

# **CRM Application For Jewel Management - (Developer)**

**College Name : Government Arts And Science**

**College Avinashi**

**College Code : asbruau**

**Team Id : NM2025TMID20861**

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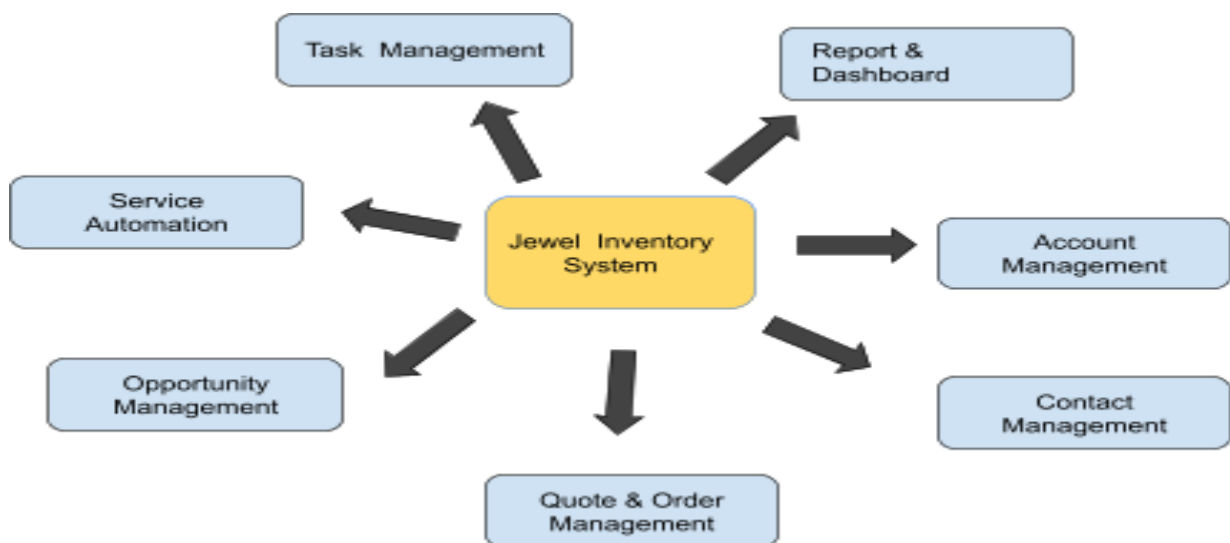
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# 1. INTRODUCTION

## 1.1 Project Overview

The **Jewel Management CRM** project aims to develop a customized Customer Relationship Management (CRM) system on Salesforce to streamline and enhance the operations of a jewelry business. The system will manage customer interactions, sales, inventory, and relationships, providing a 360-degree view of customers and enabling data-driven decision-making.



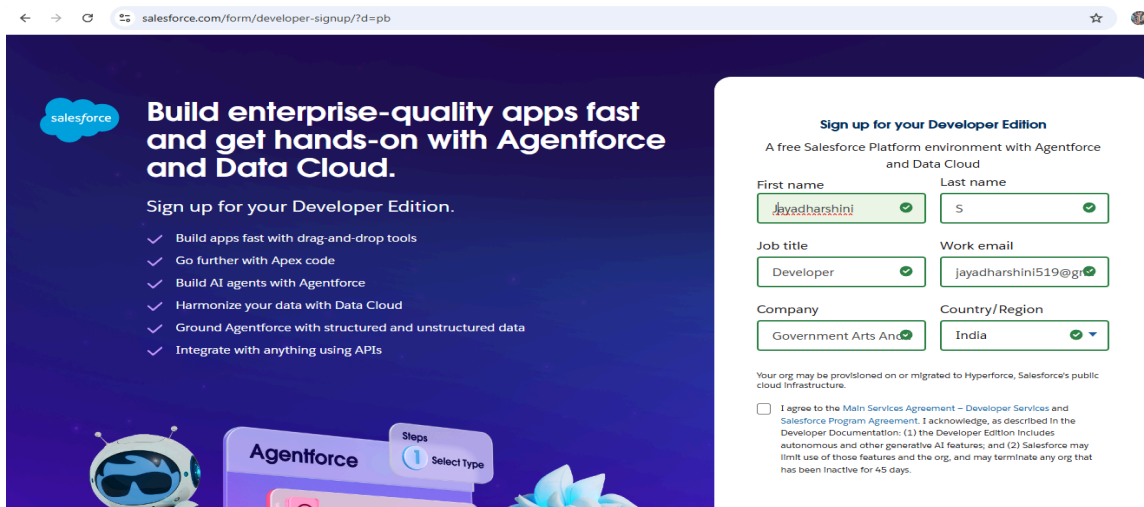
## 1.2 Purpose

The purpose of CRM in jewelry management for developers is to create a customized system that streamlines business operations, enhances customer relationships, and drives sales growth.

# DEVELOPMENT PHASE

## Creating Developer Account :

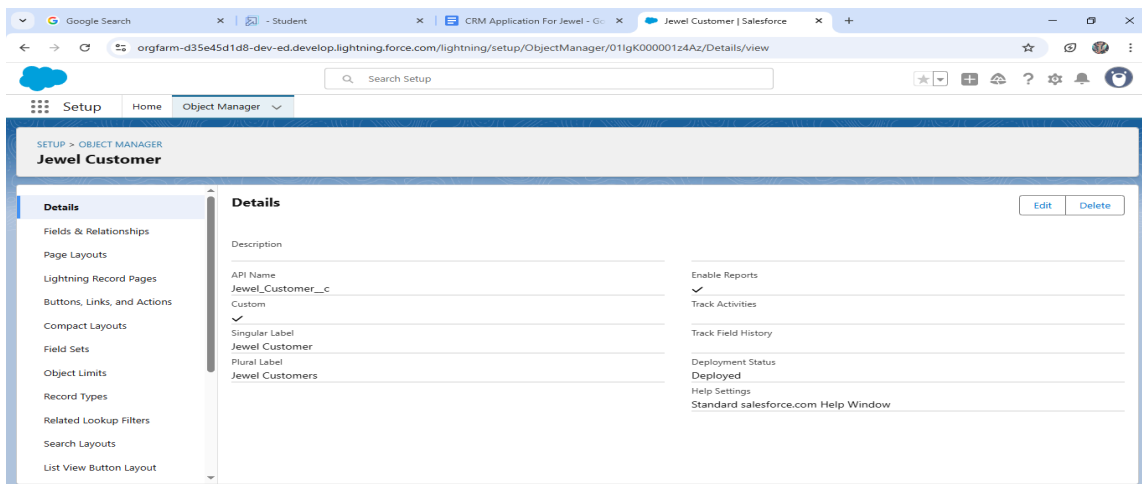
By using this URL - <https://developer.salesforce.com/signup>



The screenshot shows the Salesforce Developer Edition sign-up page. On the left, there's a blue banner with the Salesforce logo and the text "Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud." Below this, it says "Sign up for your Developer Edition." and lists several benefits: "Build apps fast with drag-and-drop tools", "Go further with Apex code", "Build AI agents with Agentforce", "Harmonize your data with Data Cloud", "Ground Agentforce with structured and unstructured data", and "Integrate with anything using APIs". On the right, there's a sign-up form titled "Sign up for your Developer Edition". The form includes fields for "First name" (filled with "Jayadharshini"), "Last name" (filled with "S"), "Job title" (filled with "Developer"), "Work email" (filled with "jayadharshini519@gr"), "Company" (filled with "Government Arts And"), and "Country/Region" (filled with "India"). Below the form, there's a checkbox for "I agree to the Main Services Agreement - Developer Services and Salesforce Program Agreement" and a note about the org being provisioned on or migrated to Hyperforce.

- **Created objects :** Jewel Customer, Item, Customer Order, Price, Billing

## JEWEL CUSTOMER



The screenshot shows the Salesforce Object Manager page for the "Jewel Customer" object. The page is titled "Jewel Customer" and has a "Details" tab selected. The "Details" section includes fields for "Description", "API Name" (Jewel\_Customer\_\_c), "Custom" (checked), "Singular Label" (Jewel Customer), "Plural Label" (Jewel Customers), "Enable Reports" (checked), "Track Activities" (checked), "Track Field History" (checked), "Deployment Status" (Deployed), "Help Settings" (Standard salesforce.com Help Window), and "Standard salesforce.com Help Window". The left sidebar shows the "Setup" menu with options like "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".

# ITEM

Google Search | Student | CRM Application For Jewel - G | Item | Salesforce

orgfarm-d35e45d1d8-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000001z52D/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Item

**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

List View Button Layout

**Details**

Description

API Name  
Item\_\_c  
Custom

Singular Label  
Item  
Plural Label  
Items

Enable Reports  
✓  
Track Activities

Track Field History

Deployment Status  
Deployed  
Help Settings  
Standard salesforce.com Help Window

Edit Delete

# CUSTOMER ORDER

Google Search | Student | CRM Application For Jewel - G | Customer Order | Salesforce

orgfarm-d35e45d1d8-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000001z5Wr/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Customer Order

**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

List View Button Layout

**Details**

Description

API Name  
Customer\_\_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

# PRICE

Google Search | Student | CRM Application For Jewel - G | Price | Salesforce

orgfarm-d35e45d1d8-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000001ywIK/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Price

**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

List View Button Layout

**Details**

Description

API Name  
Price\_\_c  
Custom

Singular Label  
Price  
Plural Label  
Prices

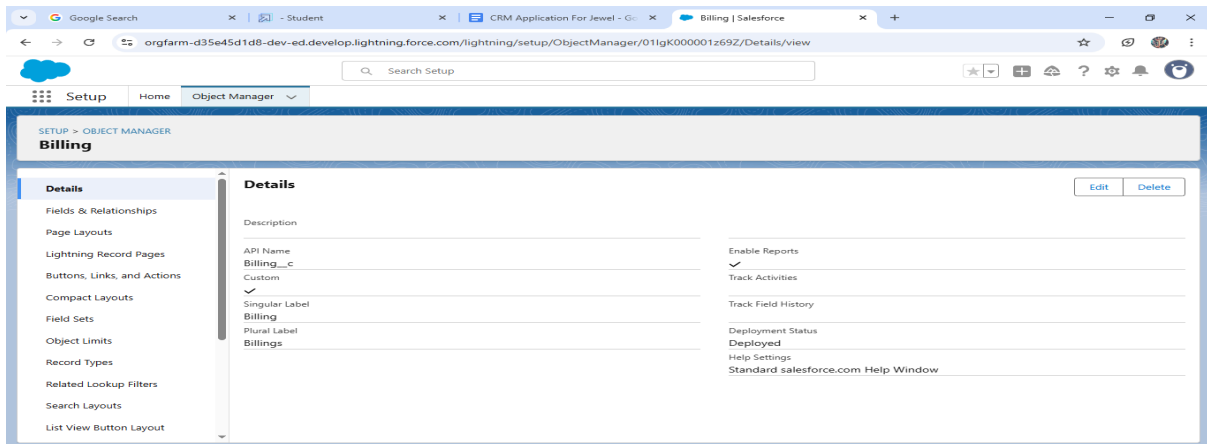
Enable Reports  
✓  
Track Activities

Track Field History

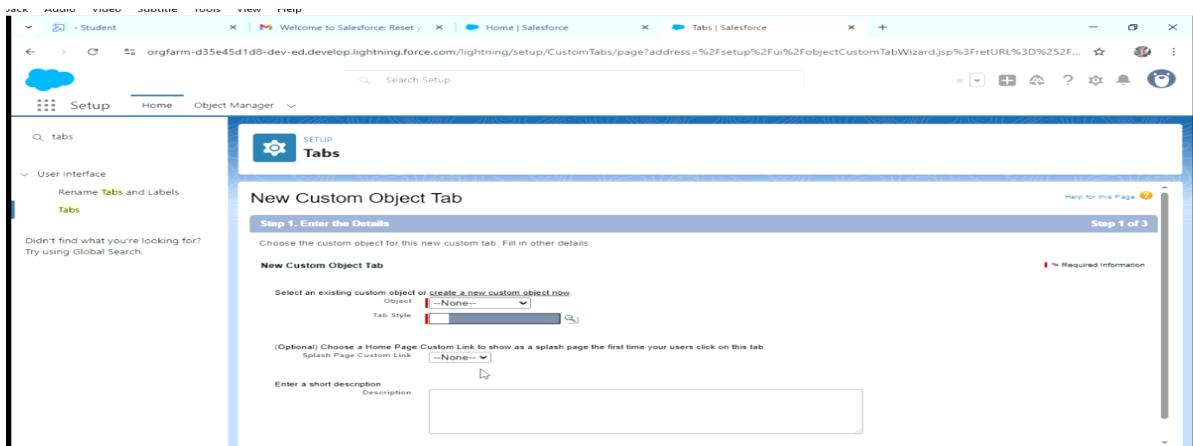
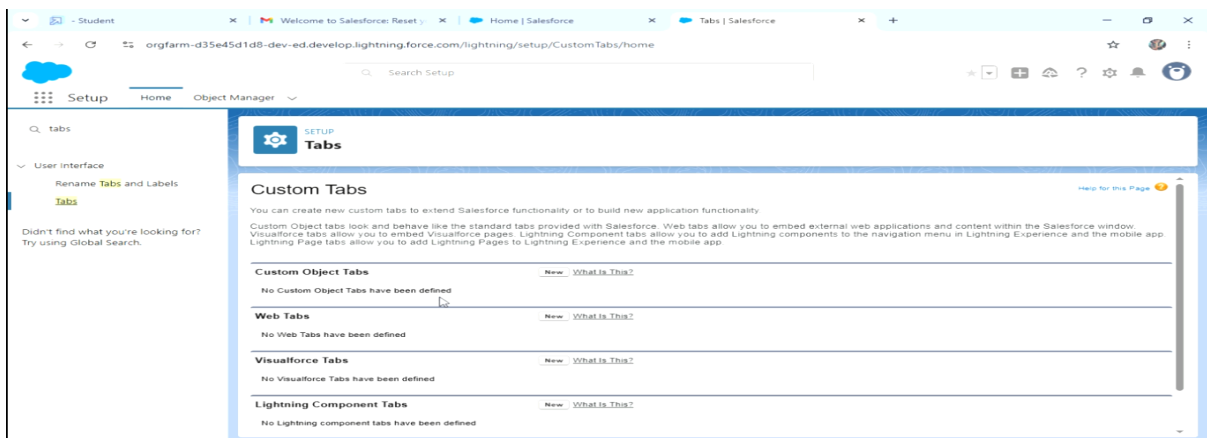
Deployment Status  
Deployed  
Help Settings  
Standard salesforce.com Help Window

Edit Delete

# BILLING



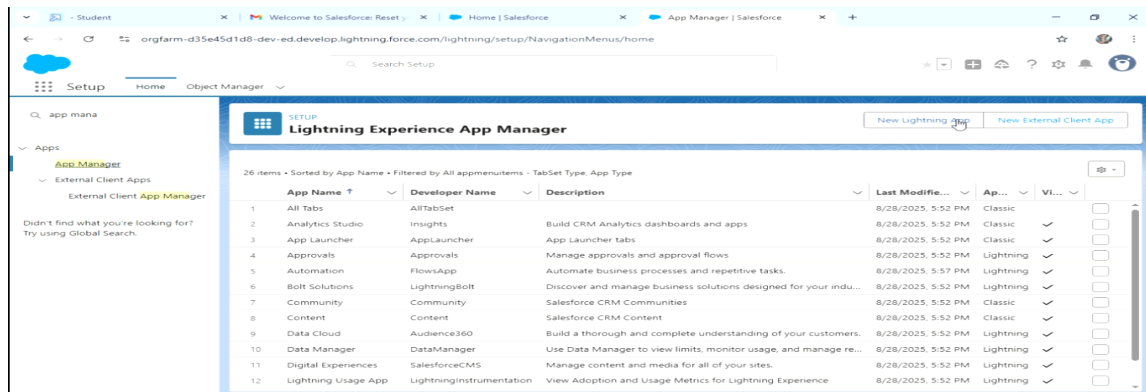
## ● Creating Tabs : Jewel Customer, Item, Customer Order, Price, Billing



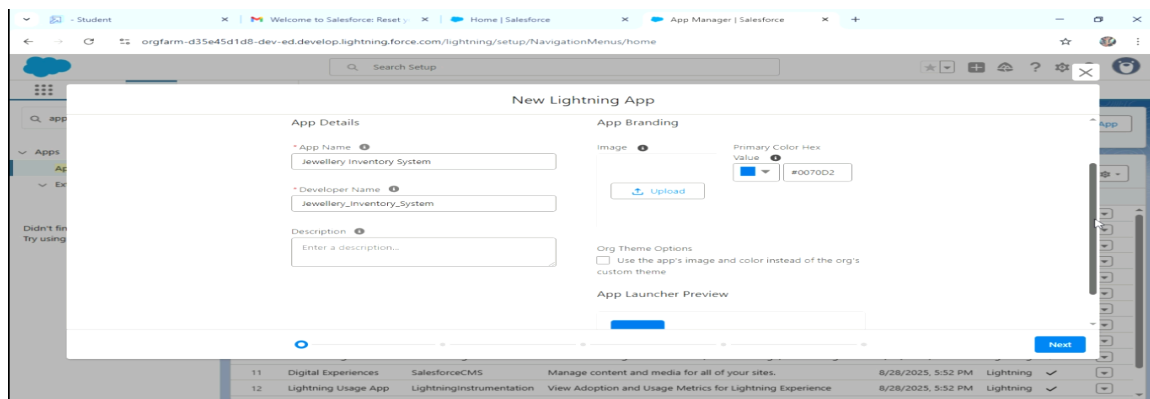
## ● Developed Lightning App with relevant tabs

### Jewellery Inventory System

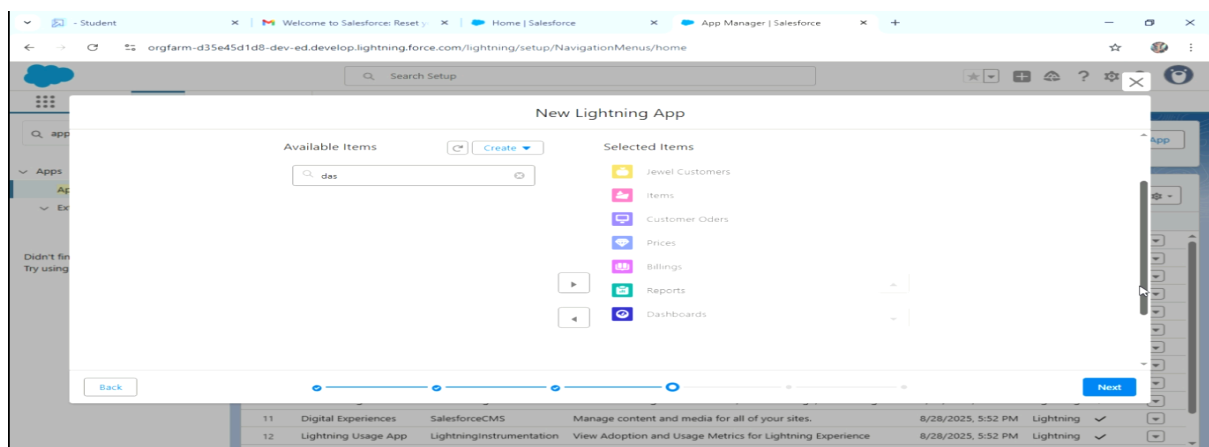
#### New Lightning App



#### Fill the app name in app details and branding



#### Add Navigation Items And User Profiles



## ● Configured fields and relationships

### Jewel Customer :

City, Phone, Email, State, Street, Country, Zip/Postal Code

The screenshot shows the 'Fields & Relationships' page for the 'Jewel Customer' object. The left sidebar lists navigation options: 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, and List View Button Layout. The main content area displays a table of fields with columns for Field Label, Field Name, and Field Type. The fields listed are: City (Text(20)), Country (Text(18)), Created By (Lookup(User)), Customer Name (Text(80)), Email (Text(80)), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), Phone (Text(20)), and State (Text(20)).

Field Label	Field Name	Field Type
City	City__c	Text(20)
Country	Country__c	Text(18)
Created By	CreatedBy	Lookup(User)
Customer Name	Name	Text(80)
Email	Email__c	Text(80)
Last Modified By	LastModifiedBy	Lookup(User)
Owner	OwnerId	Lookup(User,Group)
Phone	Phone__c	Text(20)
State	State__c	Text(20)

### Item :

Number, Item type, Gold price & etc..

The screenshot shows the 'Fields & Relationships' page for the 'Item' object. The left sidebar lists navigation options: 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, and List View Button Layout. The main content area displays a table of fields with columns for Field Label, Field Name, Field Type, and Field Properties. The fields listed are: Customer Name (Lookup(Jewel Customer)), Expected Days Of Return (Text(20)), Gold Price (Formula (Currency)), Item Id (Text(20)), Item Type (Text(20)), KDM (Formula (Currency)), Last Modified By (Lookup(User)), Making Charges (Formula (Currency)), and Ornament (Text(20)).

Field Label	Field Name	Field Type	Field Properties
Customer Name	Customer_Name__c	Lookup(Jewel Customer)	
Expected Days Of Return	Expected_Days_Of_Return__c	Text(20)	Priority
Gold Price	Gold_Price__c	Formula (Currency)	
Item Id	Name	Text(20)	
Item Type	Item_Type__c	Text(20)	
KDM	KDM__c	Formula (Currency)	
Last Modified By	LastModifiedBy	Lookup(User)	
Making Charges	Making_Charges__c	Formula (Currency)	
Ornament	Ornament__c	Text(20)	

## Field Dependencies

The screenshot shows the 'Validation Rules' page for the 'Jewel Customer' object. The left sidebar lists navigation options: 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, and List View Button Layout. The main content area displays a table of validation rules with columns for Rule Name, Error Location, Error Message, Active, and Modified By. The rules listed are: PostalCode (Must contain 6 digits) and ValidationRule\_For\_JewelCustomerObject (Please fill Required fields).

Rule Name	Error Location	Error Message	Active	Modified By
PostalCode	Zip/Postal code	Must contain 6 digits	✓	Jayadharshini S, 9/8/2025, 12:31 AM
ValidationRule_For_JewelCustomerObject	Top of Page	Please fill Required fields	✓	Jayadharshini S, 9/8/2025, 5:06 AM

## Validation Rule

The screenshot shows the 'Validation Rule' page for the 'Item' object. The left sidebar lists navigation options: 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, and List View Button Layout. The main content area displays the configuration for a validation rule. The 'General Options' section shows 'Required' as 'Required' and 'Default Value' as 'Blank'. The 'Field Dependencies' section shows a table with columns for Action, Dependent Field, and Date Type. The 'Validation Rules' section shows a table with columns for Name, Formula, and Date Type. The 'Values' section shows a table with columns for Name, Formula, and Date Type.

Field Label	Field Name	Field Type
Customer Name	Customer_Name__c	Lookup(Jewel Customer)
Expected Days Of Return	Expected_Days_Of_Return__c	Text(20)
Gold Price	Gold_Price__c	Formula (Currency)
Item Id	Name	Text(20)
Item Type	Item_Type__c	Text(20)
KDM	KDM__c	Formula (Currency)
Last Modified By	LastModifiedBy	Lookup(User)
Making Charges	Making_Charges__c	Formula (Currency)
Ornament	Ornament__c	Text(20)

## ● Creating the User Profiles

### Gold Smith

The screenshot shows the Salesforce Setup interface for the 'Gold Smith' profile. The left sidebar includes 'Setup', 'Home', and 'Object Manager'. The main content area is titled 'SETUP Profiles' and shows the 'Gold Smith' profile details. It includes a search bar, a list of enabled permissions (e.g., Login IP Ranges, Apex Class Access, Visualforce Page Access), and a 'Profile Detail' table. The table lists the profile name, user license, description, and creation/modification dates. Below the table, there are 'Page Layouts' and 'Standard Object Layouts' sections.

Profile Detail	
Name	Gold Smith
User License	Salesforce
Description	
Created By	javadharshini S. 9/8/2025, 5:19 AM
Modified By	javadharshini S. 9/8/2025, 5:23 AM

Page Layouts	
Standard Object Layouts	Global <a href="#">Global Layout</a>
Location Group Assignment	<a href="#">Location Group Assignment Layout</a>

### Worker Profile

The screenshot shows the Salesforce Setup interface for the 'Profiles' page. The left sidebar includes 'Setup', 'Home', and 'Object Manager'. The main content area is titled 'SETUP Profiles' and shows a list of profiles. The table lists the profile name, user license, and whether it is a custom profile. The 'Worker Profile' is highlighted.

Action	Profile Name	User License	Custom
<a href="#">Edit</a>   <a href="#">Clone</a>	Work.com Only User	Work.com Only	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Del</a>   ...	Worker Profile	Salesforce Platform	<input checked="" type="checkbox"/>

## ● Creating Roles

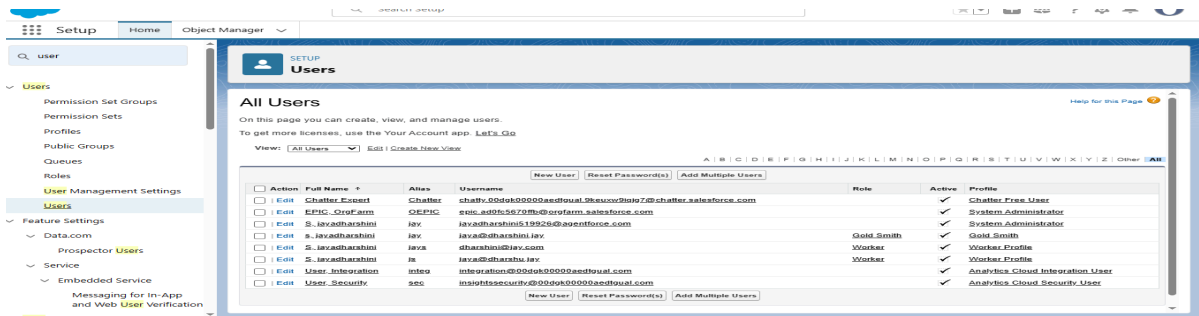
### Gold Smith And Worker Role

The screenshot shows the Salesforce Setup interface for the 'Roles' page. The left sidebar includes 'Setup', 'Home', and 'Object Manager'. The main content area is titled 'SETUP Roles' and shows the 'Creating the Role Hierarchy' section. It includes a search bar, a list of roles, and a 'Show in tree view' button. The role hierarchy is displayed as a tree structure, showing the relationship between roles like 'CEO', 'CFO', 'COO', 'Gold Smith', 'Worker', 'SVP Customer Service & Support', 'Customer Support International', and 'Customer Support North America'.

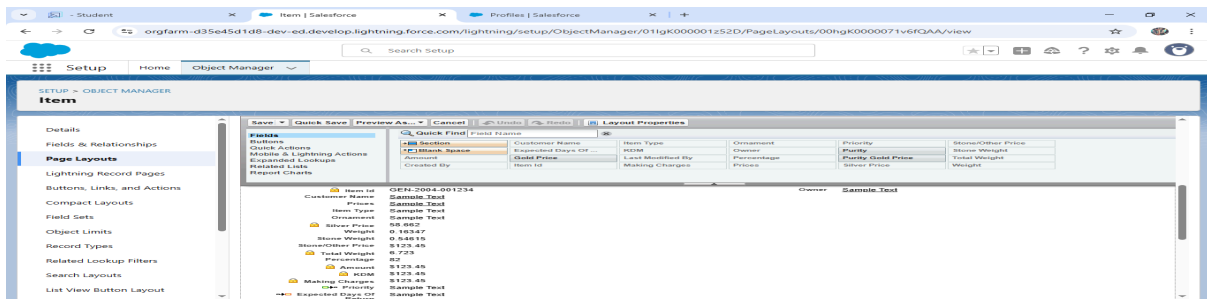
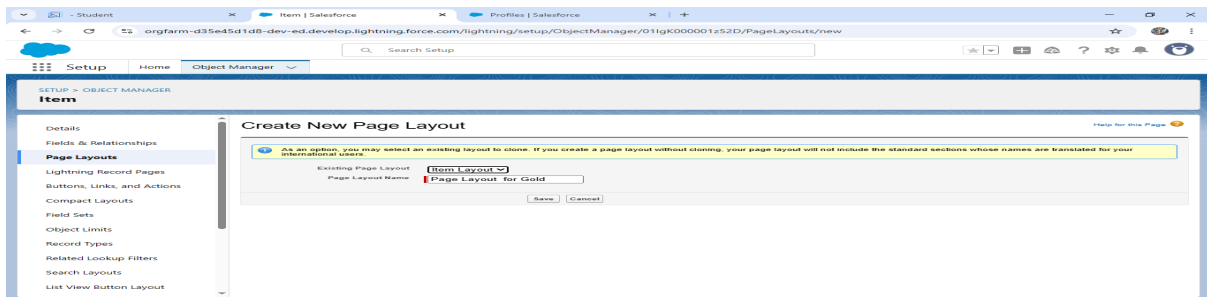
```
graph TD
    CEO[CEO] --> CFO[CFO]
    CEO --> COO[COO]
    CEO --> Gold_Smith[Gold Smith]
    CEO --> Worker[Worker]
    CEO --> SVP[SVP Customer Service & Support]
    CEO --> CS_International[Customer Support International]
    CEO --> CS_North_America[Customer Support North America]
```



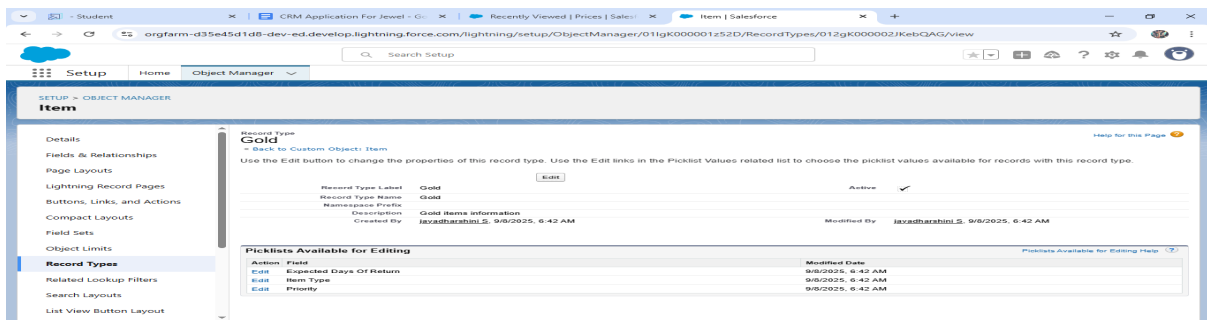
## ● Creating the User



## ● Creating A Gold And Silver Page Layout

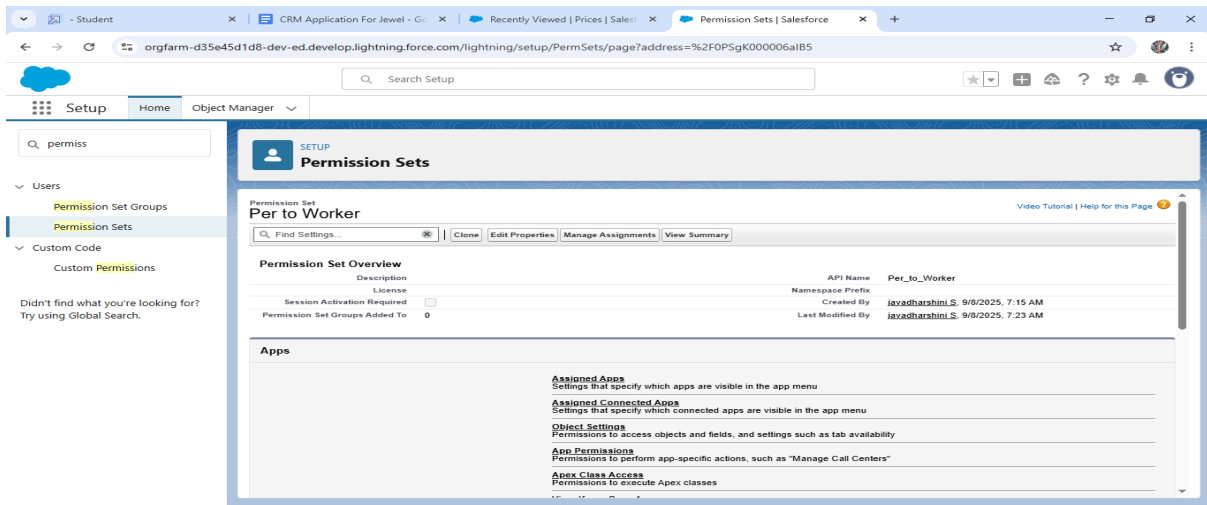


## ● TO Create a Record type Gold And Silver Record type



## ● Permission Set

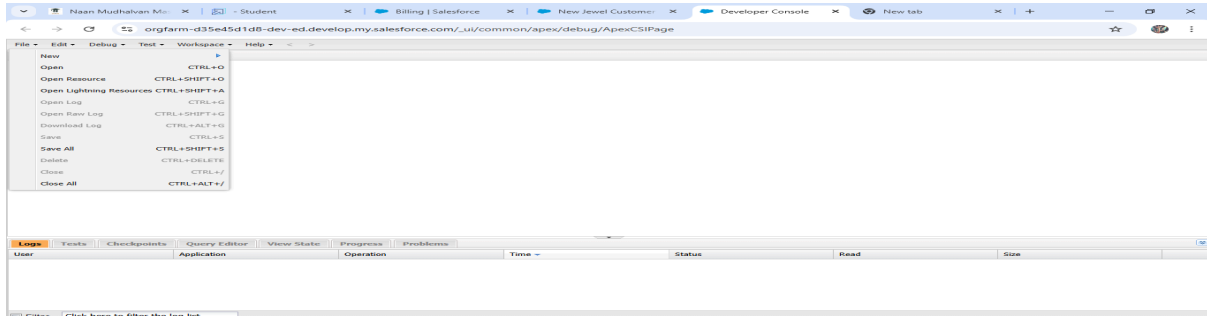
To create the Permission set as “Per to Worker”



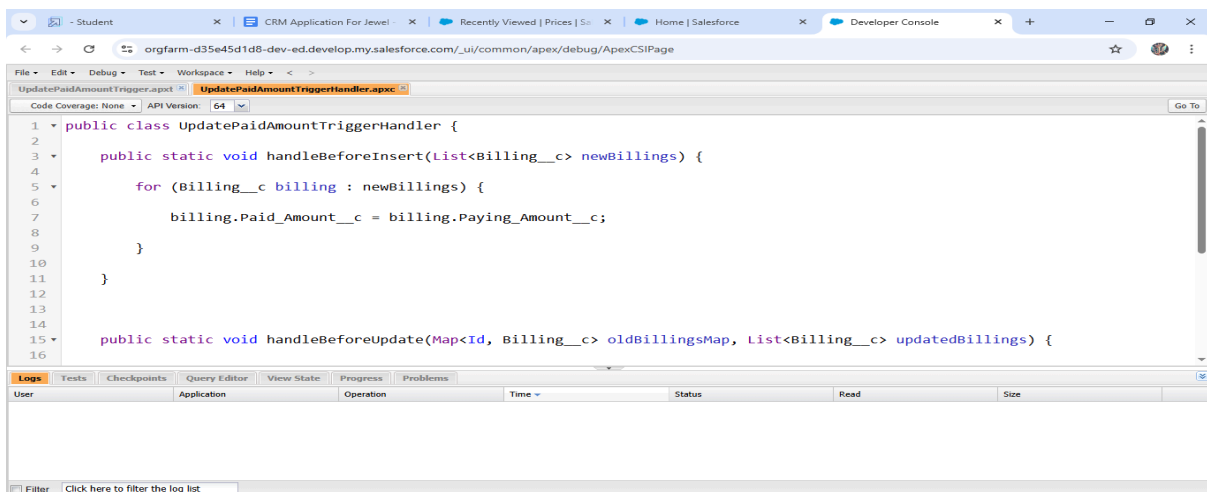
The screenshot shows the Salesforce Setup interface. On the left, the navigation menu includes 'Users', 'Permission Set Groups', 'Permission Sets', and 'Custom Code'. The 'Permission Sets' section is selected. The main content area displays the 'Permission Set Overview' for a set named 'Per to Worker'. The overview includes fields for 'API Name' (Per\_to\_Worker), 'License' (None), 'Session Activation Required' (checkbox), 'Permission Set Groups Added To' (0), 'Namespace Prefix', 'Created By' (jayadharshini S, 9/8/2025, 7:15 AM), and 'Last Modified By' (jayadharshini S, 9/8/2025, 7:23 AM). Below the overview, there are sections for 'Apps', 'Assigned Apps', 'Assigned Connected Apps', 'Object Settings', 'App Permissions', and 'Apex Class Access'.

## ● Trigger

Create A Trigger Handler Class



The screenshot shows the Salesforce IDE interface. The 'File' menu is open, displaying options like 'New', 'Open', 'Open Resource', 'Open Lightning Resources', 'Open Log', 'Open Raw Log', 'Download Log', 'Save', 'Save All', 'Delete', 'Close', and 'Close All'. The 'UpdatePaidAmountTriggerHandler.apxc' file is selected. The IDE also shows a 'Logs' tab with a table of log entries.

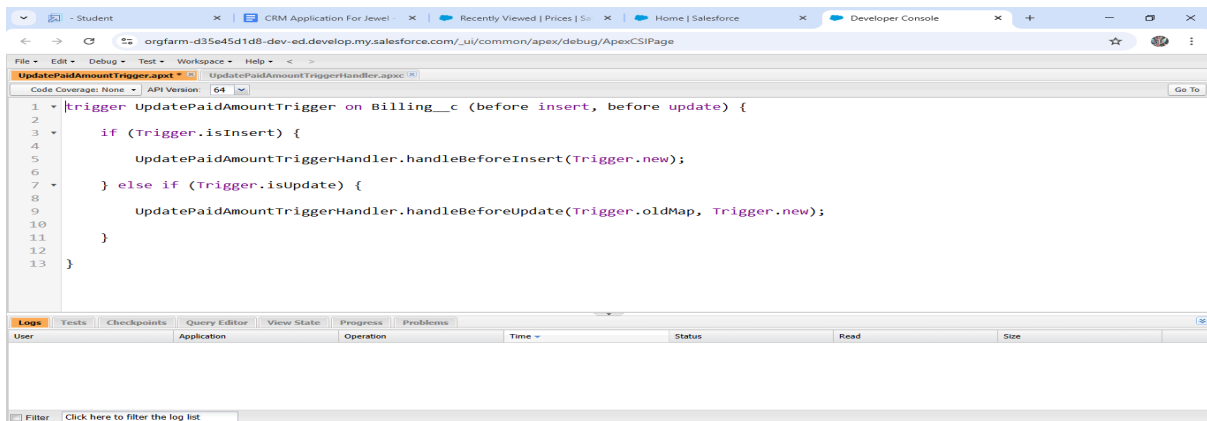


The screenshot shows the Salesforce IDE interface with the 'UpdatePaidAmountTriggerHandler.apxc' file open. The code is as follows:

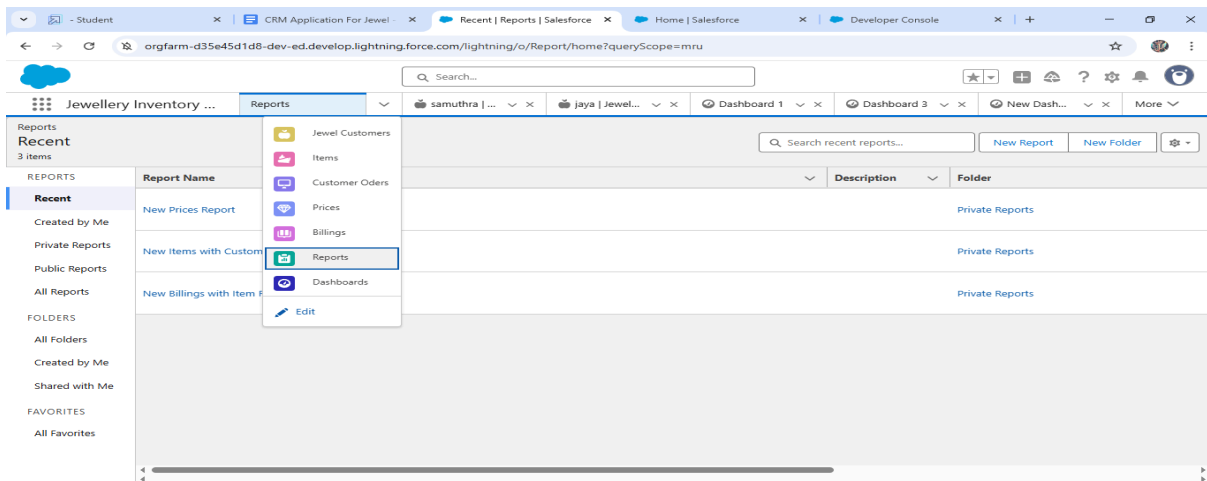
```
1 public class UpdatePaidAmountTriggerHandler {
2
3     public static void handleBeforeInsert(List<Billing__c> newBillings) {
4
5         for (Billing__c billing : newBillings) {
6
7             billing.Paid_Amount__c = billing.Paying_Amount__c;
8
9         }
10    }
11
12
13
14    public static void handleBeforeUpdate(Map<Id, Billing__c> oldBillingsMap, List<Billing__c> updatedBillings) {
15
16    }
```

The IDE also shows a 'Logs' tab with a table of log entries.

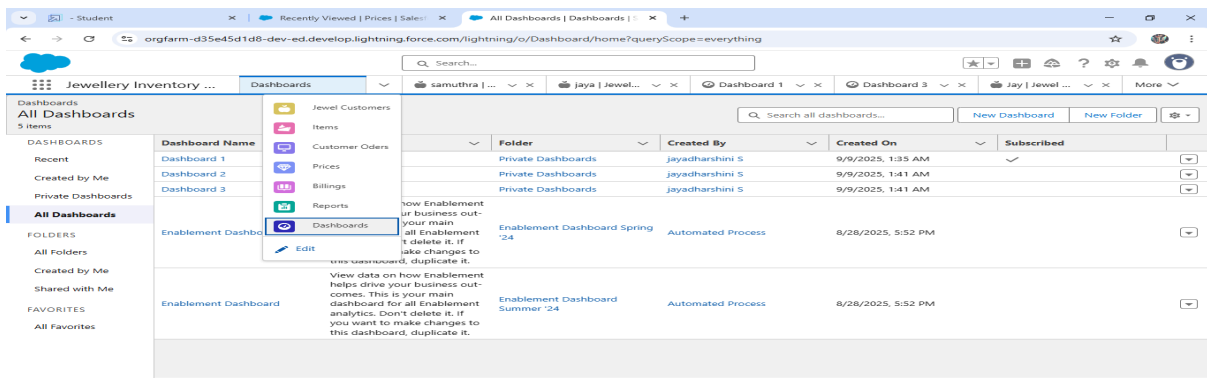
## Create the Trigger



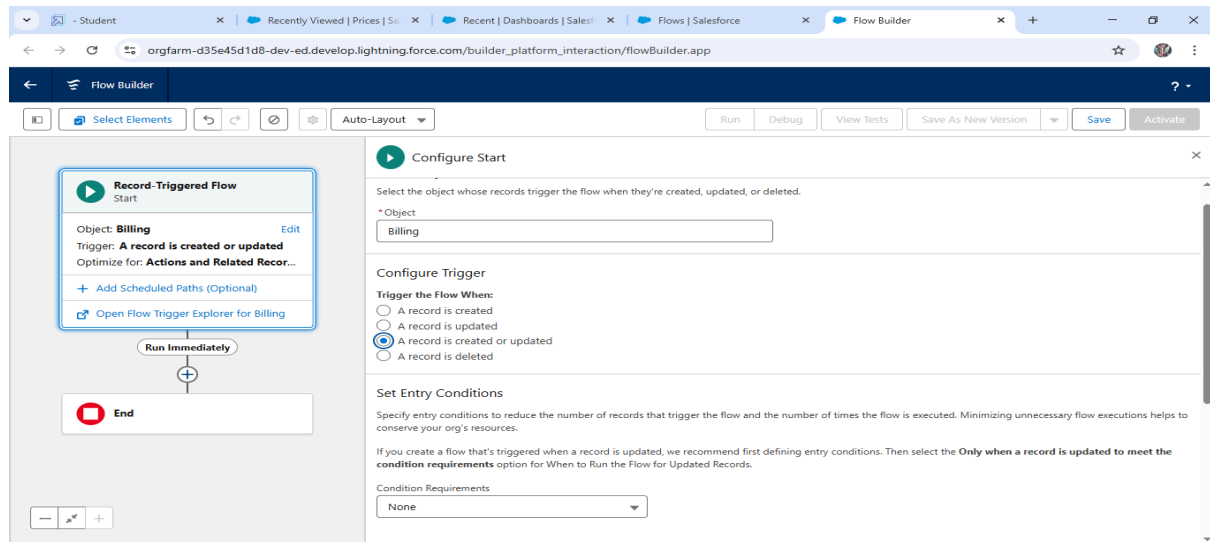
## Create Report



## Creating the Dashboard



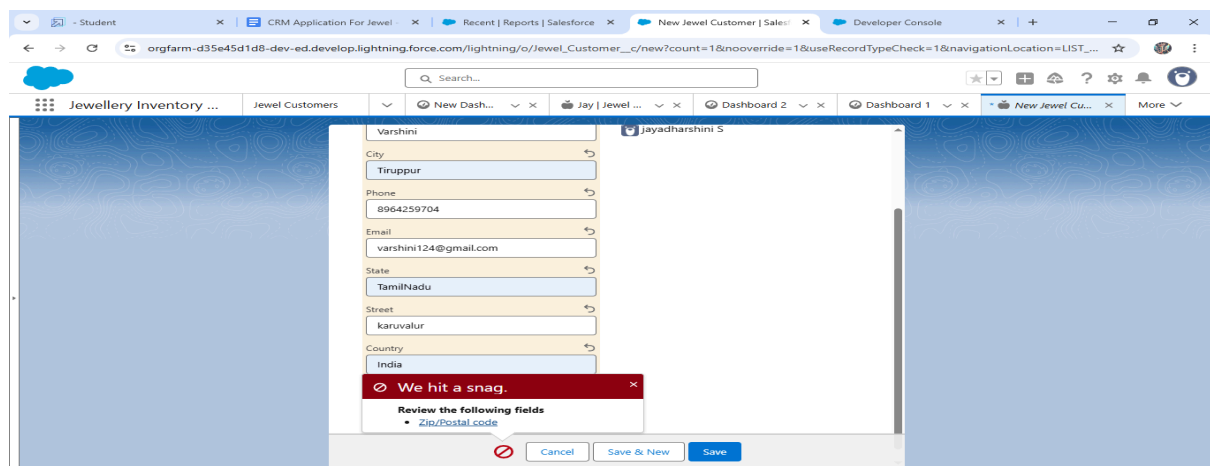
## ● Create A Flow

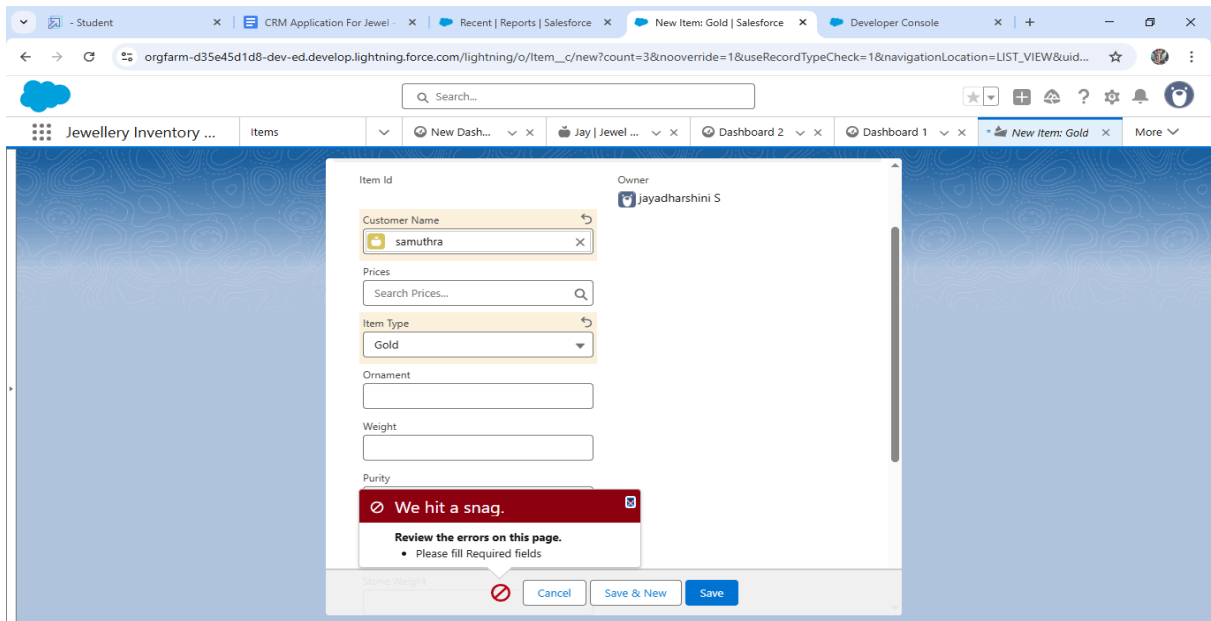


# FUNCTIONAL AND PERFORMANCE TESTING

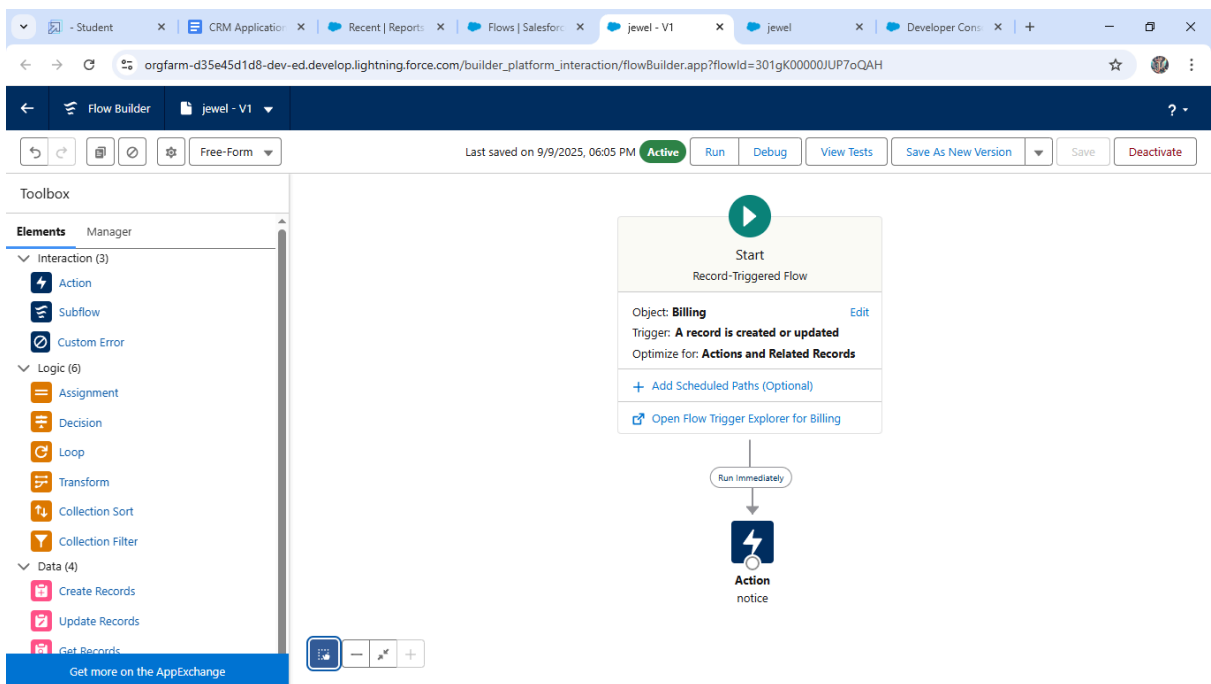
## Performance Testing

## ● Validation Rule Checking





## ● Test flows on Billing



## ● User Adoption

### Create a Record

The screenshot shows the 'New Jewel Customer' form in Salesforce. The form is titled 'New Jewel Customer' and has a sub-header '\* Required Information'. The form fields are: Customer Name (required), City, Phone, Email, State, Street, and Country. The Owner is set to 'Jayadharshini S'. The form has 'Cancel', 'Save & New', and 'Save' buttons at the bottom.

### View a Record

The screenshot shows the 'View a Record' page for a Jewel Customer in Salesforce. The page is titled 'Details' and shows the following information: Customer Name: jaya, City: Thiruvannamalai, Phone: (986) 521-5016, Email: jayadharshini519@gmail.com, State: TamilNadu, Street: kanakkampalyam, Country: India, Zip/Postal code: 606601. The record was created by Jayadharshini S. on 9/8/2025, 9:30 AM and last modified by Jayadharshini S. on 9/8/2025, 9:30 AM.

### Delete a Record

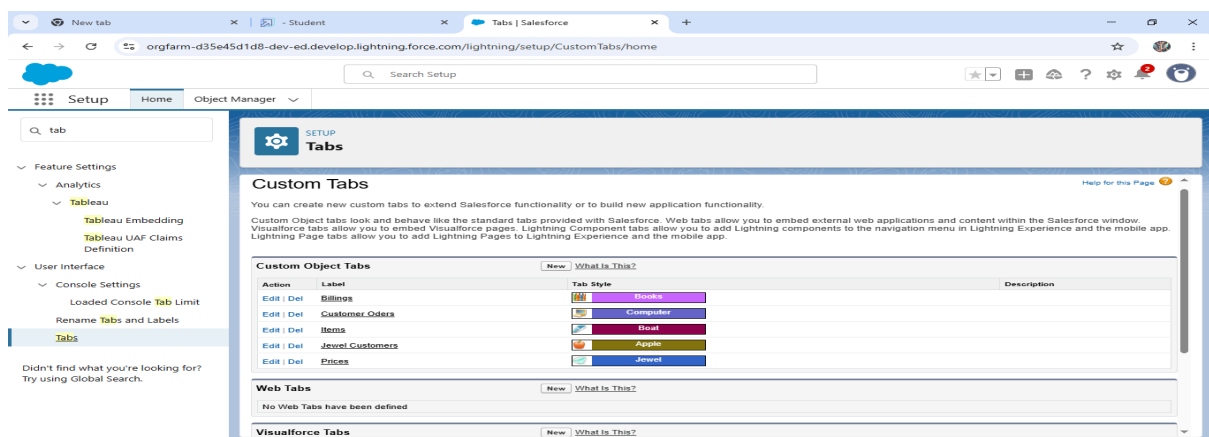
The screenshot shows the 'Delete a Record' page in Salesforce. The page is titled 'Prices' and shows a list of 'Recently Viewed' items. The list has 6 items, each with a checkbox and a 'Price Id' label. The items are: Item-06, Item-05, Item-04, Item-03, Item-02, and Item-01. A context menu is open over the 'Item-01' row, showing options: Edit, Delete, Change Owner, and Edit Labels.

	Price Id
1	Item-06
2	Item-05
3	Item-04
4	Item-03
5	Item-02
6	Item-01

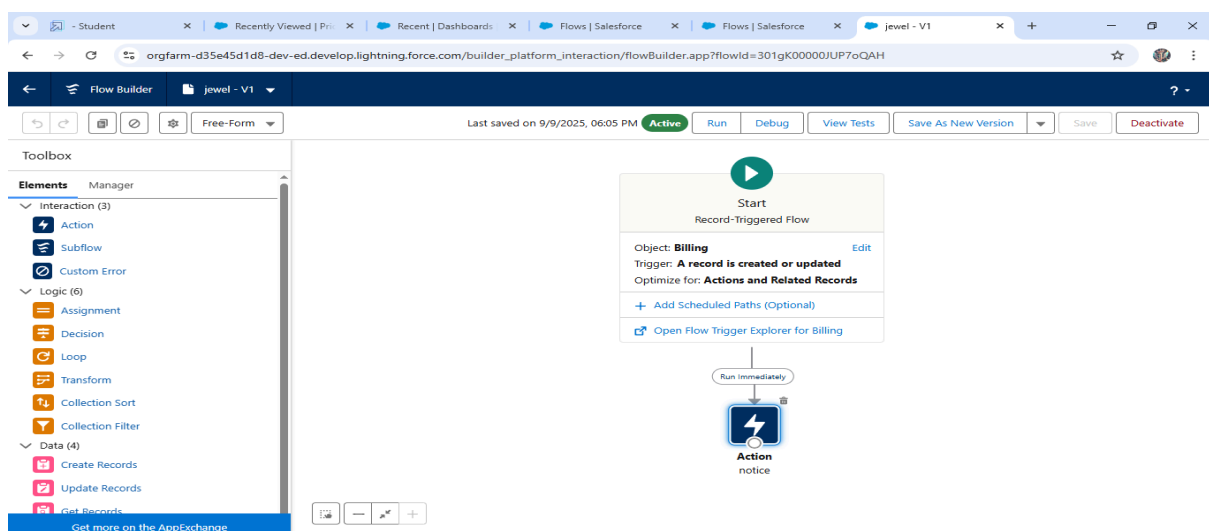
# RESULTS

## Output Screenshots

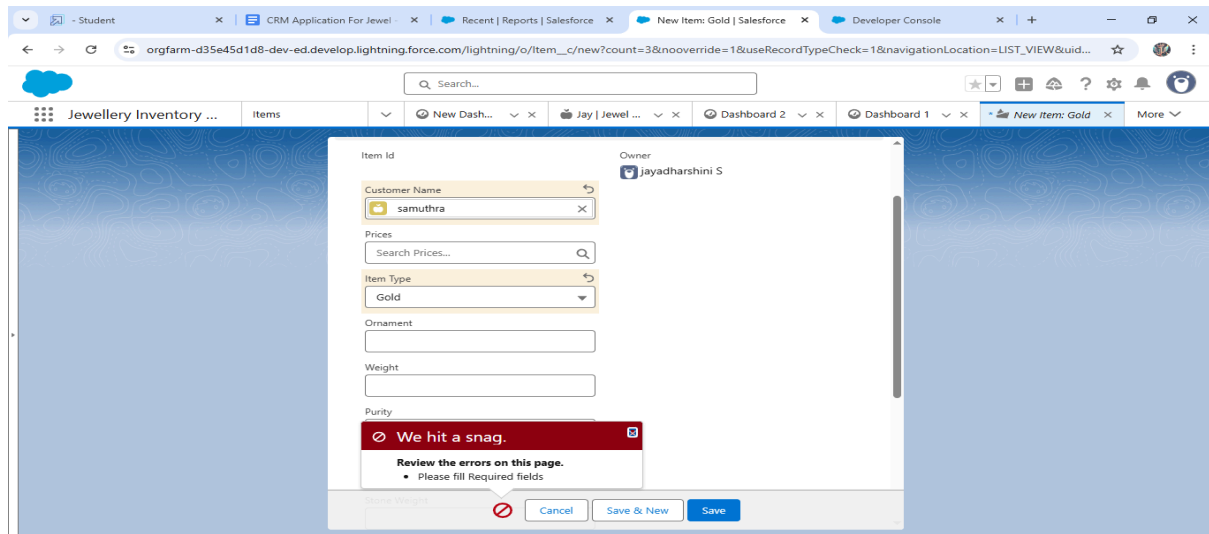
### ● Tabs for jewel Customer, Items, Customer Order, Billing, Prices



### ● Flow runs



## ● Trigger error messages



# ADVANTAGES & DISADVANTAGES

## ❖ Advantages :

- ➡ Enhanced Customer Relationships
- ➡ Streamlined Sales Processes
- ➡ Better Inventory Management
- ➡ Data - Driven Insights



## ❖ **Disadvantages :**

- ➡ Implementation Complexity
- ➡ Cost and Maintenance
- ➡ Data Security Concerns
- ➡ User adoption

## **APPENDIX**

**Source Code:** Provided in Apex Classes And Trigger

### **UpdatePaidAmountTriggerHandler**

```
public class UpdatePaidAmountTriggerHandler {  
    public static void handleBeforeInsert(List<Billing__c> newBillings) {  
        for (Billing__c billing : newBillings) {  
            billing.Paid_Amount__c = billing.Paying_Amount__c;  
        }  
    }  
  
    public static void handleBeforeUpdate(Map<Id, Billing__c> oldBillingsMap,  
List<Billing__c> updatedBillings) {  
        for (Billing__c billing : updatedBillings) {  
            Billing__c oldBilling = oldBillingsMap.get(billing.Id);  
            Decimal oldPaidAmount = oldBilling.Paid_Amount__c;  
            billing.Paid_Amount__c = oldPaidAmount + billing.Paying_Amount__c;  
        }  
    }  
}
```

## UpdatePaidAmountTrigger on Billing

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

## CONCLUSION

In Jewelry Management, CRM systems offer Developers significant benefits like enhanced customer relationships, streamlined sales processes, and better inventory management. By leveraging CRM, developers can create customized solutions that drive business growth and improve customer satisfaction.



