<u>CRM Application ForJewel</u> <u>Management</u>- (<u>Developer</u>)

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Project Overview – CRM Application for Jewel

Management 1. Introduction

Jewelry businesses often face challenges in managing customer relationships, sales, inventory, and after-sales services effectively. Traditional methods like paper records or simple spreadsheets are inefficient and prone to errors. To overcome these challenges, a CRM (Customer Relationship Management) application tailored for jewel management

helps streamline customer interactions, track sales, manage inventory, and enhance customer satisfaction.

This project aims to design and develop a CRM application specifically for jewelry shops and showrooms, integrating both customer engagement and inventory management features into a single platform.

2. Objectives

To provide a centralized system for managing customer information and purchase history. To automate jewelry sales, billing, and order tracking.

To maintain accurate records of jewelry inventory, including gold, silver, diamonds, and custom designs.

To track customer preferences and suggest personalized offers.

To generate reports for sales, profits, and stock management. To improve customer loyalty through better after-sales support and reminders (e.g., polishing, warranty, festivals).

3. Scope

The CRM application will include the following modules:

1. Customer Management – Customer profiles, purchase history, preferences. 2. Inventory Management – Adding, updating, and tracking jewelry stock. 3. Sales & Billing – Automated invoice generation, payment tracking. 4. Order Management – Custom orders, repair services, delivery tracking. 5. Loyalty & Offers – Discounts, festival offers, and loyalty points. 6. Reports & Analytics – Daily/weekly/monthly sales reports, stock alerts. 7. Admin Panel – Manage users, roles, and permissions.

4. Technology Stack (suggested)

Frontend: ReactJS / Angular / HTML, CSS, JavaScript

Backend: Node.js / Java / Python (Django/Flask)

Database: MySQL / PostgreSQL / MongoDBCRM Integration Tools: Salesforce

APIs (optional) or custom-built modules

Hosting/Deployment: AWS / Azure / Local server

5. Benefits

Easy tracking of customer data and preferences.

Efficient jewelry stock and sales management.

Reduction in manual errors and duplicate records.

Improved customer satisfaction and retention.

Business insights through automated reports.

6. End Users

Jewelry shop owners/managers.

Sales executives.

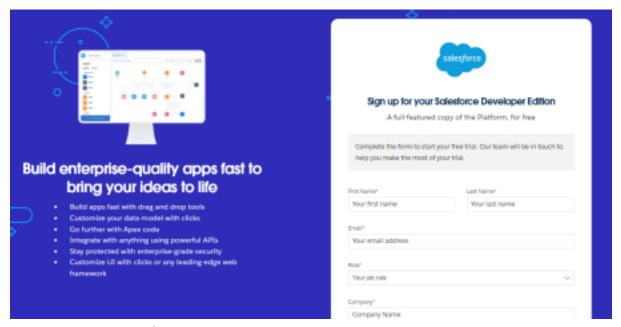
Customers (through a possible customer-facing portal or app).

MILESTONE1:SALESFORCE DEVELOPER ACCOUNT

CREATION 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:



- 1. First name & Last name
- 2. Email
- 3. Role: Developer
- 4. Company: College Name
- 5. County: India
- 6. Postal Code: pin code
- 7. Username: should be a combination of your name and company

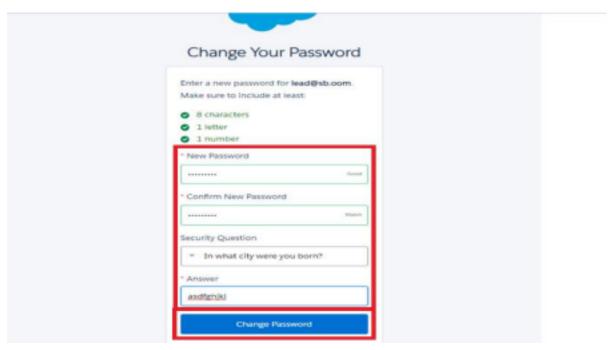
This need not be an actual email id, you can give anything in the format : username@organization.com

Click on sign me up after filling these.

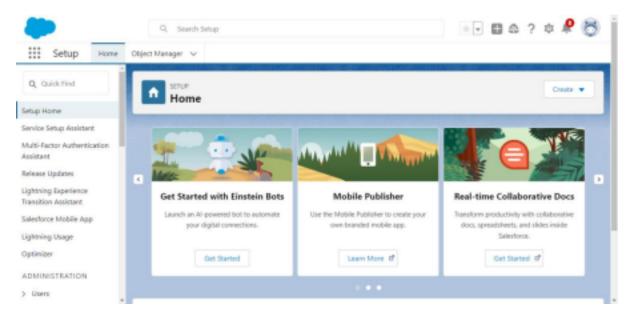
Activity 2: Account Activation

- 1. Go to the inbox of the email that you used while signing up. Click on the Reset Password to activate your account. The email may take 5-10mins.
- 2. Click on Reset Password
- 3. Give a password and answer a security question and click on change

password.



4. Then you will redirect to your salesforce setup page.



MILESTONE 2: OBJECT

Activity 1 :Creating jewel customer object

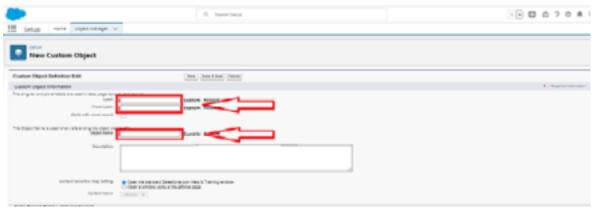
The purpose of creating a Jewel Customer custom object is to store and manage information about Customer.

To create an 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 a Item Object

The purpose of creating a Item object is to manage the inventory of gold and silver items. To create an object:

- 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 (Use "Auto Number" as a data type for Customer Order, Price, Billing).

MILESTONE 3: TABS

Activity 1: Create a Custom Tab

To create a Tab:(Customer)

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

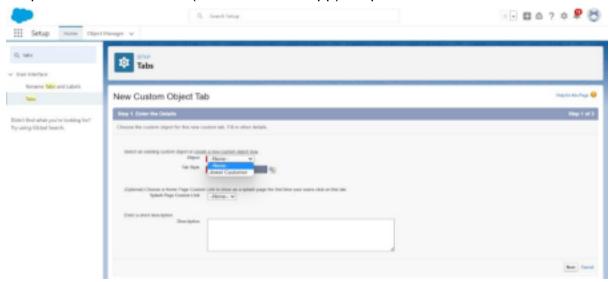
Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed extra allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigat you to add Lightning Pages to Lightning Experience and the mobile app.



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 : Create a Tab:(item)

- 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.

Note: Now create tabs for Customer Order, Price, Billing objects.

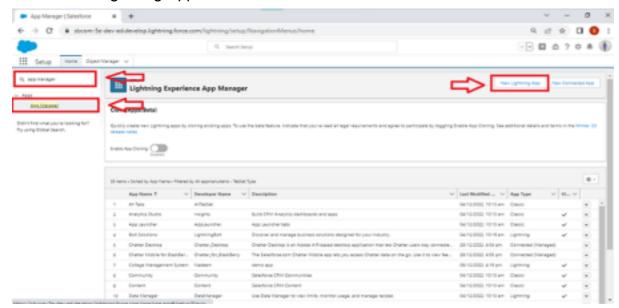
MILESTONE 4: THE LIGHTING APP

Activity 1 : Create a Lighting App

To create a lightning app page:

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

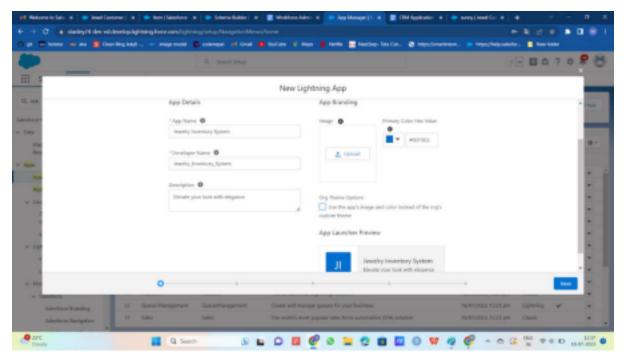
App Name: Jewellery Inventory System.

Developer Name: This will auto populated

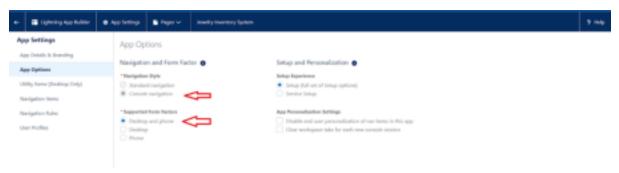
Description: Elevate your look with elegance

Image: optional (if you want to give any image you can otherwise not

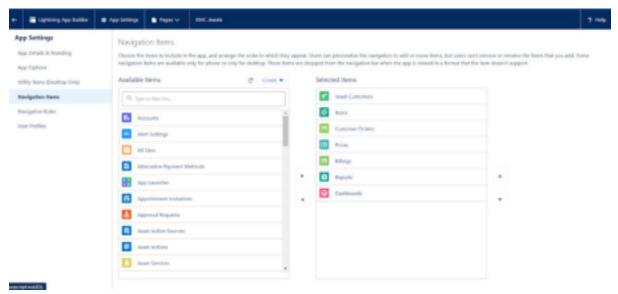
mandatory) Primary colour hex value: keep this default.



4. Then click Next >> (App option page)Set Navigation Style as Console Navigation >> Next.

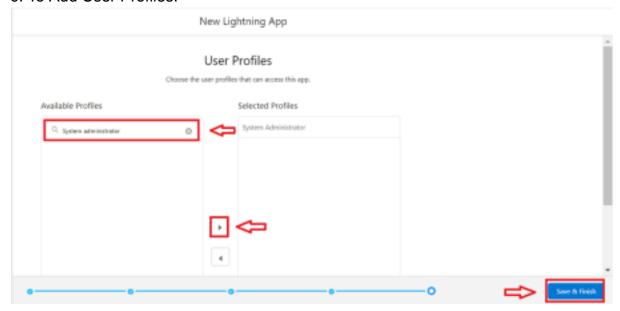


- 4. (Utility Items) keep it as default >> Next.
- 5. To Add Navigation Items:



Search for the item in the (JewelCustomer, Item, CustomerOrder, Price, Billing, Reports, Dashboard) from the search bar and move it using the arrow button? Next? Next.

6. 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

A Lookup relationship is a type of relationship in Salesforce that connects two

objects together based on a field known as the Lookup field. It establishes a relationship between a child object and a parent object, allowing the child object to reference the parent object.

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

- 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.
- 6. Next >> Next >> Save.

Activity 2 : Creating a Master-Detail Relationship

Master-detail relationship is a type of relationship between two objects where the master object controls certain behaviours and settings of the detail object. Here are a few use cases that demonstrate the use of master-detail relationships

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

To Create a Master-Detail relationship:

- 1. Go to the setup page >> click on object manager >> type object name(Customer Order) in the guick find bar >> click on the object.
- 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.
- 6.Next >> Next >> Save.

Activity 3: Creating Text Field in Jewel Customer Object

To create fields in an object:

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

o Length: 20

o Field Name : gets auto generated

Click on Next >> Next >> Save and new.

Activity 4 : Creating the Phone field in object Jewel Customer

To create fields in an 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 "Phone" and click Next.
- 4. Given the Field Label as "Phone".



1. Field Name will be auto populated, and click on Next >> Next >> Save & new.

Activity 5: Creating the Email field in object Jewel Customer

To create fields in an 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 "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 the number field in Item object

To create fields in an 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 "Number" and click Next.
- 4. Given the Field Label as "Purity" and length as "2".



5. Field Name will be auto populated, and click on Next >> Next >> Save. Activity 7: Creating Picklist Field in Item Object

To create fields in an 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 "Picklist" and click Next.

- 4. Enter Field Label as "Item Type".
- 5. In values select "Enter values(Gold,Silver), with each value separated by a new line" and enter values as shown below.



6. Click Next? Next? Next? Save.

Activity 8: Creating Currency Field in Price Object

To create fields in an object:

- 1. Go to setup >> click on Object Manager >> type object name(Price) in quick find bar >> click on the object.
- 2. Now click on "Fields & Relationships" >> New.
- 3. Select Data type as "Currency" and click Next.



- 4. Enter Field Label as "Gold Price" and length as "8" and decimal 0. Field name will be auto generated.
- 5. Click Next >> Next >> Save .

Activity 9 : Creating Formula Field(Cross Object) in Item Object

To create fields in an object:

(Note:Create a Lookup Relationship in Item Object to Price Object with Field Name:Prices)

- 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.





6.

click "Check Syntax" and Next >> Next >> Save & New.

Activity 10 : Creating Remaining Fields in Objects

Now create the remaining fields using the data types mentioned.

Activity 11: 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.

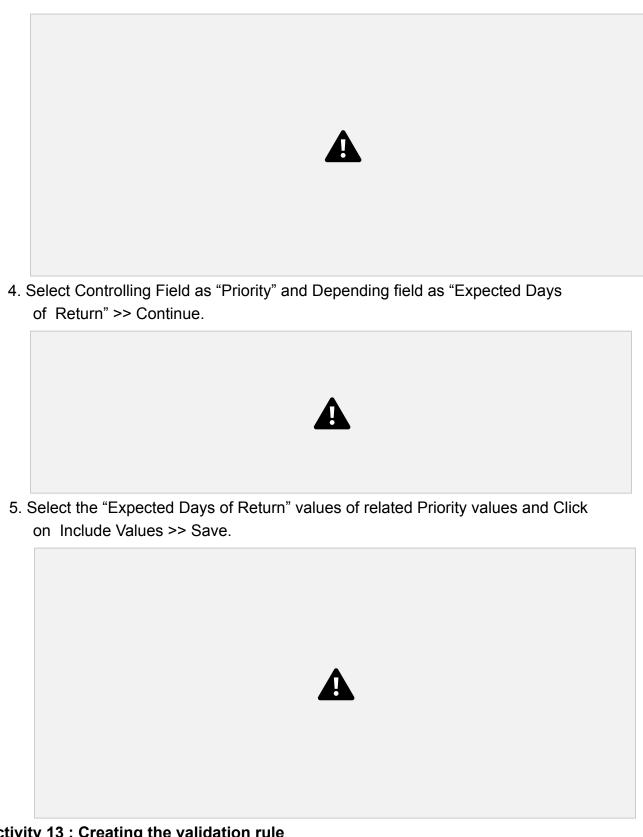


Activity 12 : Creating the Field Dependencies

Use case:

Field Dependencies are used to create relationships between fields within an object. They allow you to control the visibility and availability of fields based on the values selected in other fields.

- 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.



Activity 13 : Creating the validation rule Creating the validation rule

Creating the validation rule for Postal Code field in Jewel Customer object

Note: check whether the fields mentioned in the formula field are created or not, if not go to activity 10 and create those fields mentioned 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. Click on the validation rule >> click New.



- 3. Enter the Rule name as "Postal Code ".
- 4. 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))
 )
)
```



5. 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".
- 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.

Create Validation rule for Item object.

- 1. Enter Rule name as "ValidationRule For Item".
- 2. Insert the Error Condition Formula as : OR(ISBLANK(Amount__c) , ISBLANK(Customer_Name__c) ,ISBLANK(
 Gold_price__c),ISBLANK(KDM__c),ISBLANK(Ornament__c),ISBLANK(
 Percentage__c),ISBLANK(Making_Charges__c),ISBLANK(Prices__c
),ISBLANK(Stone_weight__c),ISBLANK(Silver_price__c),ISBLANK(
 Stone other price_ c),ISBLANK(Stone weight_c),ISBLANK(Weight_c

))

3. Enter the Error Message as "Please fill Required fields", select the Error location as Top of Page and click Save.

MILESTONE 6: 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, Prices, 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 7: ROLES

Activity 1: Creating Gold Smith Role

1. From setup ,Go to quick find >> Search for Roles >> click on set up roles.

2. Click on Expand All and click on add role under whom this role works.



3. Give Label as "Gold Smith" and Role name gets auto populated. Check to whom this role (Gold Smith) reports. Then click on Save.



Activity 2: Create one more role as Worker which reports to Gold Smith.



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

1. First Name: Niklaus

2. Last Name: Mikaelson

3. Alias: Give a Alias Name

4. Email id : Give your Personal Email id

5. Username: Username should be in this form: text@text.text

6. Nick Name: Give a Nickname

7. Role: Gold Smith

8. User licence : Salesforce9. Profiles : Gold Smith



1. Save.

Activity 2 : Create User

1. Go to setup >> type users in quick find box >> select users >> click New

user. 2. Fill in the fields

• First Name : Kol

· 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 : Worker

User licence : Salesforce Platform

• Profiles : Worker

3. Save.

Note:

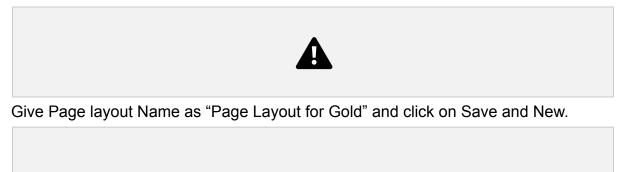
Create two more users as mentioned in activity 2 using the same profile.

MILESTONE 9:PAGE LAYOUTS

Activity 1: To Create a Gold Page layout

Go to Setup >> Click on Object Manager >> Search for the object (Item) >> From drop down click on Edit.

Click on Page layout >> Click on New.





Arrange the field as shown in the Information Section ,remove fields which are related to Silver and click Ok.



Click Save.

Make sure your page layout looks like the picture above.

Activity 2:To Create A Silver Page Layout

- 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 Silver" and click on Save.
- 4. Arrange the field as shown in the Information Section ,remove fields which are related to Gold and click Ok.



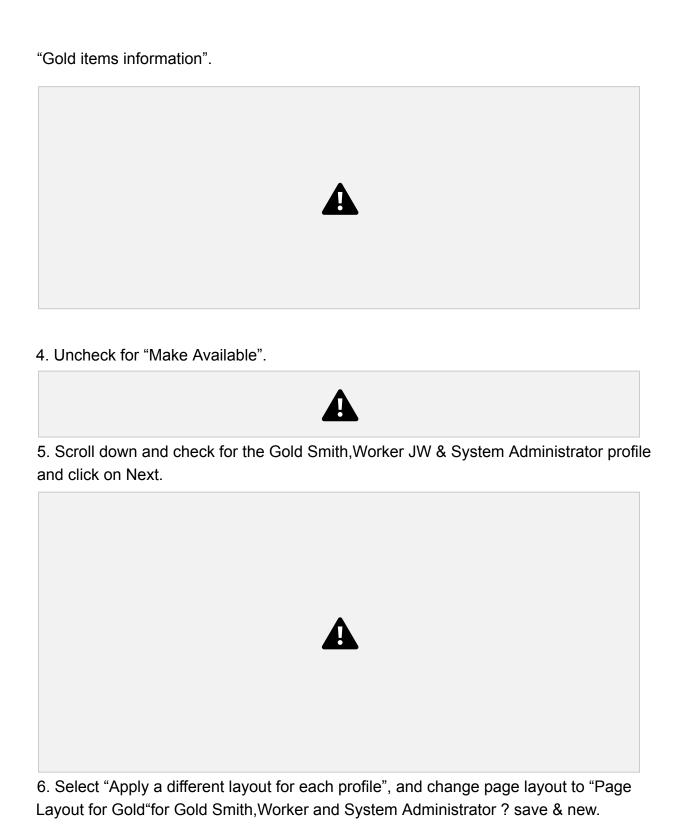
MILESTONE 10:RECORD TYPES

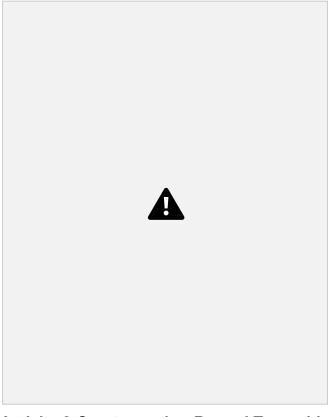
Activity : To Create A Record Type

- 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





Activity 2:Create another Record Type with name "Silver" following the steps from Activity1.

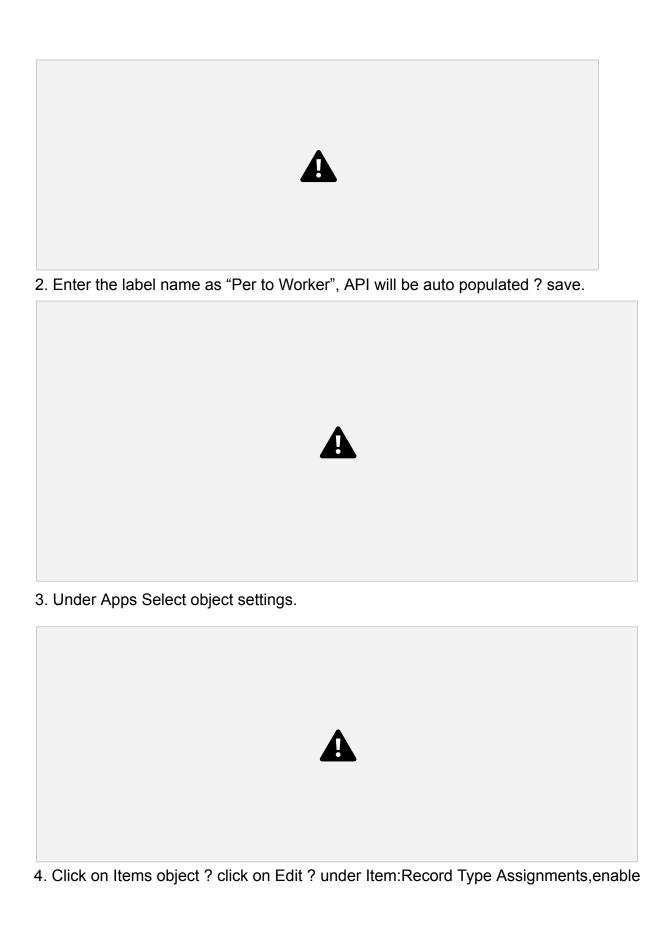
Note: Use page layout for Silver.

MILESTONE 11:PREMISSION SETS

Activity : Create A Permission Sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. Permission sets extend users' functional access without changing their profiles. Users can have only one profile but, depending on the Salesforce edition, they can have multiple permission sets.

1. Go to setup >> type "permission sets" in quick search >> select permission sets >> New.



Gold, Silver? Object permission check for read, edit and create. 5. Click on Save. 6. After saving the permission click on the Manage assignment 7. Now click on the Add Assignment.

8. 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:Creating A Trigger Handler Class

Trigger handler:

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.

CODE:

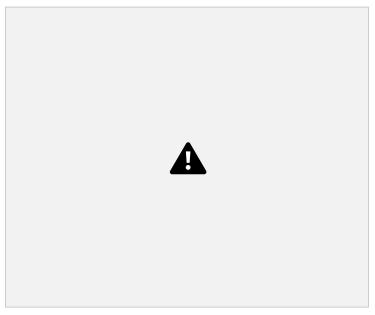
```
public class UpdatePaidAmountTriggerHandler {
  public static void handleBeforeInsert(List<Billing__c> newBillings)
  {
    for (Billing__c billing : newBillings) {
      billing.Paid_Amount__c = billing.Paying_Amount__c;
    }
}
```

```
public static void handleBeforeUpdate(Map<Id, Billing c>
oldBillingsMap, List<Billing c> updatedBillings) {
for (Billing c billing : updatedBillings) {
Billing c oldBilling = oldBillingsMap.get(billing.ld);
Decimal oldPaidAmount = oldBilling.Paid Amount c;
billing.Paid Amount c = oldPaidAmount + billing.Paying Amount c;
}
}
Activity 2:Create A 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.



5. Fill the Details and click on Save.

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: Delete 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 delete.

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

MILESTONE 14: REPORTS

Activity 1 : Create A Reports

- 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

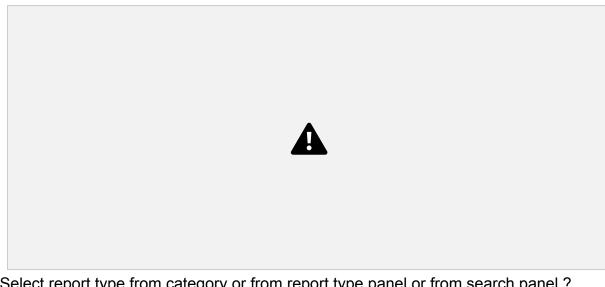


- Add fields from the left pane as shown below.
- 5. Save or run it.



Note: Reports may get varied from the above pictures as the data might be different. **Activity 2:Reports**

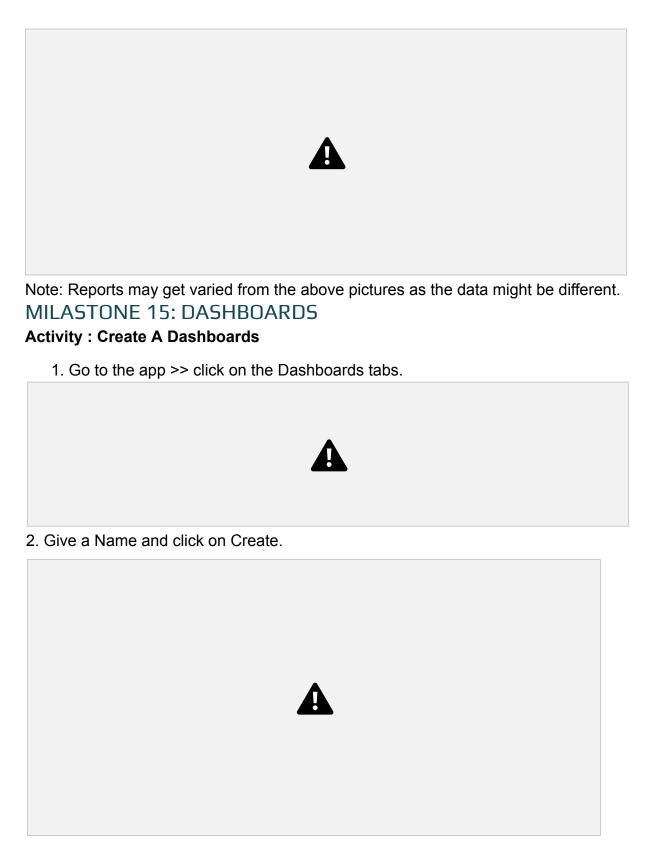
- 1. Go to the app >> click on the reports tab
- 2. Click New Report.



- 3. Select report type from category or from report type panel or from search panel? click on start report.
- 4. Customise your report



- Add fields from the left pane as shown below.
- 5. Save or run it.



3. Select add component.



- 4. Select a Report and click on select.
- 5. Click Add then click on Save and then click on Done.

Activity 2: Create another Dashboard as we discussed in activity 1.



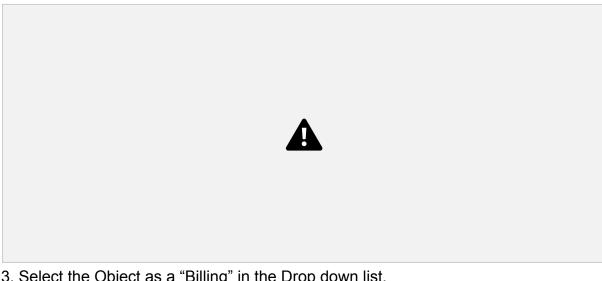
MILESTONE 16: FLOWS

Activity : Create A Flow

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.



- 3. Select the Object as a "Billing" in the Drop down list.
- 4. Select the Trigger Flow when: "A record is Created or Updated". 5. Select the Optimise the flow for: "Actions and Related Records" and Click on Done.



- 6. Now change the mode form Auto-layout to free-form.
- 7. Now select the manger option in the toolbox, click New resource.
- 8. Select the resource type as text template.



9. Enter the API name as "Email body".



- 10. Change the view as Rich Text? View to Plain Text.
- 11. 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

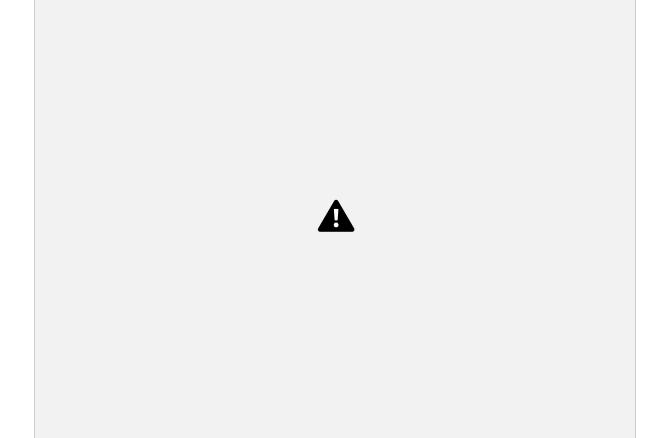
System Item Type: {!\$Record.Item r.Item Type c}

Ornament: {!\$Record.Ornament__c}

Weight: {!\$Record.Weight_c}grams

Amount: {!\$Record.Amount__c}

- 12. Click done.
- 13. Now click on elements, and drag the action element into the preview pane.
- 14. Their action bar will be opened in that search for "send email" and click on it.
- 15. Give the label name as "notice"
- 16. API name will be auto populated.
- 17. Enable the body in set input values for the selected action.
- 18. Select the text template that was created.



- 19. Include Recipient Address list, select the email form the record. ({!\$Record.Item_r.Customer_Namer.Email_c})
- 20. Include the subject as "Welcome to Jewelry Inventory System".
- 21. Click done.



- 22. Now drag the path from the start to the action element.
- 23. Click on save. Given the Flow label, Flow Api name will be auto populated. 24. And click save, and click on activate.





CONCLUSION

Conclusion

The CRM application for jewel management successfully streamlines and modernizes the way jewelry businesses manage their customer relationships, inventory, and sales processes. By integrating customer data, purchase history, and personalized preferences, the system enables jewelers to deliver a more engaging and customer-focused experience. Additionally, it enhances operational efficiency through features such as order tracking, sales analysis, inventory management, and follow-up reminders.

This project demonstrates how a CRM tailored to the jewelry industry not only improves customer satisfaction and loyalty but also assists business owners in making informed decisions based on real-time data. Overall, the application provides a sustainable, user friendly, and scalable solution that bridges the gap between traditional jewelry business practices and modern digital transformation.