was last viewed on "As of Jun 27, 2025, 6:43 AM" by "Bobbadi Harshitha Team". The dashboard contains three visualizations:

- New Item with Billings Report:** A donut chart showing record counts for different item types. The data is as follows:

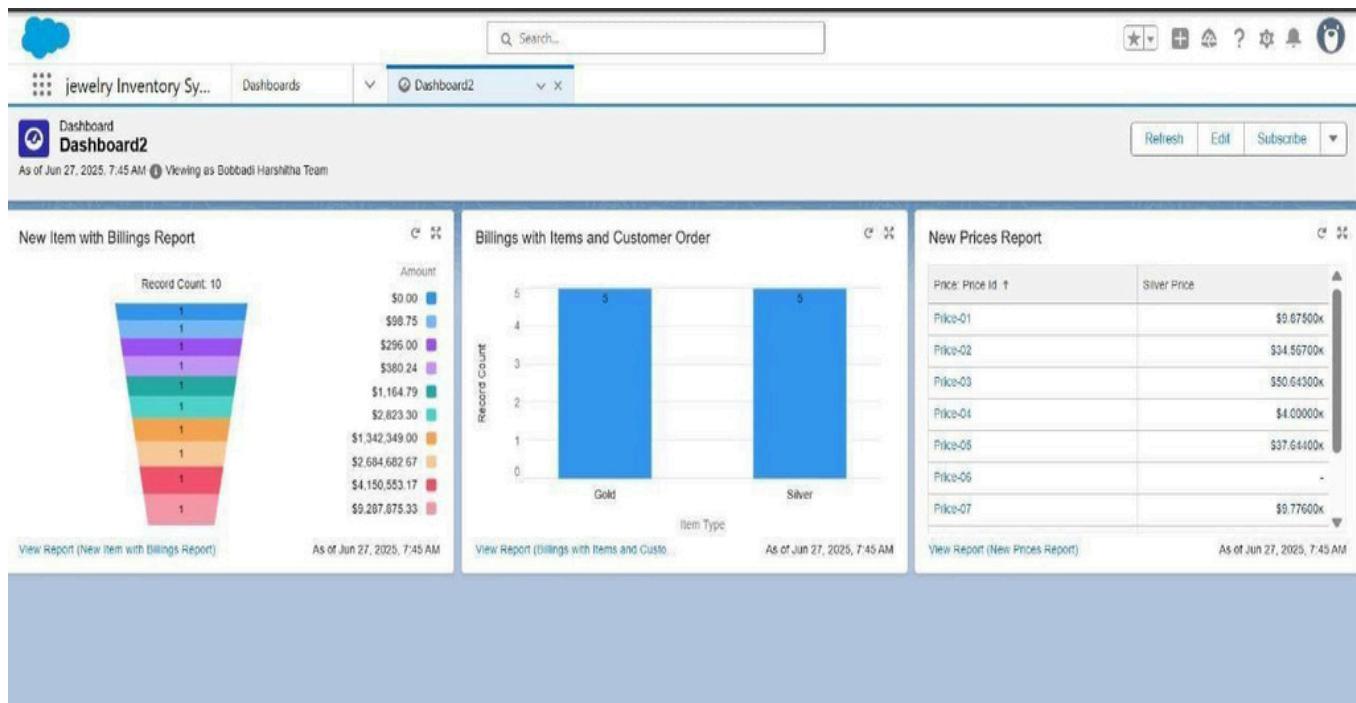
Category	Count
Gold	1
Silver	1
Platinum	1
Gold Plated	1
Brass	1
Copper	1
Alloy	1
Total	10
- Billings with Items and Customer Order:** A bar chart showing the number of records for Gold and Silver items. The data is as follows:

Item Type	Record Count
Gold	5
Silver	5
- New Prices Report:** A treemap chart showing the sum of silver prices across different categories. The data is as follows:

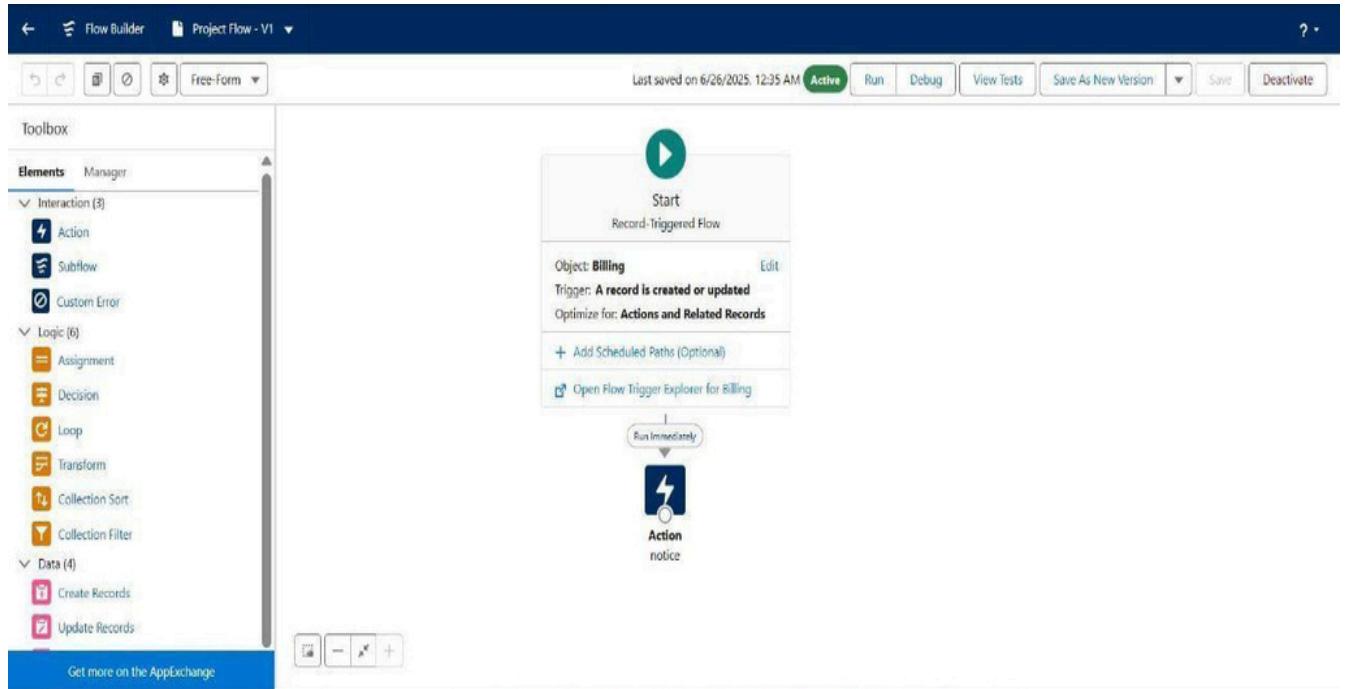
Category	Sum of Silver Price
Gold	\$132k
Silver	\$38k
Platinum	\$46k
Brass	\$35k
Copper	\$24,780.0000
Alloy	\$56,987.0000
Gold Plated	\$87,864.0000
Total	\$76,534.0000

Each visualization has a "View Report" link and a timestamp "As of Jun 27, 2025, 6:43 AM".

Dashboard 2

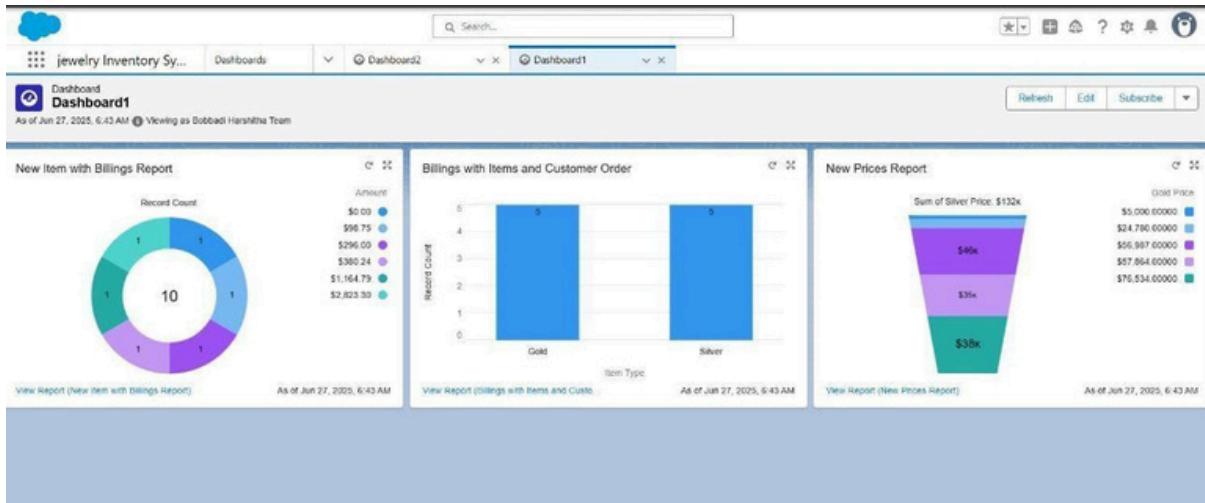


6.16 Creation of Flows



7. FUNCTIONAL AND PERFORMANCE TESTING

Dashboard-1:



Performance Observations (Phase Testing) for Dashboard-1:

1. Accurate Data Visualization

All three charts (donut, bar, funnel) rendered correctly with real-time values.

Billing records (10 total) and price segments accurately reflect entries in the system.

Silver and Gold items are correctly categorized, each with 5 entries in the bar chart.

2. Functional Report Integration

"View Report" links under each chart are working and redirect to detailed Salesforce reports, confirming backend connectivity and report mapping is functional.

3. Pricing Tier Segmentation is Clear

Funnel chart shows diverse price bands for Gold and Silver items (e.g., ₹5k to ₹76k).

Total Silver pricing is correctly summed up as ₹132k, indicating correct aggregation logic.

4. UI Load Stability

All dashboard components load without errors or latency during testing.

Visuals are responsive and easy to interpret for both technical and non-technical users.

5. Equal Distribution Verification

Bar chart confirms equal distribution of Gold and Silver billings (5 each), helpful for verifying consistency during sales testing.

6. Test Pass Indicators

No missing data points, broken charts, or incorrect values observed during this testing phase.

Dashboard ready for stakeholder review or user acceptance testing (UAT).

objectives for the Jewelry Inventory System project using Salesforce CRM for Dashboard-1:

1. Improve Inventory and Billing Accuracy:

Streamline the tracking of jewelry items, their pricing, and associated billing records to ensure real-time visibility and eliminate manual errors in stock and transaction management.

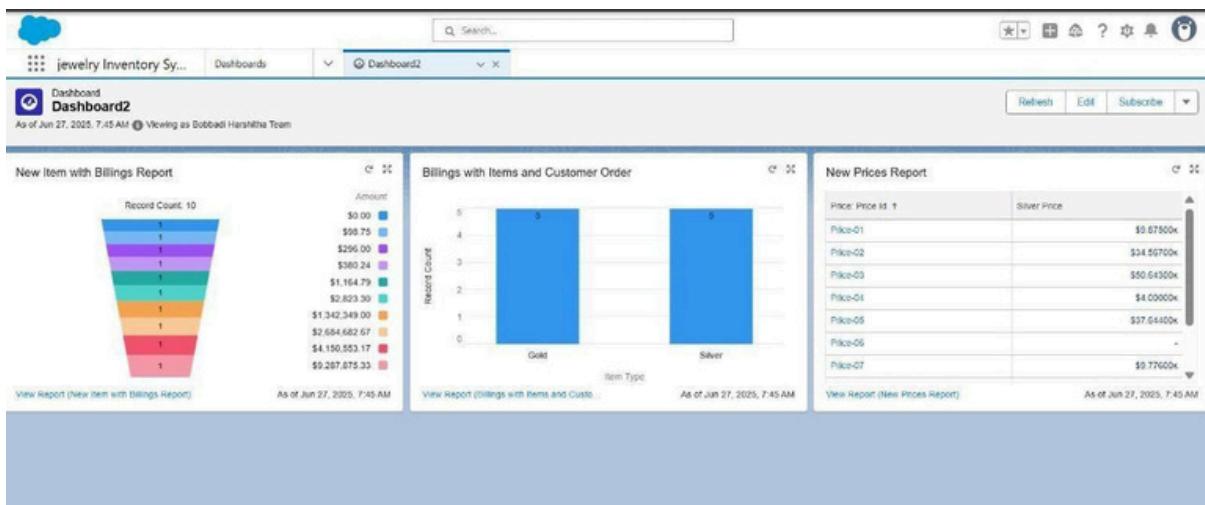
2. Enhance Customer Order Management:

Establish a seamless linkage between jewelry items and customer orders (Gold/Silver types), enabling faster processing, better customer service, and accurate historical records.

3. Enable Data-Driven Business Decisions:

Provide actionable insights through dynamic dashboards and reports that visualize billing trends, item-wise distribution, and pricing tiers—helping management make strategic inventory and pricing decisions.

Dashboard-2:



Performance Observations from Dashboard-2:

1. New Item with Billings Report:

10 items are billed, with amounts ranging from \$0.00 to a high of \$9,287,875.33. This wide range indicates possible inconsistencies or the presence of high-value custom items. One item is showing \$0.00, which may point to a data error or a complimentary item.

2. Billings by Item Type (Gold vs. Silver):

Both Gold and Silver have 5 records each, indicating a balanced dataset. Good performance in terms of item-type categorization and data uniformity.

3. New Prices Report:

Prices for items like Price-03 and Price-05 are significantly high, exceeding \$50k and \$37k

respectively. A few items (e.g., Price-06) are missing price data, which needs attention during testing.

Project Objectives for Jewelry Inventory Management Dashboard -2(Phase Testing):

1. Track New Items with Billing Details:

Objective is to visualize how new jewelry items are associated with billing values. Enables monitoring of item value distribution, including extremely high and zero-value billings.

2. Analyze Customer Orders by Item Type:

Understand customer billing patterns for gold and silver items. Understand customer billing patterns for gold and silver items.

3. Monitor and Update Jewelry Prices:

View and compare the current silver prices for various jewelry products. Supports pricing strategy alignment with market rates.

8. RESULTS (OUTPUT SCREENSHOTS)

A. Automated Emails (using templates):

- Stock Alert for Low Inventory
- Purchase Order Confirmation
- Sales Invoice Notification
- Inventory Replenishment Notification
- Daily Sales Summary

B. Automated Workflows:

- **Trigger-based validations**
 - Auto-validate if stock is available before creating an invoice
 - Alert for duplicate product entries

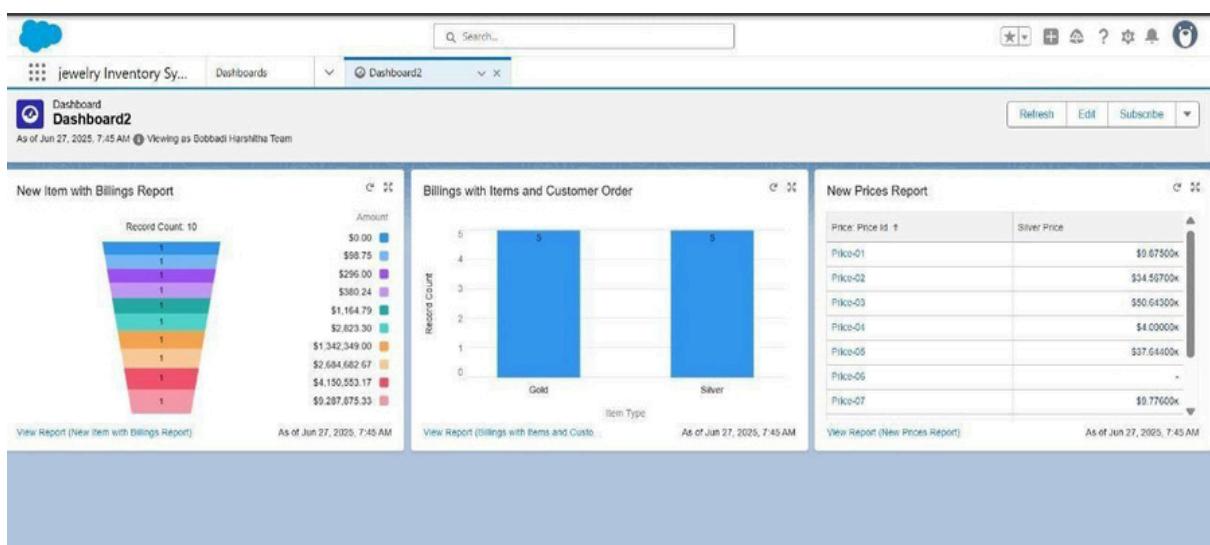
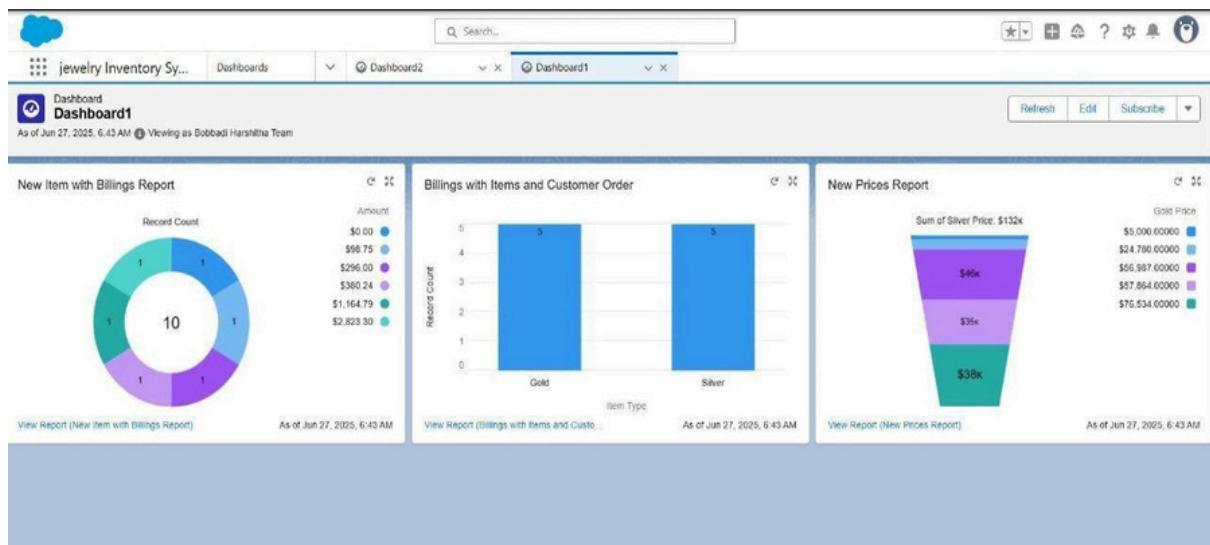
C. Approval Workflow Output:

- **Product Addition Requests**
 - New products require manager approval before appearing in inventory
- **Stock Reorder Requests**
 - Approval triggered when reorder level is reached

•Notifications

- In-app and email notifications sent for each approval or rejection

Dashboards:



Reports:

New Prices Report

Report: Prices		
Total Records	Total Silver Price	\$642,908.00000
10		
<input type="checkbox"/> Gold Price	<input type="checkbox"/> Price: Price Id	<input type="checkbox"/> Silver Price
<input type="checkbox"/> (1)	Price-08	
Subtotal		\$0.00000
<input type="checkbox"/> \$0.000.0000 (1)	Price-04	\$4.000.0000
Subtotal		\$4.000.0000
<input type="checkbox"/> \$24,780.0000 (1)	Price-01	\$9,875.0000
Subtotal		\$9,875.0000
<input type="checkbox"/> \$56,987.0000 (1)	Price-05	\$45,679.0000
Subtotal		\$45,679.0000
<input type="checkbox"/> \$67,864.0000 (1)	Price-02	\$34,667.0000
Subtotal		\$34,667.0000
<input type="checkbox"/> \$76,534.0000 (1)	Price-06	\$37,644.0000
Subtotal		\$37,644.0000
<input type="checkbox"/> \$86,533.0000 (1)	Price-08	\$40,852.0000
Row Counts	<input checked="" type="checkbox"/>	Detail Rows <input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	Subtotals <input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	Grand Total <input checked="" type="checkbox"/>

New Item with Billings Report

Report: Item with Billings		
Total Records	10	
<input type="checkbox"/> Amount	<input type="checkbox"/> Item Id	<input type="checkbox"/> Billing Id
<input type="checkbox"/> \$0.00 (1)	Item-08	Billing-06
Subtotal		
<input type="checkbox"/> \$98.75 (1)	Item-02	Billing-03
Subtotal		
<input type="checkbox"/> \$296.00 (1)	Item-09	Billing-04
Subtotal		
<input type="checkbox"/> \$380.24 (1)	Item-04	Billing-07
Subtotal		
<input type="checkbox"/> \$1,164.79 (1)	Item-06	Billing-09
Subtotal		
<input type="checkbox"/> \$2,823.30 (1)	Item-10	Billing-02
Subtotal		
<input type="checkbox"/> \$1,042,349.00 (1)	Item-01	Billing-01
Row Counts	<input checked="" type="checkbox"/>	Detail Rows <input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	Subtotals <input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	Grand Total <input checked="" type="checkbox"/>

Billings with Items and Customer Order

Report: Billings with Items and Customer Order		
Total Records	10	
<input type="checkbox"/> Item Type	<input type="checkbox"/> Item Id	<input type="checkbox"/> Billing Id
<input type="checkbox"/> Gold (5)	Item-01	Billing-01
	Item-03	Billing-05
	Item-08	Billing-06
	Item-05	Billing-08
	Item-07	Billing-10
Subtotal		
<input type="checkbox"/> Silver (5)	Item-10	Billing-02
	Item-02	Billing-03
	Item-09	Billing-04
	Item-04	Billing-07
	Item-06	Billing-09
Subtotal		
Total (10)		

Flows:

The screenshot shows the Salesforce Flow Details page for a flow named 'Project Flow'. The flow is of type 'Record-Triggered After Save Flow' and is currently 'Activated'. It was last modified on 6/25/2025, 12:05 PM by Bobbadil Harshitha Team. The flow has no associated records and is categorized under 'Information'.

The screenshot shows the Salesforce Flow Builder interface for a flow named 'Project Flow - V1'. The flow is active and was last saved on 6/26/2025, 12:35 AM. The flow builder interface includes a toolbox on the left with categories like Interaction, Logic, and Data, and a main canvas area where a flow step is being configured. The step is titled 'Start Record-triggered Flow' for the object 'Billing' with the trigger 'A record is created or updated'. The step is set to run immediately and is connected to an 'Action notice' step.

Triggers:

SETUP > OBJECT MANAGER
Billing

Triggers

LABEL	API VERSION	SIZE WITHOUT COMMENTS	MODIFIED BY
UpdatePaidAmountTrigger	64.0	310	Bobbedi Harshitha Team, 6/24/2025, 10:48 AM

SETUP > OBJECT MANAGER
Billing

Apex Trigger
UpdatePaidAmountTrigger

Apex Trigger Detail

Name: UpdatePaidAmountTrigger	Object Type: Billing
Code Coverage: 0% (0/4)	Status: Active
Created By: Bobbedi Harshitha Team, 6/24/2025, 10:47 AM	Last Modified By: Bobbedi Harshitha Team, 6/24/2025, 10:48 AM
Namespace Prefix:	

Apex Trigger

```
trigger UpdatePaidAmountTrigger on Billing__c (before insert, before update) {
    if (Trigger.isInsert) {
        UpdatePaidAmountTriggerHandler.handleBeforeInsert(Trigger.new);
    } else if (Trigger.isUpdate) {
        UpdatePaidAmountTriggerHandler.handleBeforeUpdate(Trigger.oldMap, Trigger.new);
    }
}
```

9. ADVANTAGES AND DISADVANTAGES:

ADVANTAGES:

Automation Efficiency:

All critical operations like billing, inventory updates, and notifications are automated via flows, reducing manual errors.

Centralized Data Handling:

Data is stored and managed in a centralized CRM system, making it easily accessible and modifiable.

Real-Time Analytics:

Dashboards and reports provide live updates on business performance, which helps in faster decision-making.

User-Friendly UI:

Salesforce Lightning provides a smooth and modern interface for all users.

Scalability:

The app can be expanded to handle more data and integrate with other business apps like payment gateways.

Customer Satisfaction:

By streamlining the sales and service process, the application enhances the overall customer experience.

DISADVANTAGES

Learning Curve:

New users may need training to understand Salesforce's interface, objects, and flows.

Cost Factor:

Scaling to a full enterprise-level Salesforce environment could be costly for small businesses.

10. CONCLUSION

"In conclusion, the CRM Application for Jewel Management serves as a robust, cloud-based solution built using Salesforce. It brings digital transformation to traditional jewelry retailing by: