CRM APPLICATION FOR JEWEL MANAGEMENT

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College Code: 8100

TEAM ID: NM2025TMID04136

TEAM SIZE: 4

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INTRODUCTION

Salesforce is one of the world's leading cloud-based Customer Relationship Management (CRM) platforms. It enables organizations to manage their sales, marketing, customer service, and analytics all in one integrated environment. Salesforce helps in automating tasks, improving communication, and providing valuable insights into customer behavior.
For a jewelry business, Salesforce plays a vital role in managing customer interactions, tracking sales, maintaining inventory, and automating billing operations efficiently. With customizable objects, workflows, and dashboards, Salesforce allows the creation of a robust and scalable CRM application that fits specific business needs like jewel management.

PROBLEM STATEMENT

Traditional jewelry management systems rely heavily on manual record-keeping, which leads to data duplication, errors, and poor customer tracking. Jewelers often face challenges in managing customer information, item details, billing, and pricing efficiently. Lack of automation results in delayed responses, missed sales opportunities, and weak customer relationships. Therefore, there is a need for a centralized CRM system that can automate these operations, maintain accurate records, and enhance customer satisfaction through streamlined management and real-time data access.

OBJECTIVES

1. **Customer Data Management:** To maintain a centralized database of customer profiles, including personal details, purchase history, and preferences, to enable personalized services.
2. **Sales Tracking and Lead Management:** To automate the process of capturing leads, tracking sales activities, and converting potential customers into loyal buyers through Salesforce tools.
3. **Product and Inventory Management:** To manage detailed information about jewelry products, including type, purity, weight, price, and stock
4. **Billing and Order Processing:** To simplify the billing process by automating invoice generation, payment tracking, and sales reporting for each transaction.

IDEATION

1. **Originality of Ideas:** The project introduces a dedicated CRM solution tailored for jewel businesses. Unlike generic CRM systems, this application

focuses on jewelry-specific processes such as gemstone tracking, customer purchase history, and customized pricing features.

2. **Feasibility of Ideas:** The solution is highly feasible due to Salesforce's cloud-based environment and its support for custom objects and automation tools. The design can be implemented efficiently using standard Salesforce functionalities like Apex, triggers, and reports, ensuring scalability and maintainability.

SYSTEM REQUIREMENTS

1. Hardware Requirements:
   - ➢ Computer with minimum 4 GB RAM (8 GB recommended)
   - ➢ Dual-core processor
   - ➢ Stable internet connection
2. Software Requirements:
   - ➢ Salesforce Developer Edition Org
   - ➢ Modern Web Browser (Google Chrome, Firefox, Edge)

PROJECT DESIGN

Design Completeness

The system architecture includes four main modules:

1. Customer Module – maintains customer details and purchase history.
2. Jewelry Item Module – manages the stock, price, and descriptions of jewelry.
3. Order Module – handles customer orders and billing operations.
4. Report Module – provides sales and performance analytics.

PROJECT DEVELOPMENT

Code Quality

The code follows Salesforce Apex standards with proper naming conventions, comments, and modularity. Handlers are separated from triggers for maintainability.

Apex Trigger and Handler

- Trigger Example: When a new order is inserted, inventory is automatically updated.
- Handler Example: Business logic for updating stock and sending notifications is written in a separate Apex class to ensure clean architecture.

ADHERENCE TO TIMELINES

PHASE 1: REQUIREMENT ANALYSIS & PLANNING

- ✓ The system focuses on managing Customers, Jewelry Items, Customer Orders, Billing, and Pricing. Customer records store personal details and purchase history, while Item records hold details like name, purity, and stock.
- ✓ Orders link customers with their selected jewelry items, and Billing handles payment details with automatic invoice generation.
- ✓ Relationships between these objects were planned to ensure smooth data flow across all modules in Salesforce.

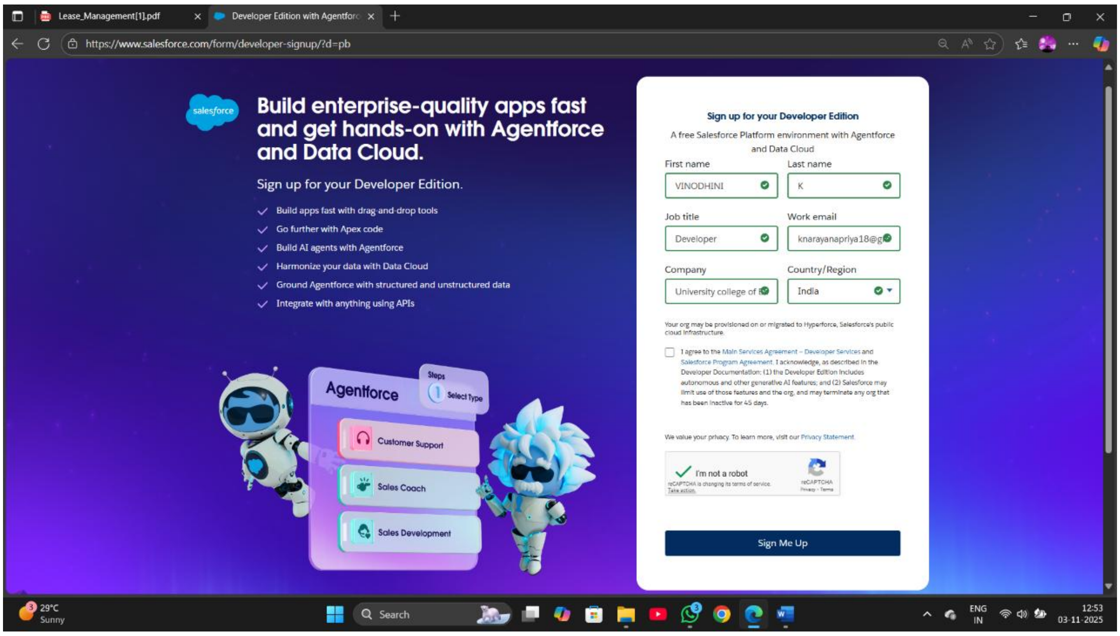
PHASE 2: SALESFORCE DEVELOPMENT – BACKEND

<u>Milestone 1: Salesforce Developer Account Creation:</u>

Activity 1: Creating Developer Account

Creating a developer org in salesforce.

1. Go to https://developer.salesforce.com/signup
2. On the sign up form, enter the following details :

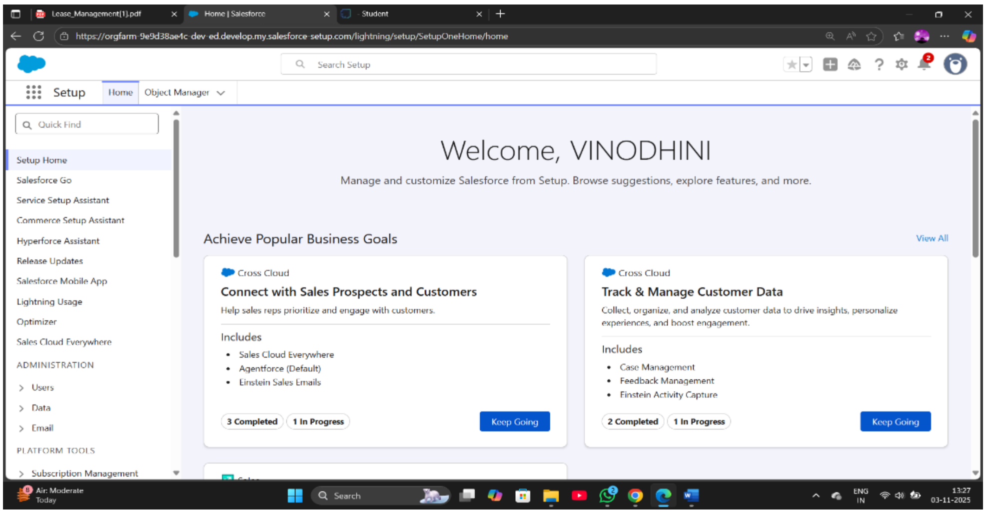


- First name & Last name
- Email
- Role: Developer
- Company: College Name
- County: India
- Username: should be a combination of your name and company

3. Click on sign me up after filling these.

Activity 2: Account Activation

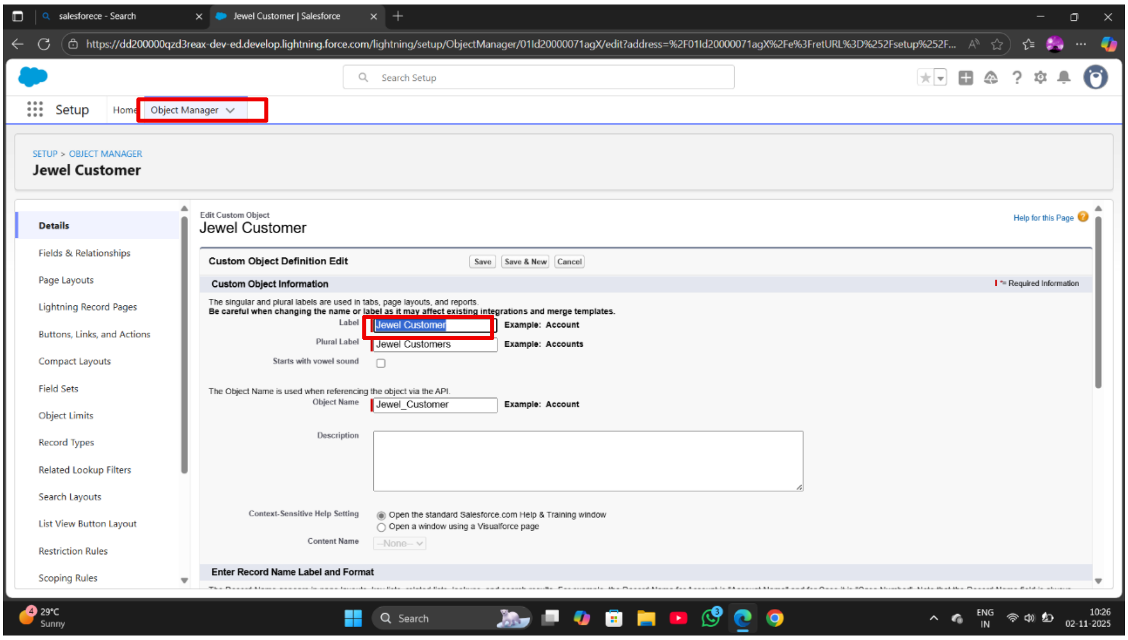
1. Go to the inbox of the email that you used while signing up. Click on the Reset Password to activate your account. Click on Reset Password. Give a password and answer a security question and click on change password.
2. Then you will redirect to your salesforce setup page.



Milestone 2: Objects

Activity 1: Create Jewel Customer Object

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
   1. Enter the label name: Jewel Customer
   2. Plural label name: Jewel Customers
   3. Enter Record Name Label and Format
      - Record Name >> Customer name
      - Data Type >> Text



2. Click on Allow reports.
3. Allow search and click Save.

Activity 2: Create Item Object

1. From the setup page >>Click on Object Manager >> Click on Create >> Click on Custom Object.
    1. Enter the label name >> Item
    2. Plural label name >> Items
    3. Enter Record Name Label and Format
        - Record Name >> Item Id
        - Data Type >> Auto Number
        - Display Format >> Item- {00}
        - Starting Number >> 1
2. Click on Allow reports.
3. Allow search >> Save.

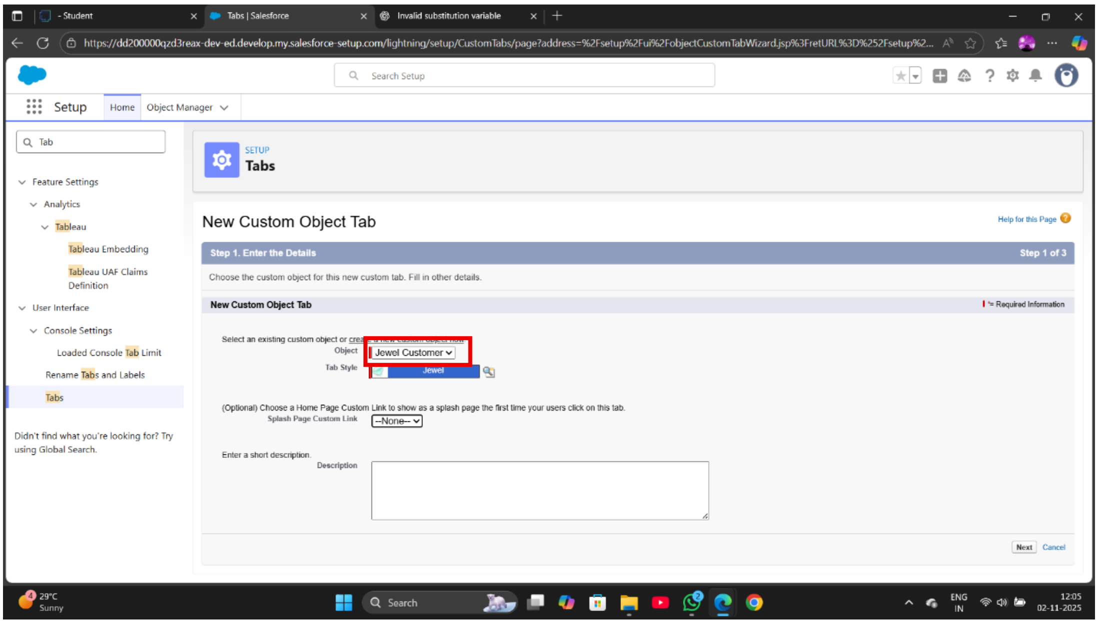
Note: Create 3 more objects with label names as Customer order, Price, Billing.

Milestone 3: Tabs

Activity 1: Creating a Custom Tab

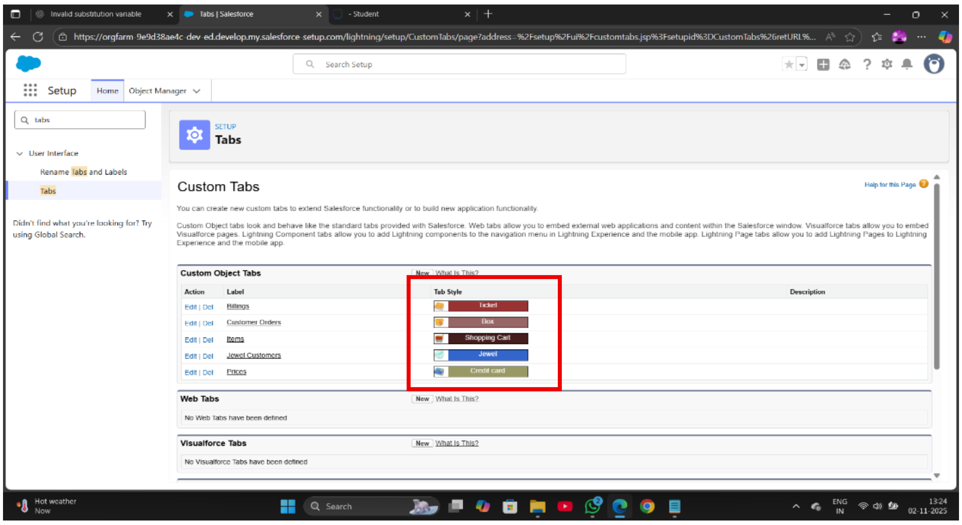
1. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab).

2. Select Object (Jewel Customer) >> Select any tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) keep it as default >> Save.



Activity 2: To Create a Tab (Item, Customer Order, Price, Billing)

1. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)
2. Select Object (Item) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) keep it as default >> Save.



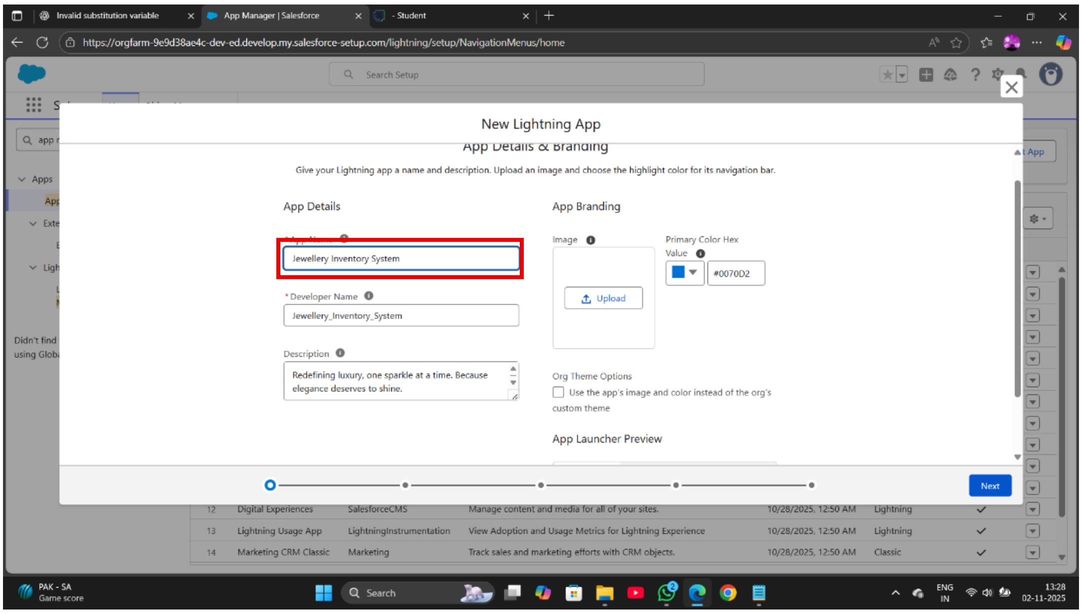
PHASE 3: UI/UX DEVELOPMENT

<u>Milestone 4: The Lightning App</u>

Activity 1: Create A Lightning App

1. Go to setup page >> search "app manager" in quick find >> select "app manager" >>
2. Click on New lightning App.

3. Fill the app name in app details and branding as follow:
   App Name: Jewellery Inventory System.
   Developer Name: This will auto populated
   Description: Elevate your look with elegance

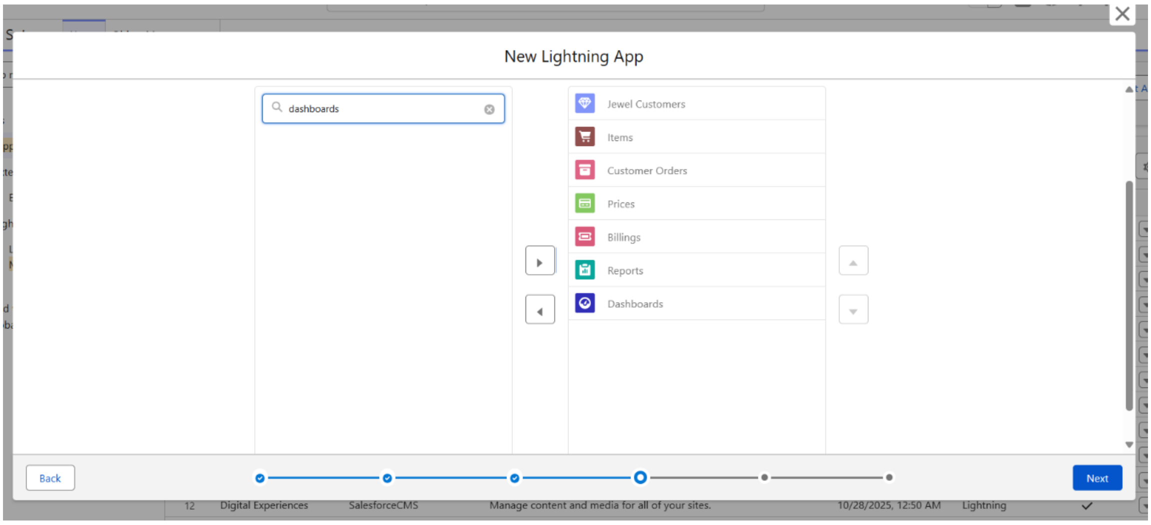


4. Then click Next >> (App option page) Set Navigation Style as Console Navigation >> Next (Utility Items) keep it as default >> Next

5. To Add Navigation Items:

6. Search for the item in the (Jewel Customer, Item, Customer Order, Price, Billing, Reports, Dashboards) from the search bar and move it using the arrow button >> Next >> Next

7. To Add User Profiles: Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.



Milestone 5: Fields

Activity 1: Creating Lookup Relationship

1. Go to the setup page >> click on object manager >> type object name (Customer Order) in the quick find bar >> click on the object.
2. Click on fields & relationship >> click on New.
3. Select "Lookup relationship" as data type and click Next.
4. Select the related object " Jewel Customer "
5. Give Field Label as "Customer" and click Next >> Next >> Next >> Save.

Activity 2: Creating a Master-Detail Relationship

1. Go to the setup page >> click on object manager >> type object name (Customer Order) in the quick find bar >>
2. Click on fields & relationships >> click on New.
3. Select "Master-Detail relationship" as data type and click Next.
4. Select the related object "Item"
5. Give Field Label as "Item" and click Next >> Next >> Next >> Save.

Activity 3: Creating Text Field in Jewel Customer Object

1. Go to setup >> click on Object Manager >> type object name (Jewel Customer) in quick find bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as "Text".
4. Click on Next
5. Fill the above as following:
    - Field Label: City
    - Length: 20
    - Field Name: gets auto generated
    - Click on Next >> Next >> Save and new.

Activity 4: Creating the Phone field in object Jewel Customer

1. Go to setup >> click on Object Manager >> type object name (Jewel Customer) in quick find bar >> click on the object.
2. Now click on "Fields & Relationships" >> New

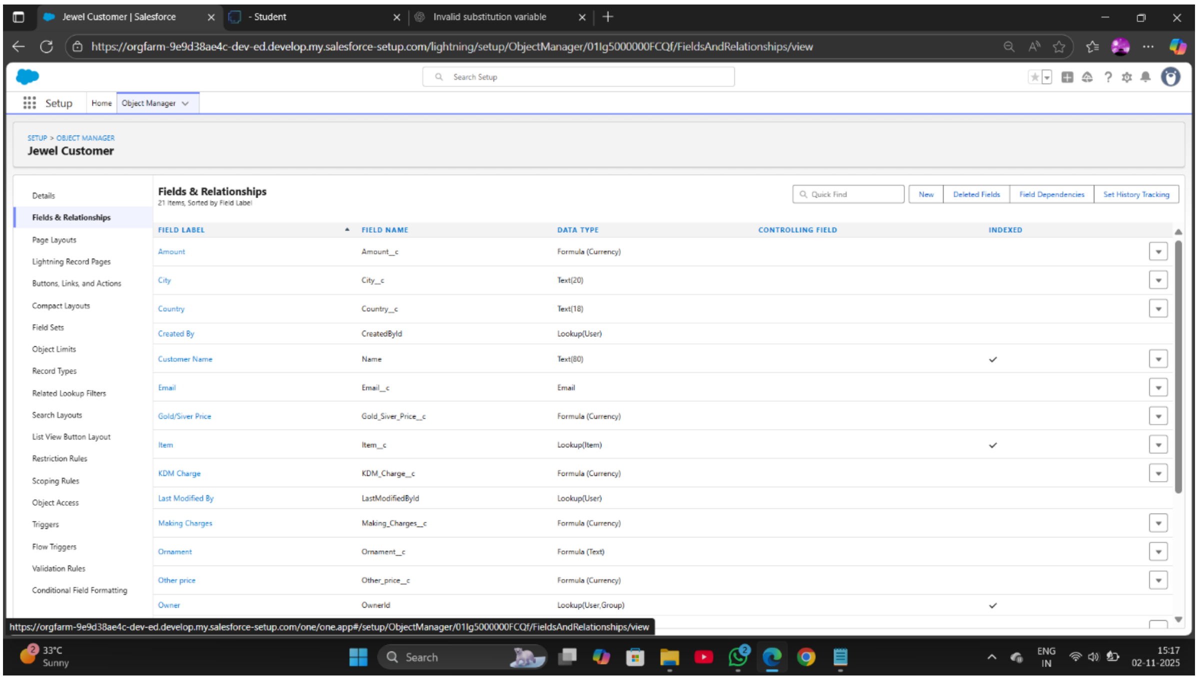
3. Select Data type as “Phone” and click Next.
4. Given the Field Label as “Phone”.
5. Field Name will be auto populated, and click on Next >> Next >> Save & new.

Activity 5: Creating the Email field in object Jewel Customer

1. Go to setup >> click on Object Manager >> type object name(Jewel Customer) in quick find bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as “Email” and click Next.
4. Given the Field Label as “Email”.
5. Field Name will be auto populated, and click on Next >> Next >> Save.

Activity 6: Creating Formula Field (Cross Object) in Item Object

1. Go to setup >> click on Object Manager >> type object name (Item) in quick find bar? click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select Data type as “Formula” and click Next.

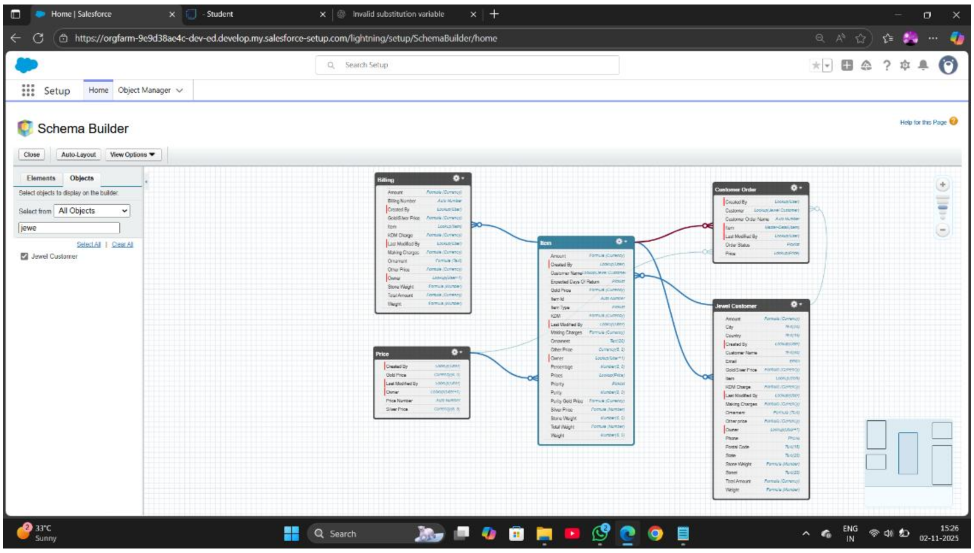


4. Give Field Label and Field Name as “Gold Price” and select formula return type as “Currency” and click next.

5. Under Advanced Formula write down the formula:
   Prices__r.Gold_price__c / 10
6. Click "Check Syntax" and Next >> Next >> Save & New.

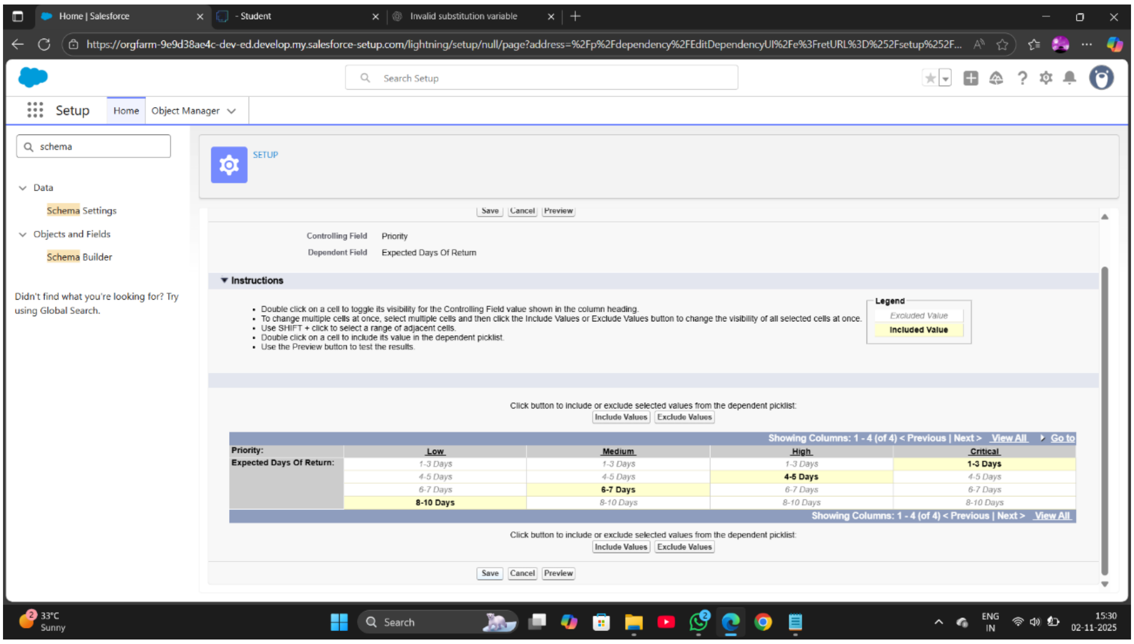
Activity 7: Schema Builder

Schema Builder is a powerful tool within Salesforce that allows you to visualise, explore, and design the relationships between objects in your Salesforce organisation. It provides a graphical representation of the data model, making it easier to understand the structure and connections between different objects.



Activity 8: Creating the Field Dependencies

1. Go to setup >> click on Object Manager >> type object name(Item) in quick find bar >> click on the object.
2. Click on Fields & Relationships and click on the Priority field.
3. Search for Field Dependencies and click on New.
4. Select Controlling Field as "Priority" and Depending field as "Expected Days of Return" >> Continue.



5. Select the “Expected Days of Return” values of related Priority values and Click on Include Values >> Save.

PHASE 4: TESTING & SECURITY

Milstone 6: Validation Rule

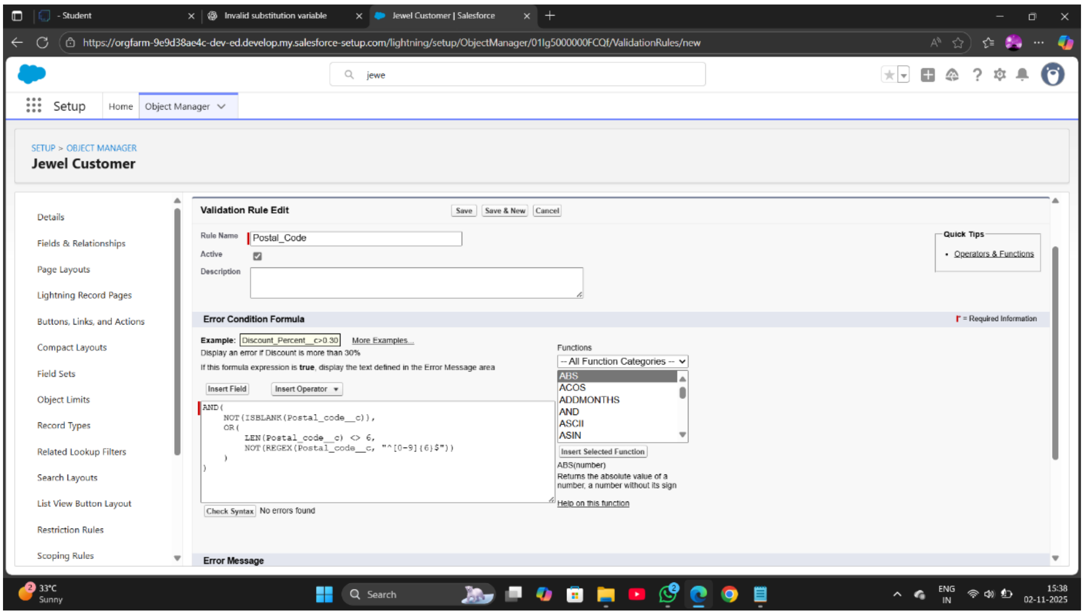
Activity 1: Creating the validation rule

1. Go to setup >> click on Object Manager >> type object name(Jewel Customer) in quick find bar>> click on the object.

2. Click on the validation rule >> click New >>Enter the Rule name as “Postal Code “.

3. Insert the Error Condition Formula as : -
```
AND(OR(
        LEN( Zip_Postal_code__c ) <> 6,
NOT(REGEX(Zip_Postal_code__c, "^[0-9]{6}$"))),
        NOT(ISBLANK(Zip_Postal_code__c))))
```

4. Enter the Error Message as “Must contain 6 digits”, select the Error location as Field and select the field as “Zip/Postal code”, and click Save.



NOTE:

Create One more Validation rule for Jewel Customer object.

1. Enter Rule name as "ValidationRule For JewelCustomerObject ".
2. Insert the Error Condition Formula as : -
   OR(ISBLANK(City__c) , ISBLANK(Country__c),ISBLANK(Phone__c),ISBLANK(State__c),ISBLANK(Street__c))
3. Enter the Error Message as "Please fill Required fields", select the Error location as Top of Page and click Save.

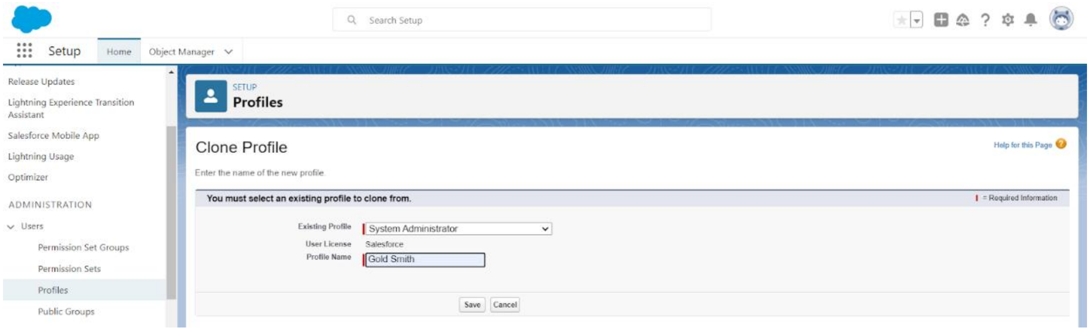
Milestone 7: Profiles

Activity 1: Gold Smith Profile

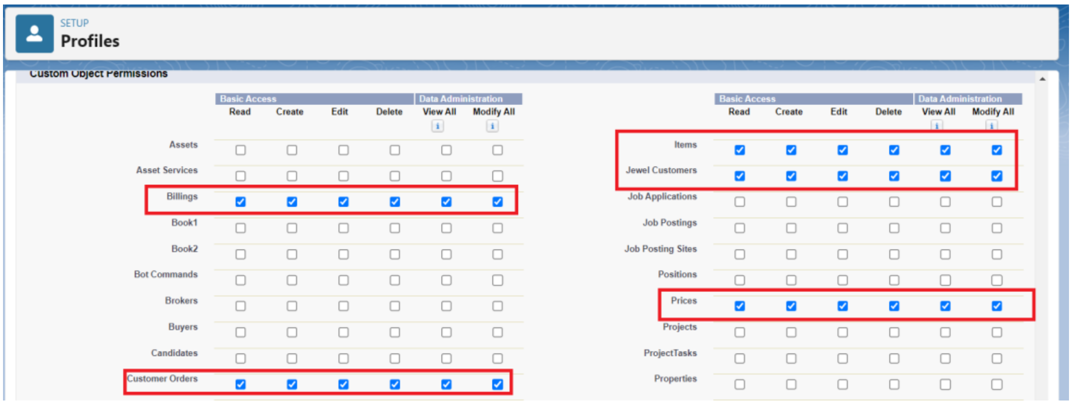
1. Go to setup >> type profiles in quick find box >>click on profiles ? clone the desired profile (System Administrator) >> enter profile name (Gold Smith) >> Save.
2. While still on the profile page, then click Edit.
3. Scroll down to Custom Object Permissions and Give access permissions for Jewel Customer, Item, Customer Order, Price, Billings.
4. Scroll down and Click on Save.

Activity 2: Worker Profile

1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Salesforce Platform User) >> enter profile name () >> Save.
2. While still on the profile page, then click Edit.



3. Scroll down to Custom Object Permissions and Give access permissions for Items, Price and Customer Order objects.

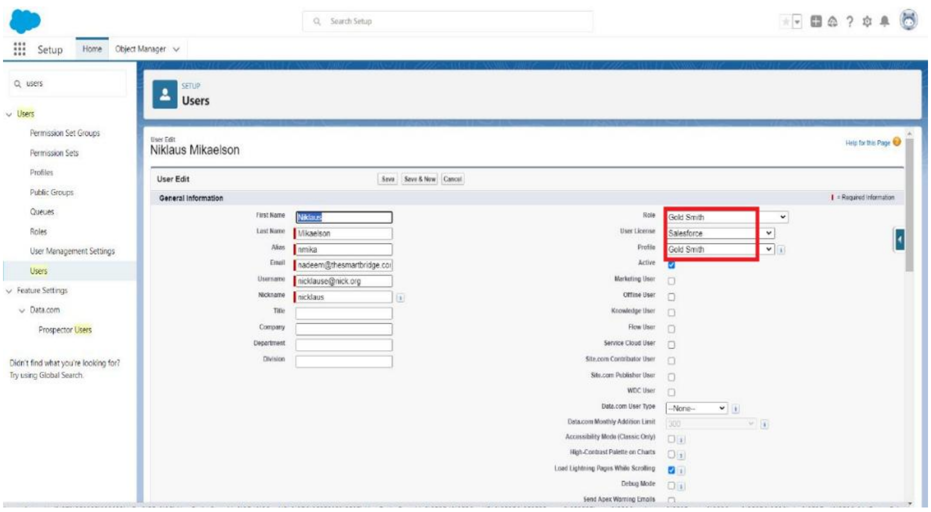


4. Scroll down and Click on Save.

Milestone 8: Users

Activity 1: Create User

1. Go to setup >> type users in quick find box >> select users >> click New user.
2. Fill in the fields:



- First Name : Niklaus
- Last Name : Mikaelson
- Alias : Give a Alias Name
- Email id : Give your Personal Email id
- Username : Username should be in this form: text@text.text
- Nick Name : Give a Nickname
- Role : Gold Smith
- User licence : Salesforce
- Profiles : Gold Smith

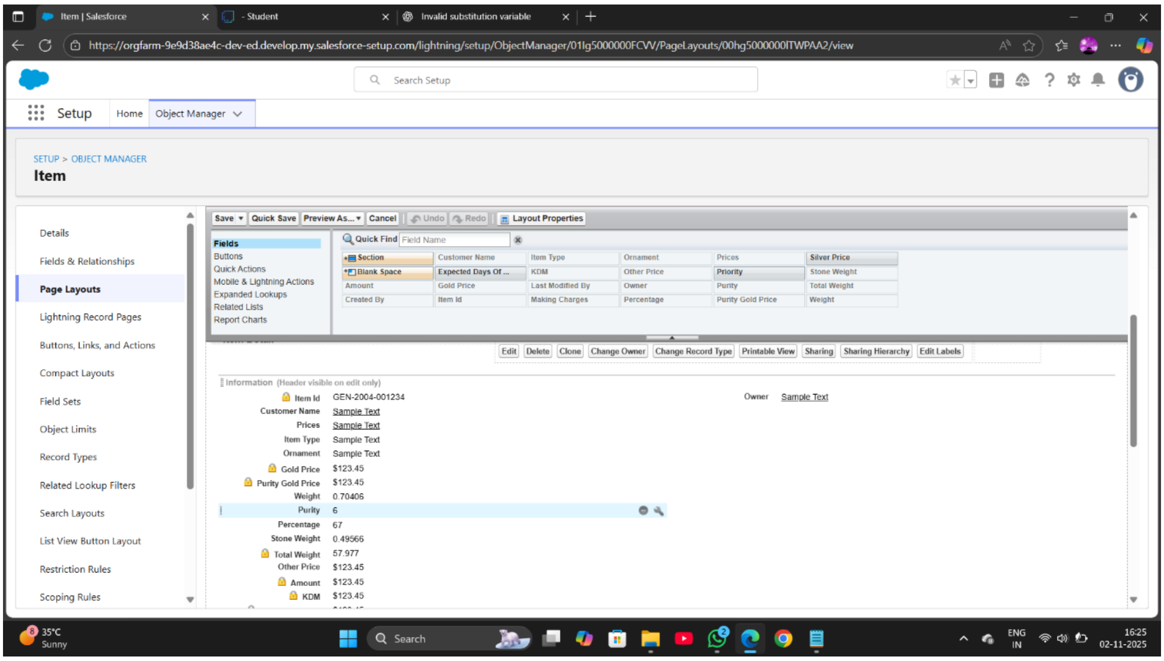
3. Click on Save.

Note: Create two more users as mentioned in activity 2 using the same profile.

Milestone 9: Page Layouts

Activity 1: To Create a Gold Page layout

1. Go to Setup >> Click on Object Manager >> Search for the object (Item) >> From drop down click on Edit.
2. Click on Page layout >> Click on New.
3. Give Page layout Name as "Page Layout for Gold" and click on Save.
4. Arrange the field as shown in the Information Section, remove fields which are related to Silver and click Ok.

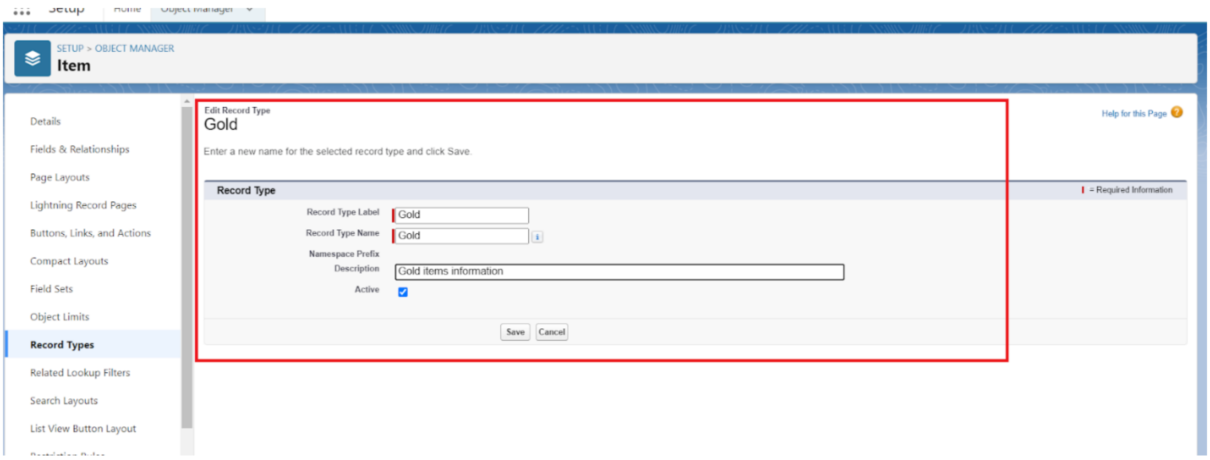


5. Click Save.
6. Make sure your page layout looks like the picture above.

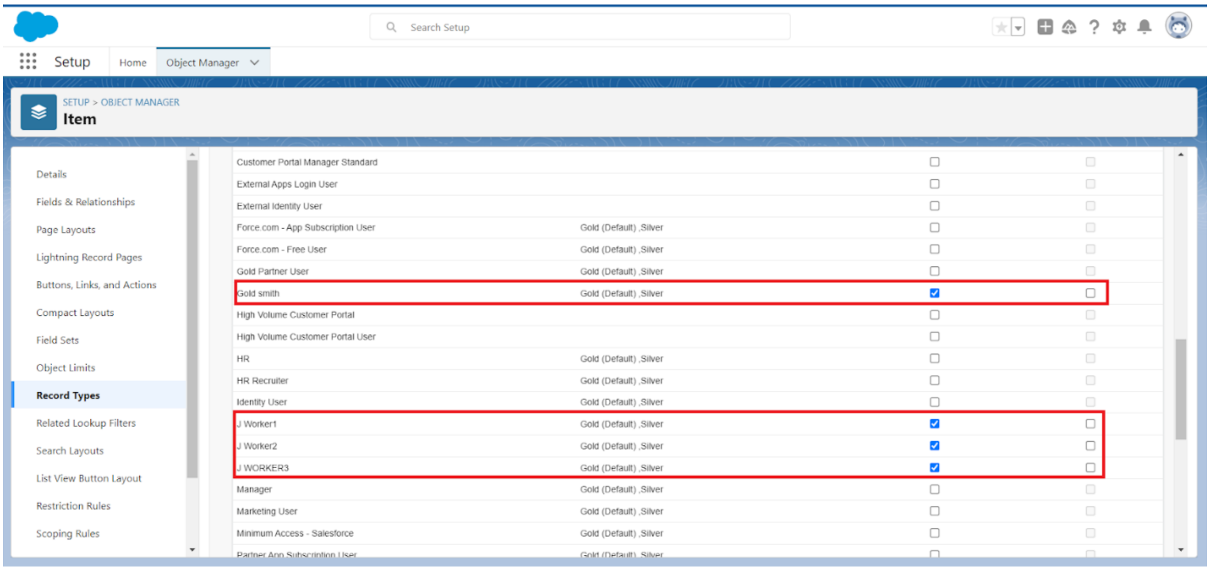
Milestone 10: Record Types

Activity 1: To Create a Record Type

1. Go to setup >> click on Object Manager >> type object name (Item) in quick find bar? click on the object.
2. Click on the Record Types >> click New.
3. Select Existing Record as "Master",Record type Label as "Gold",Description as "Gold items information".



4. Uncheck for "Make Available".
5. Scroll down and check for the Gold Smith,Worker JW & System Administrator profile and click on Next.

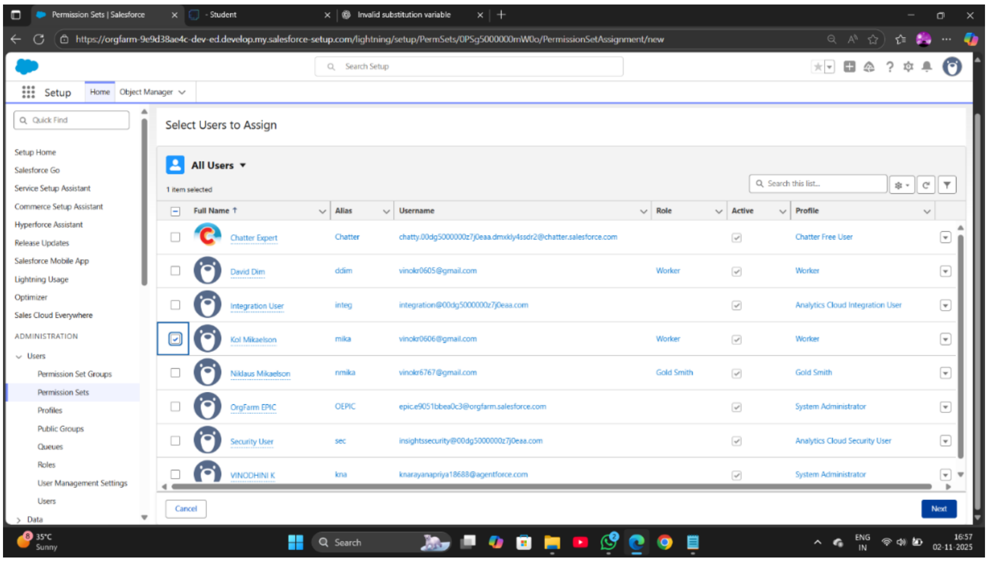


6. Select "Apply a different layout for each profile"
7. Change page layout to "Page Layout for Gold"for Gold Smith,Worker and System Administrator
8. Save & new.

Milestone 11: Permission Sets

Activity 1: Creating permission set

1. Go to setup >> type “permission sets” in quick search >> select permission sets >> New.
2. Enter the label name as “Per to Worker”, API will be auto populated >> save.
3. Click on Save.
4. After saving the permission click on the Manage assignment
5. Now click on the Add Assignment.

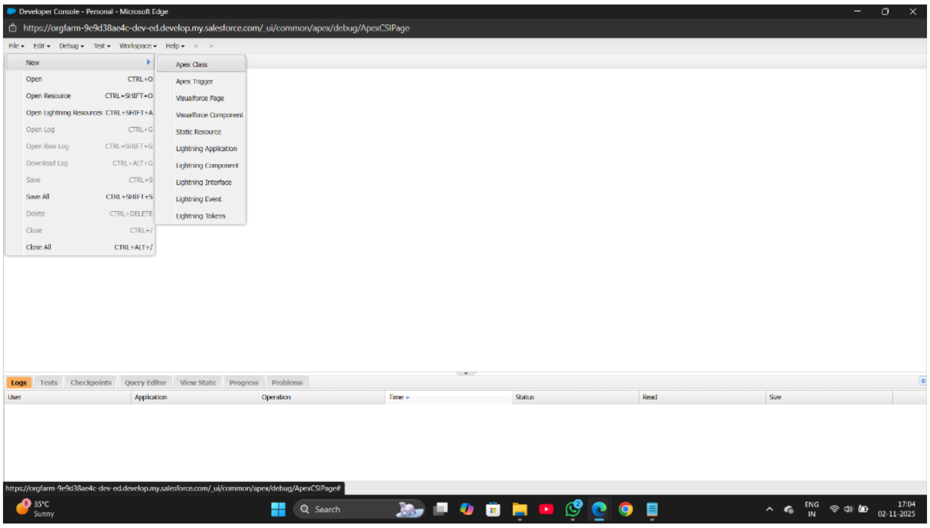


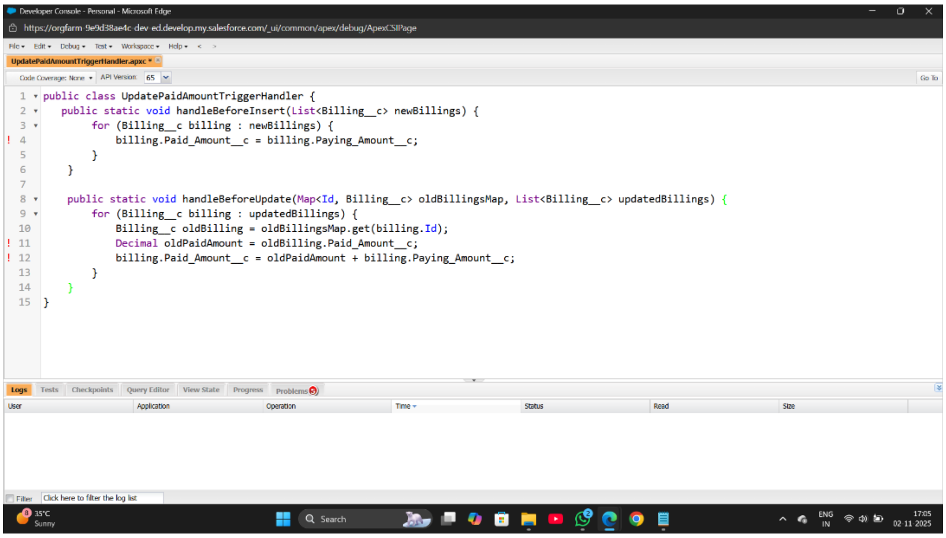
6. Now select the users which you have created in user milestone, using Worker profile and click on Next >> Assign >> Done.

Milestone 12: Trigger

Activity 1: Create a Trigger Handler class

- A trigger handler is a design pattern that organises trigger logic into separate classes.
- This helps in keeping code organised, reusable, and easier to maintain.
- The trigger handler class contains methods that handle the specific logic for different trigger events, improving code structure and readability.
- This approach is particularly useful for complex triggers or projects with multiple triggers, as it promotes modular coding practices and reduces the chances of code duplication





Activity 2: Create The Trigger

CODE:

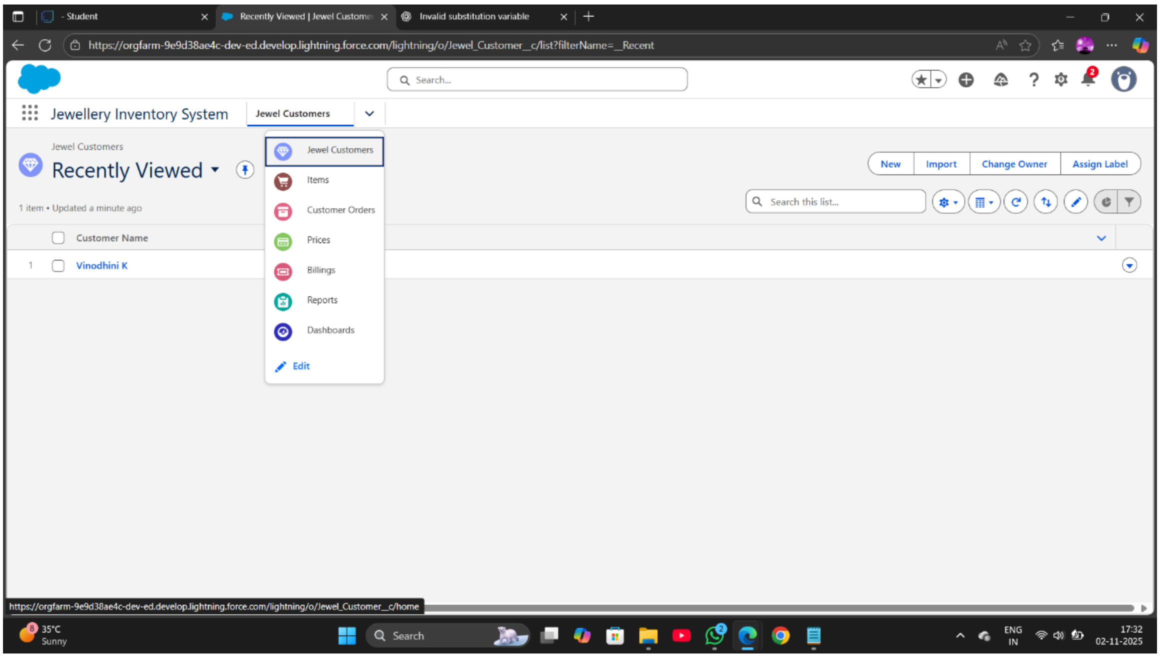
```
trigger UpdatePaidAmountTrigger on Billing__c (before insert, before update) {
    if (Trigger.isInsert) {
        UpdatePaidAmountTriggerHandler.handleBeforeInsert(Trigger.new);
    } else if (Trigger.isUpdate) {
        UpdatePaidAmountTriggerHandler.handleBeforeUpdate(Trigger.oldMap,
Trigger.new);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

}

Milestone 13: User Adoption

Activity 1: Create a Record (Jewel Customer)

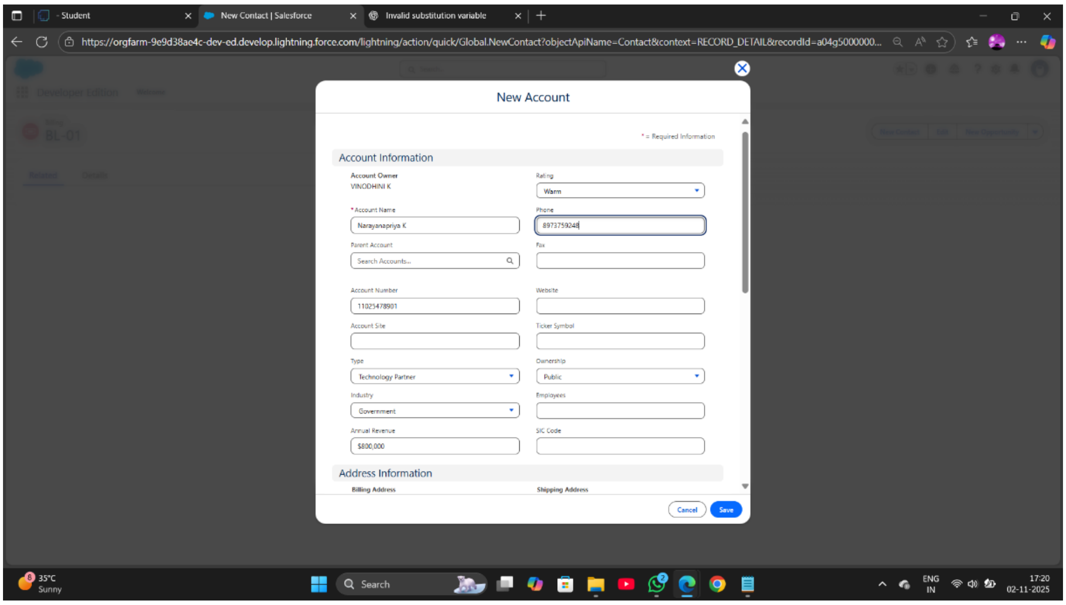
1. Click on App Launcher on the left side of the screen.
2. Search Jewelry Inventory System & click on it.



3. Click on Drop Down and Click on the Jewel Customer tab.
4. Click New.

Activity 2: View a Record (Jewel Customer)

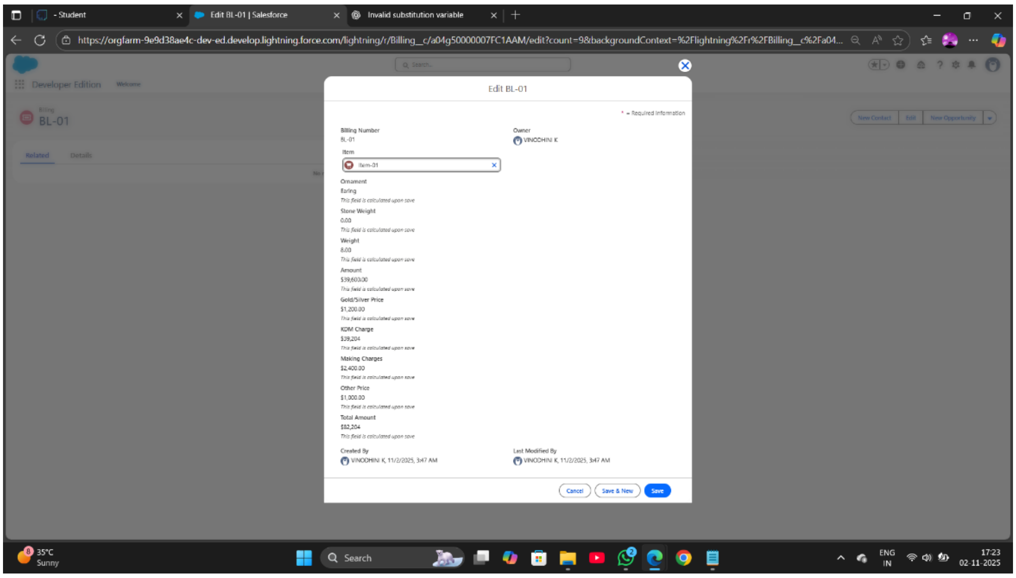
1. Click on App Launcher on the left side of the screen.
2. Search Jewelry Inventory System & click on it.
3. Click on the Jewel Customer Tab.



4. Click on any record name. you can see the details of the Jewel Customer.

Activity 3: Update a Record (Jewel Customer)

1. Click on App Launcher on the left side of the screen.
2. Search Jewelry Inventory System & click on it.
3. Click on the Jewel Customer Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click update.

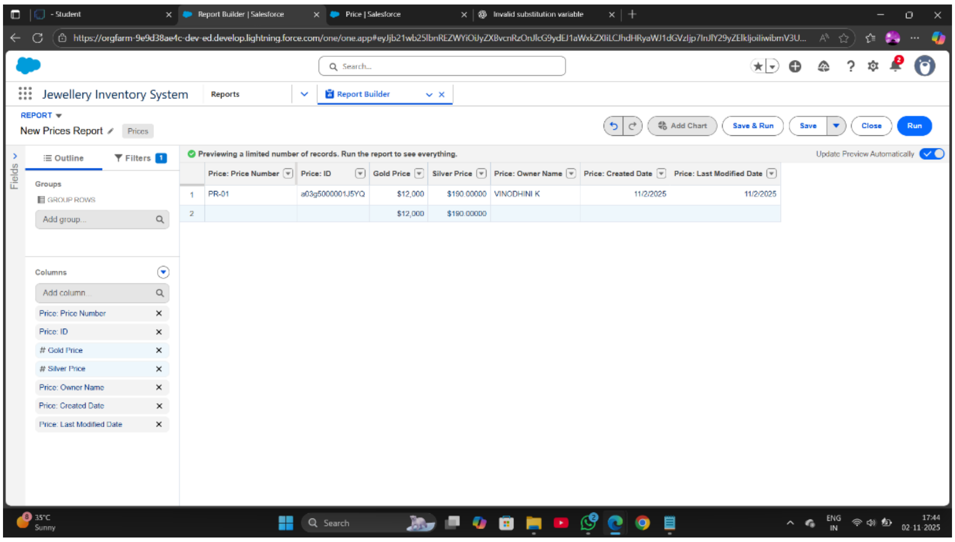


Note: Create at least 10 records for each of the objects: Jewel Customer, Price, Item, Customer Order and Billing.

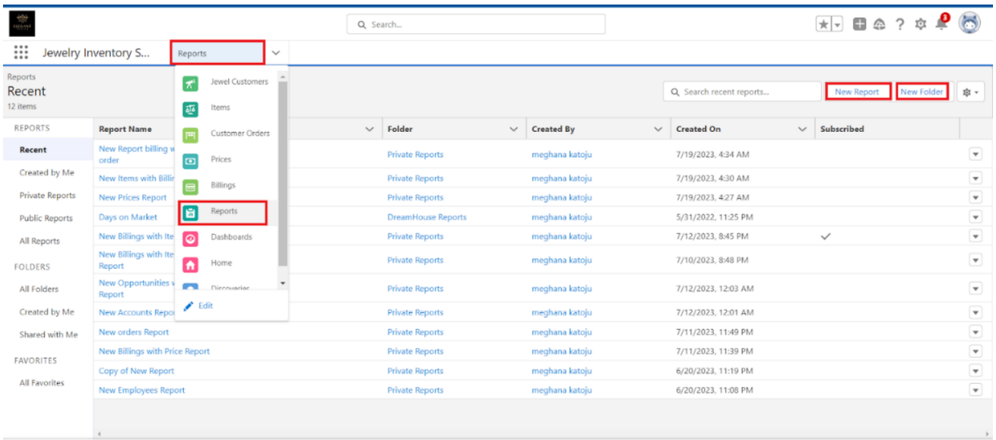
<u>Milestone 14: Reports</u>

Activity 1: Create Report

1. Go to the app >> click on the reports tab
2. Click New Report.



3. Select report type from category or from report type panel or from search panel >> Click on start report.
4. Customise your report

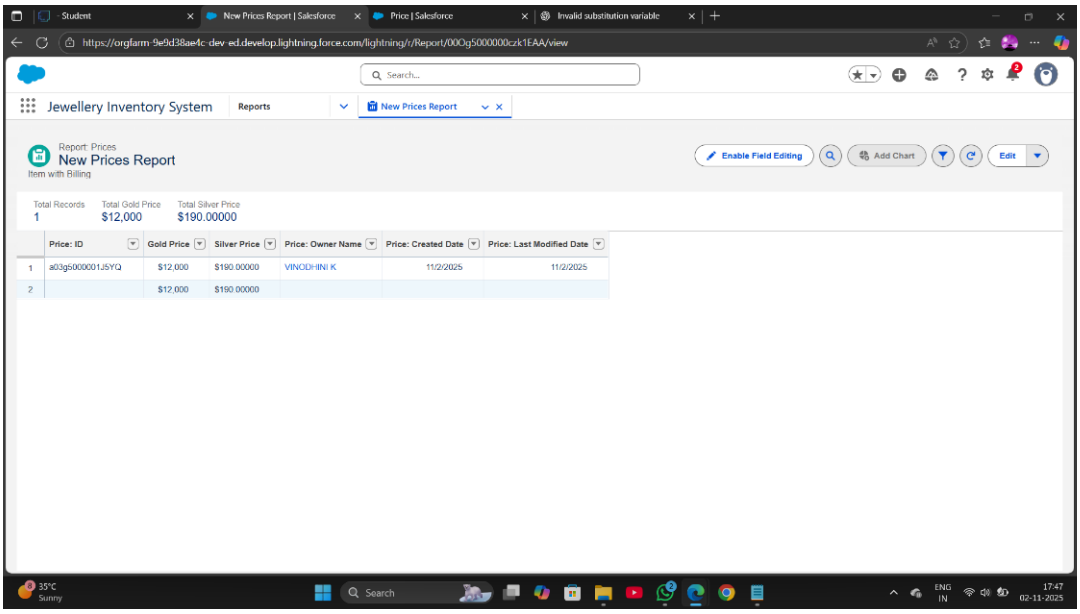


5. Save or run it.

Note: Reports may get varied from the above pictures as the data might be different.

Activity 2: Reports

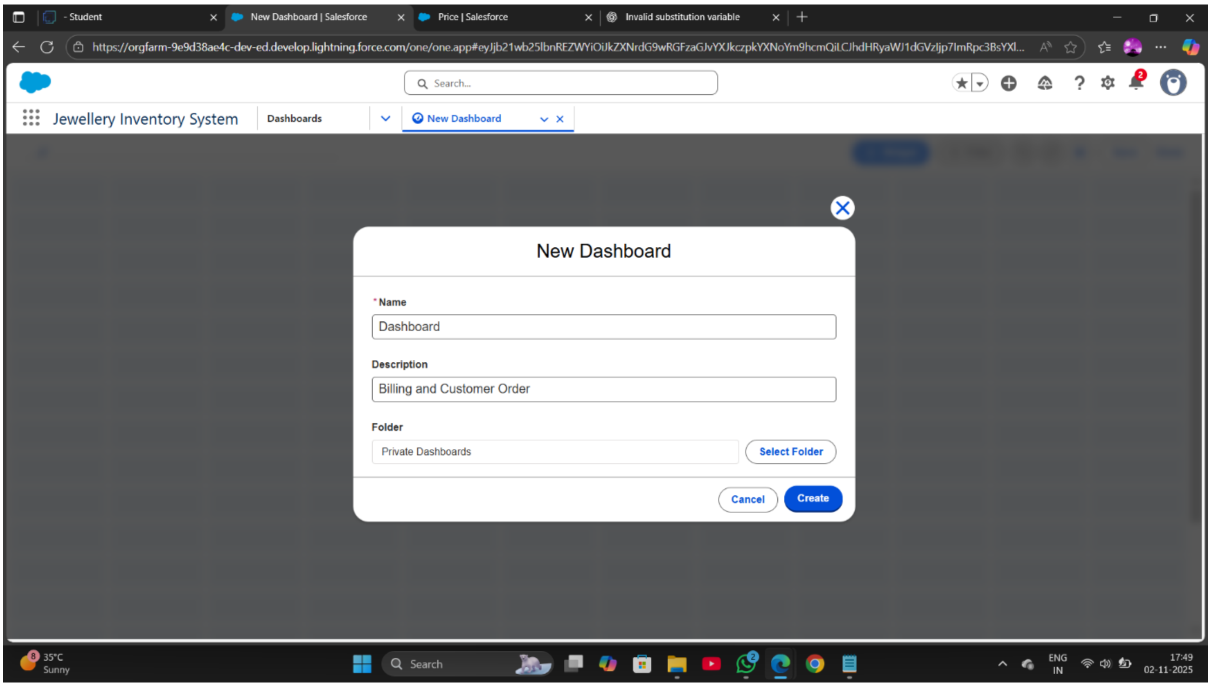
1. Create a report with report type: “Item with Billings”.
2. Create a report with report type: “Billings with item and Customer order”.



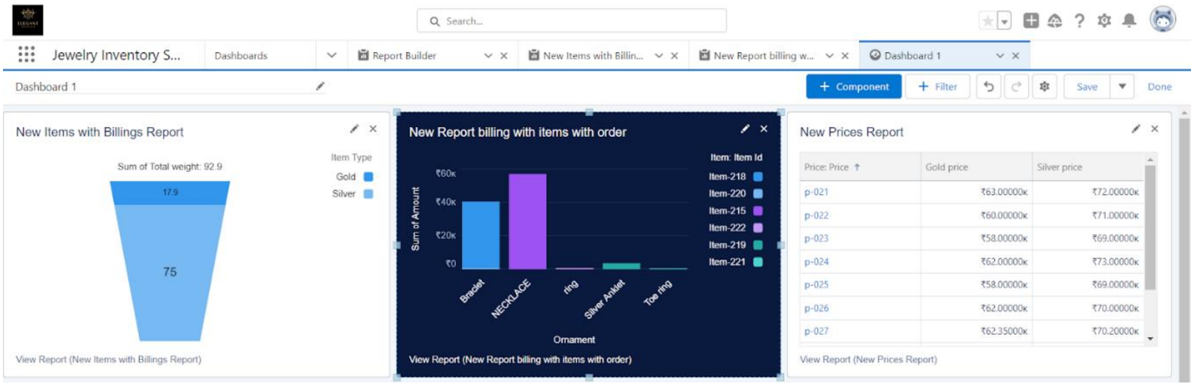
Milestone 15: Dashboards

Activity 1: Create Dashboards

1. Go to the app >> click on the Dashboards tabs.
2. Give a Name and click on Create.



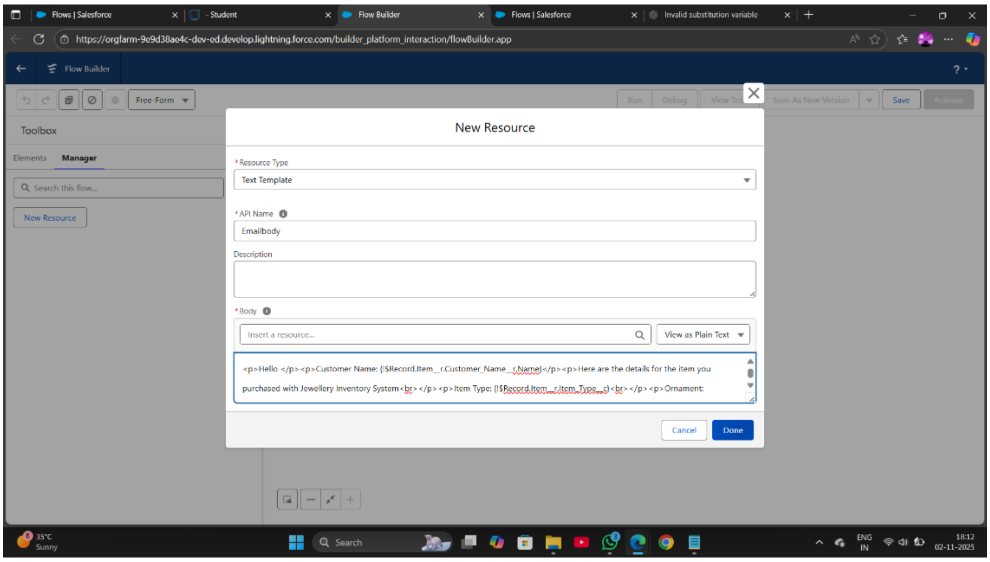
3. Select add component.
4. Select a Report and click on select.
5. Click Add then click on Save and then click on Done.
6. Create another Dashboard as we discussed in activity 1.



Milestone 16: Flows

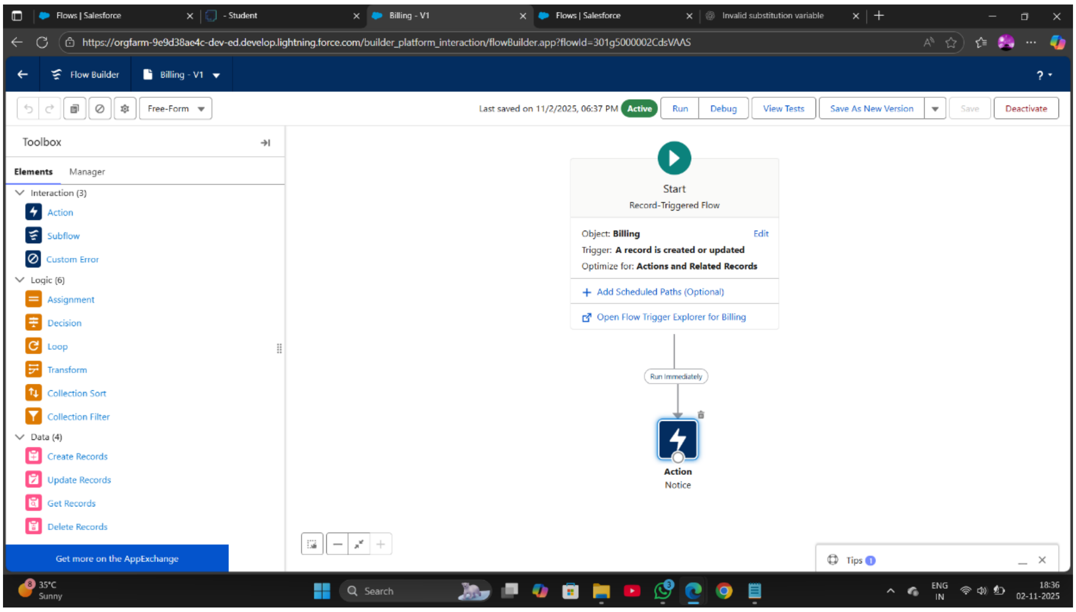
Activity 1: Create a Flows

1. Go to setup >> type Flow in quick find box >> Click on the Flow and Select the New Flow.

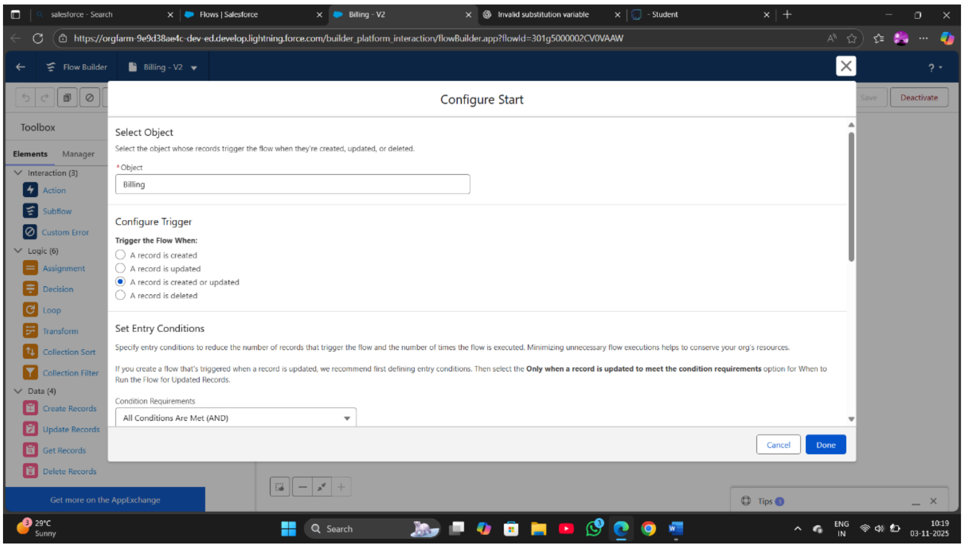


2. Select the Record-triggered flow and Click on Create. Select the Object as a "Billing" in the Drop down list.
3. Select the Trigger Flow when: "A record is Created or Updated".
4. Select the Optimise the flow for: "Actions and Related Records" and Click on Done.
5. Now change the mode form Auto-layout to free-form.
6. Now select the manger option in the toolbox, click New resource.

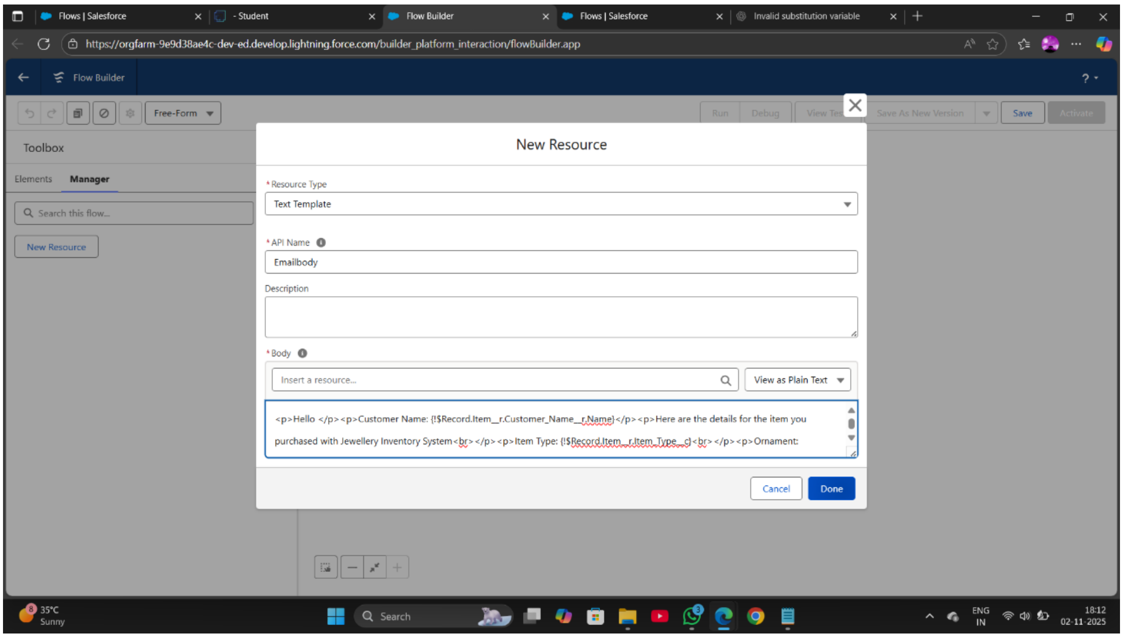
7. Select the resource type as text template. Click done.



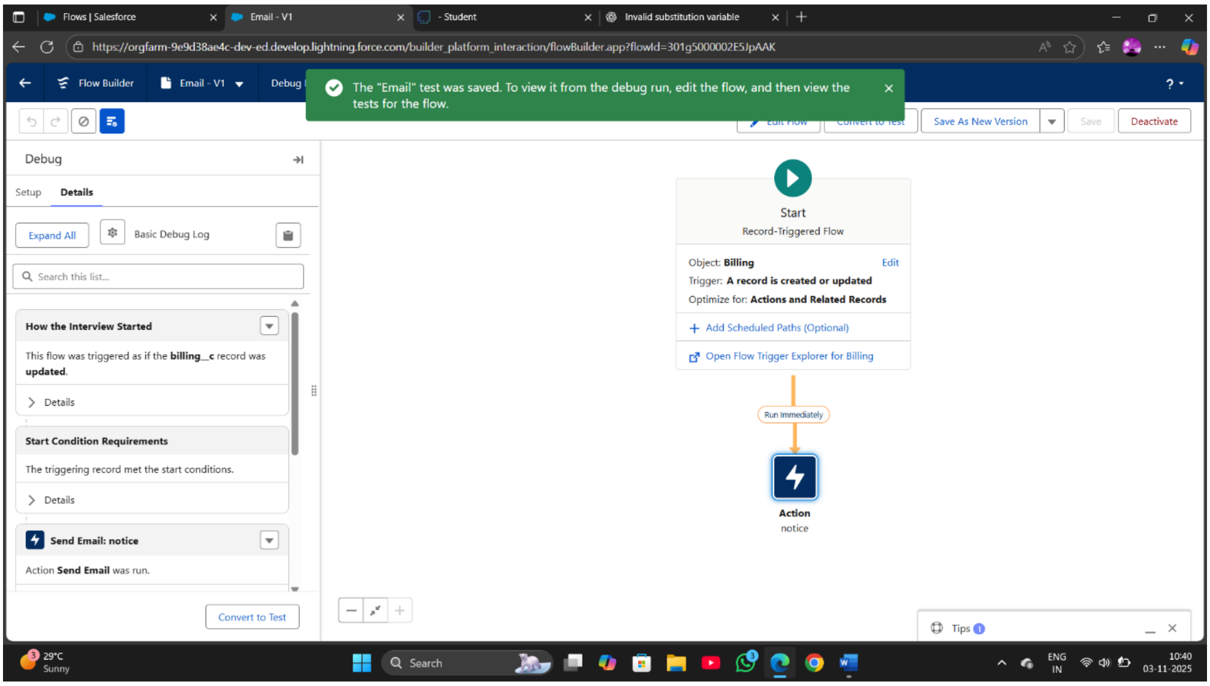
8. Now click on elements, and drag the action element into the preview pane.
9. In the body field paste the syntax that is given below.
   Hello
   Customer Name: {!$Record.Item__r.Customer_Name__r.Name}
   Here are the details for the item you purchased with Jewellery Inventory System



10. Give the label name as “notice”. Now drag the path from the start to the action element.
11. Include Recipient Address list, select the email form the record.



12. Click on save. Given the Flow label , Flow Api name will be auto populated.
13. And click save, and click on activate.



PHASE 5: DEPLOYMENT & MAINTENANCE

- ✓ Once the CRM application was fully tested and validated, it was deployed in the Salesforce production environment for real-time use.
- ✓ All essential modules — including Customer, Jewelry Item, Customer Order, Billing, and Price — were activated and integrated.

- ✓ Dashboards and reports were shared with management for monitoring business performance and customer engagement.
- ✓ Maintenance involves regular updates, system monitoring, and performance optimization.

USE OF BEST PRACTICES

- ❖ Technical Improvements: Integration with AI and machine learning to predict customer preferences and buying trends.
- ❖ Business Outcomes: Increased brand loyalty through rewards, offers, and better customer engagement.
- ❖ Long-Term Goals: Expansion of CRM features to support multiple branches or franchises. Use of data analytics and forecasting for strategic business planning.

CONCLUSION

- ➢ The CRM Application for Jewel Management successfully streamlines and automates jewelry business operations using the Salesforce platform. It centralizes customer information, manages jewelry items, handles orders and billing, and ensures accurate pricing — all within a secure and efficient system.
- ➢ By integrating automation and cloud technology, this CRM system reduces manual work, minimizes errors, and supports business growth. In conclusion, the project demonstrates how Salesforce CRM can be effectively applied to the jewelry industry to achieve better efficiency, transparency, and customer relationship management.

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