

**GOVERNMENT ARTS AND SCIENCE COLLEGE METTUPALAYAM**  
**(Affiliated to Bharathiar University)**  
**METTUPALAYAM**



**DEPARTMENT OF COMPUTER SCIENCE**  
**BATCH 2023-2026**  
**BSC COMPUTER SCIENCE III-YEAR**  
**V - SEMESTER**

**PROJECT TITLE : CRM – APPLICATION FOR JEWEL MANAGEMENT –  
(DEVELOPER)**

**TEAM ID : NM2025TMID25269**

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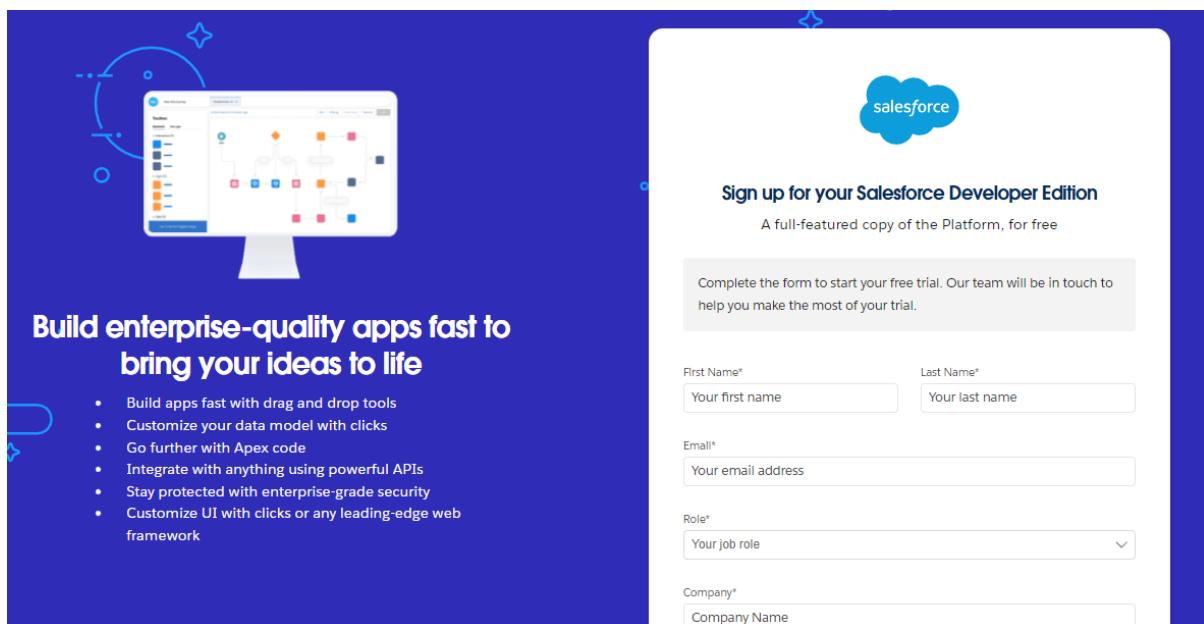
**TEAM MEMBER : RANJITH.R**

# INTRODUCTION :

A jewelry management CRM is a specialized Customer Relationship Management (CRM) application designed to help jewelers manage customer relationships, streamline sales processes and improve overall business operations by centralizing customer data, purchase history, and preferences to create personalized experiences and drive sales. Key features include customer segmentation, personalized marketing, loyalty programs, efficient sales and order management, robust inventory tracking with visual catalogs, and insightful reporting for data-driven decisions. The goal is to enhance customer loyalty, boost sales, and provide a competitive edge in the growing jewelry market.

## Creating Developer Account :

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.

## **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.**

Change Your Password

Enter a new password for lead@sb.oom.  
Make sure to include at least:

- 8 characters
- 1 letter
- 1 number

\* New Password

..... Good

\* Confirm New Password

..... Match

Security Question

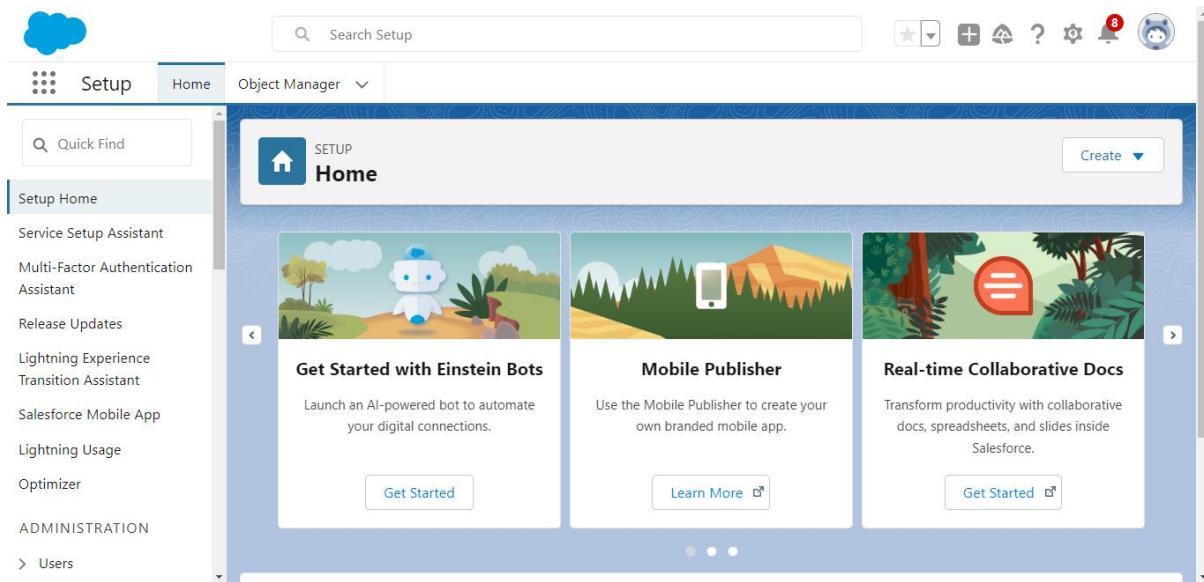
In what city were you born?

\* Answer

asdfghjkl

Change Password

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



## Create 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

Label	API Name	Type	Description	Last Modified
Jewel Customer				Custom Object from Spreadsheet

### 3. Enter Record Name Label and Format

- **Record Name >> Customer name**
- **Data Type >> Text**

The screenshot shows the 'Enter Record Name Label and Format' page. At the top, there's a note: 'The Record Name appears in page layouts, key lists, related lists, lookups, and search results. For example, the Record Name for Account is "Account Name" and for Case it is "Case Number". Note that the Record Name field is always called "Name" when referenced via the API.' Below this, the 'Record Name' field contains 'Customer' and the 'Example' field shows 'Account Name'. The 'Data Type' is set to 'Text'. Under 'Optional Features', 'Allow Reports' is checked, while others like 'Allow Activities' and 'Enable Licensing' are unchecked. In the 'Object Classification' section, 'Allow Sharing', 'Allow Bulk API Access', and 'Allow Streaming API Access' are checked. Under 'Deployment Status', 'Deployed' is selected. A 'What is this?' link is located at the top right.

### 4. Click on Allow reports.

### 5. Allow search and click Save.

## Create Item Object :

**The purpose of creating a Item object is to manage the inventory of gold and silver items.**

**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 >> 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).

## Creating 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)

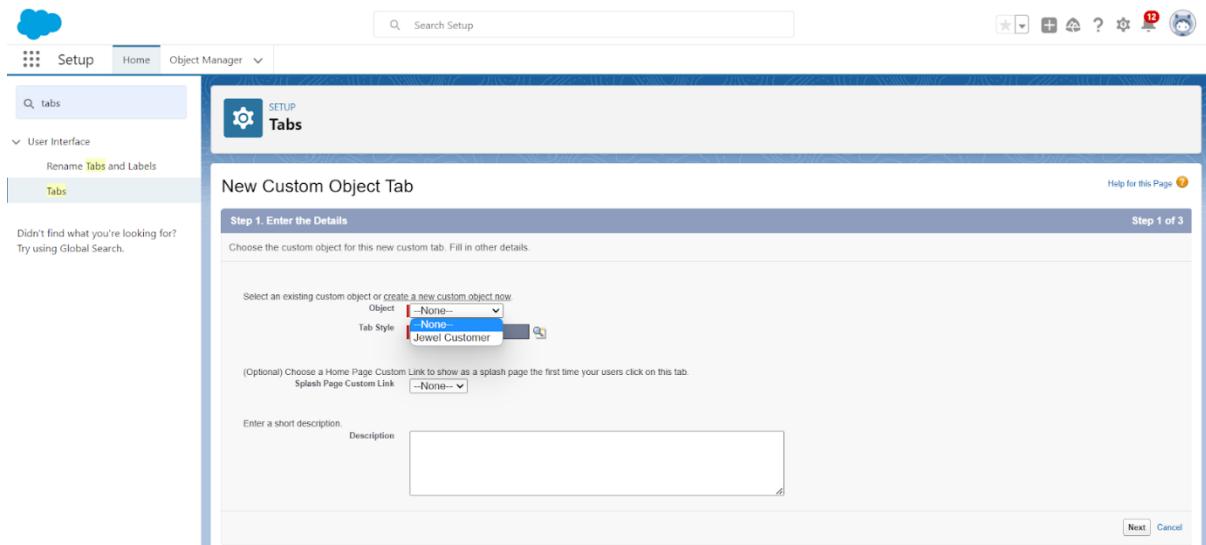
### Custom Tabs

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 external pages. Lightning Component tabs allow you to add Lightning components to the navigation bar. You can also allow users to add Lightning Pages to Lightning Experience and the mobile app.

Custom Object Tabs	<a href="#">New</a>	<a href="#">What Is This?</a>
No Custom Object Tabs have been defined		
Web Tabs	<a href="#">New</a>	<a href="#">What Is This?</a>
No Web Tabs have been defined		

- 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.**



## To create a Tab:(Item)

- 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.**

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

## Create a Lightning 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.

The screenshot shows the Salesforce App Manager interface. At the top, there are tabs for 'Setup', 'Home', and 'Object Manager'. Below these, there are search fields for 'app manager' and 'Apps'. A red arrow points to the 'New Lightning App' button in the top right corner of the main content area. Another red arrow points to the 'Clone (App,Beta)' link below the search fields.

## 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.**

The screenshot shows the 'New Lightning App' configuration dialog box. It has two main sections: 'App Details' and 'App Branding'. In 'App Details', the 'App Name' is set to 'Jewelry Inventory System', 'Developer Name' is set to 'Jewelry\_Inventory\_System', and 'Description' is set to 'Elevate your look with elegance'. In 'App Branding', there is a 'Primary Color Hex Value' field with the value '#007D2'. Below it is a checkbox for 'Org Theme Options' which is unchecked. On the right side of the dialog, there is a preview of the app launcher card with the logo 'JI' and the text 'Jewelry Inventory System' and 'Elevate your look with elegance'. At the bottom right of the dialog is a 'Next' button.

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

**App Settings**

**App Options**

**Navigation and Form Factor**

- Navigation Style: Standard navigation (radio button)
- Console navigation (radio button) ←

**Supported Form Factors**

- Desktop and phone (radio button) ←
- Desktop
- Phone

**Setup and Personalization**

Setup Experience: Setup (full set of Setup options) (radio button)

**App Personalization Settings**

- Disable end user personalization of nav items in this app
- Clear workspace tabs for each new console session

#### 4. (Utility Items) keep it as default >> Next.

#### 5. To Add Navigation Items:

**App Settings**

**Navigation Items**

**Available Items**

Type to filter list... ←

- Accounts
- Alert Settings
- All Sites
- Alternative Payment Methods
- App Launcher
- Appointment Invitations
- Approval Requests
- Asset Action Sources
- Asset Actions
- Asset Services

**Selected Items**

- Jewel Customers
- Items
- Customer Orders
- Prices
- Billing
- Reports
- Dashboard

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:

New Lightning App

**User Profiles**

Choose the user profiles that can access this app.

**Available Profiles**

System administrator ←

**Selected Profiles**

System Administrator ←

→

Save & Finish

**Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.**

## **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.**

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

## **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 quick 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.

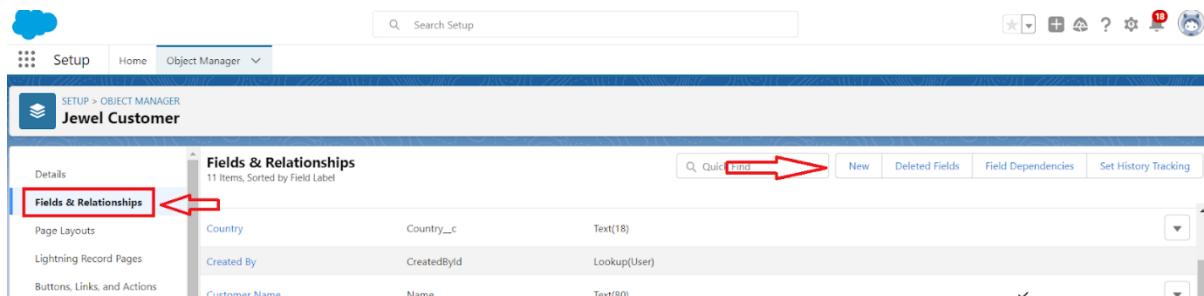
## Creating Text Field in Jewel Customer Object :

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.



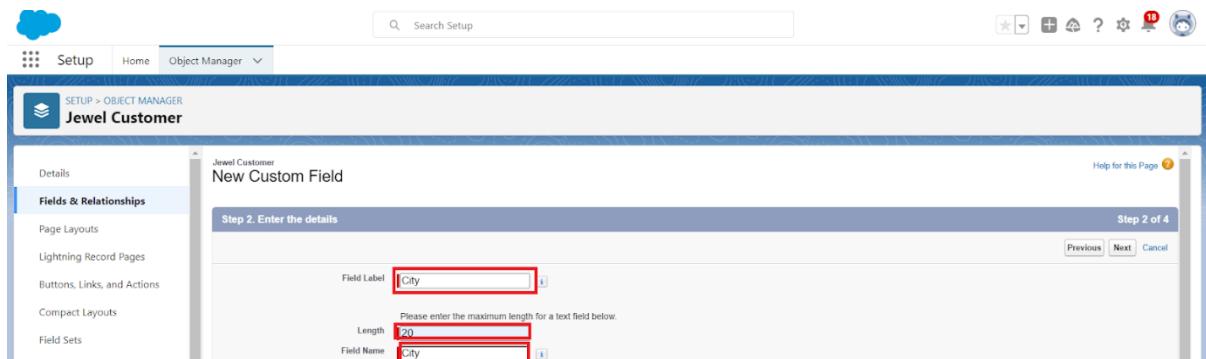
2. Now click on “Fields & Relationships” >> New



3. Select Data type as “Text”.

<input type="radio"/> Picklist	Allows users to select a value from a list you define.
<input type="radio"/> Picklist (Multi-Select)	Allows users to select multiple values from a list you define.
<input checked="" type="radio"/> Text	Allows users to enter any combination of letters and numbers.
<input type="radio"/> Text Area	Allows users to enter up to 255 characters on separate lines.
<input type="radio"/> Text Area (Long)	Allows users to enter up to 131,072 characters on separate lines.
	Allowing users to enter formatted text, add images and links. Up to 124,972 characters on separate lines.

#### 4. Click on Next



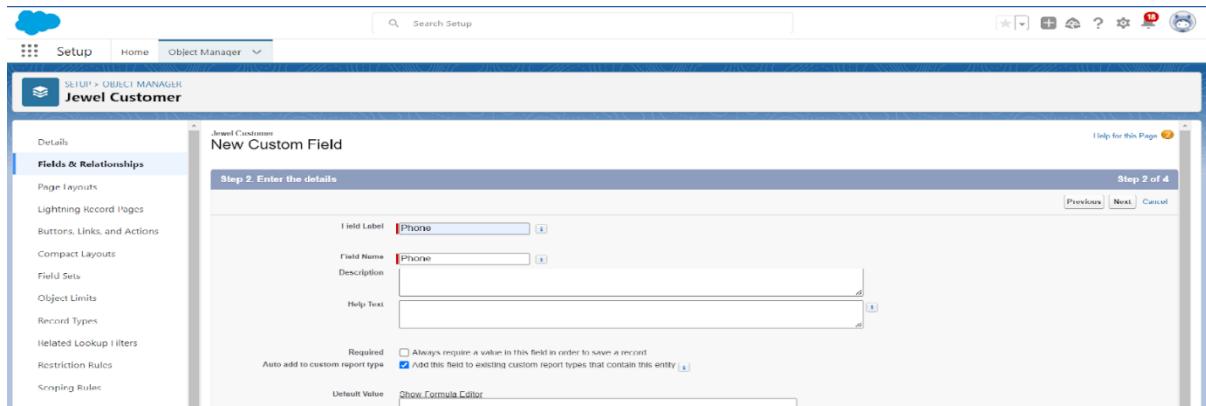
#### 5. Fill the above as following:

- **Field Label: City**
- **Length : 20**
- **Field Name : gets auto generated**
- **Click on Next >> Next >> Save and new.**

### 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.**

## Creating the Email field in object Jewel Customer :

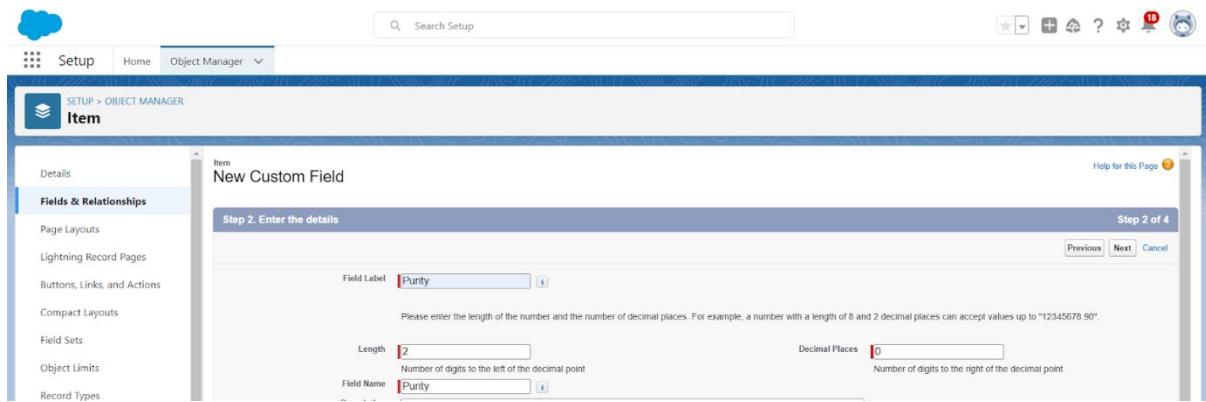
To create fields in an object:

- 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.**

## 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 ”.**

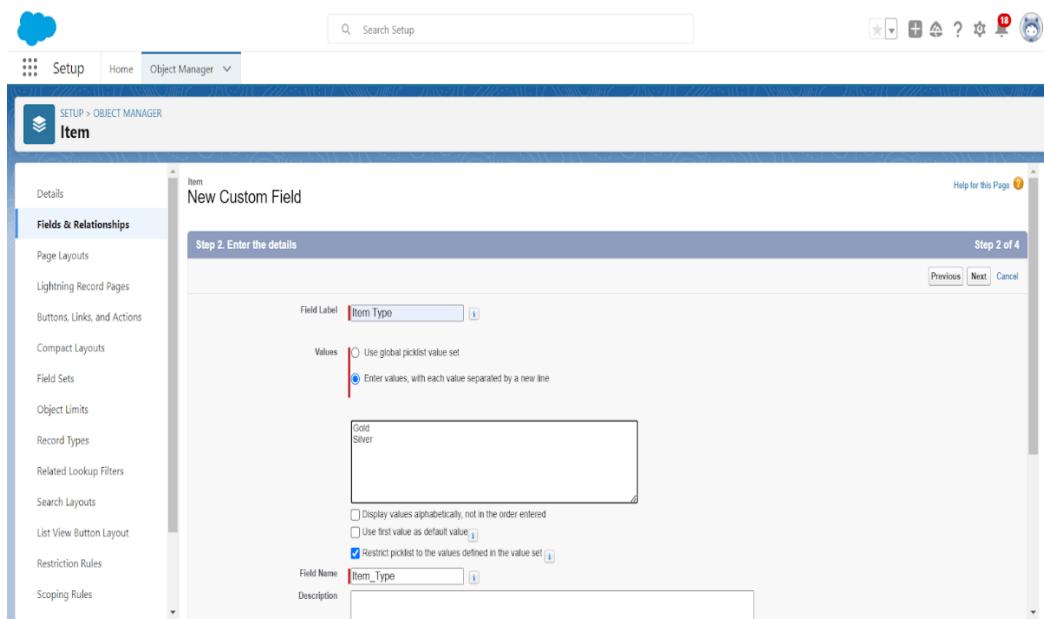


**5. Field Name will be auto populated, and click on Next >> Next >> Save.**

## Creating Picklist Field in Item Object :

To create fields in an object:

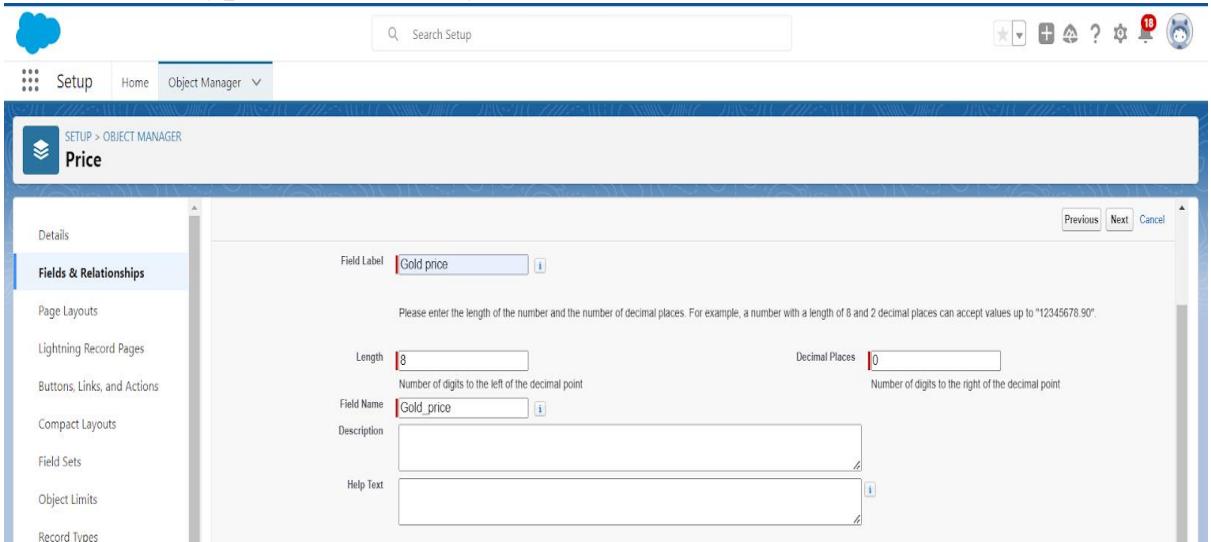
1. Go to setup >> click on Object Manager >> type object name(Item) in quick find bar>> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select Data type as “Picklist” and click Next.
4. Enter Field Label as “Item Type”.
5. In values select “Enter values(Gold,Silver), with each value separated by a new line" and enter values as shown below.



## **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 >> Next >> Save .

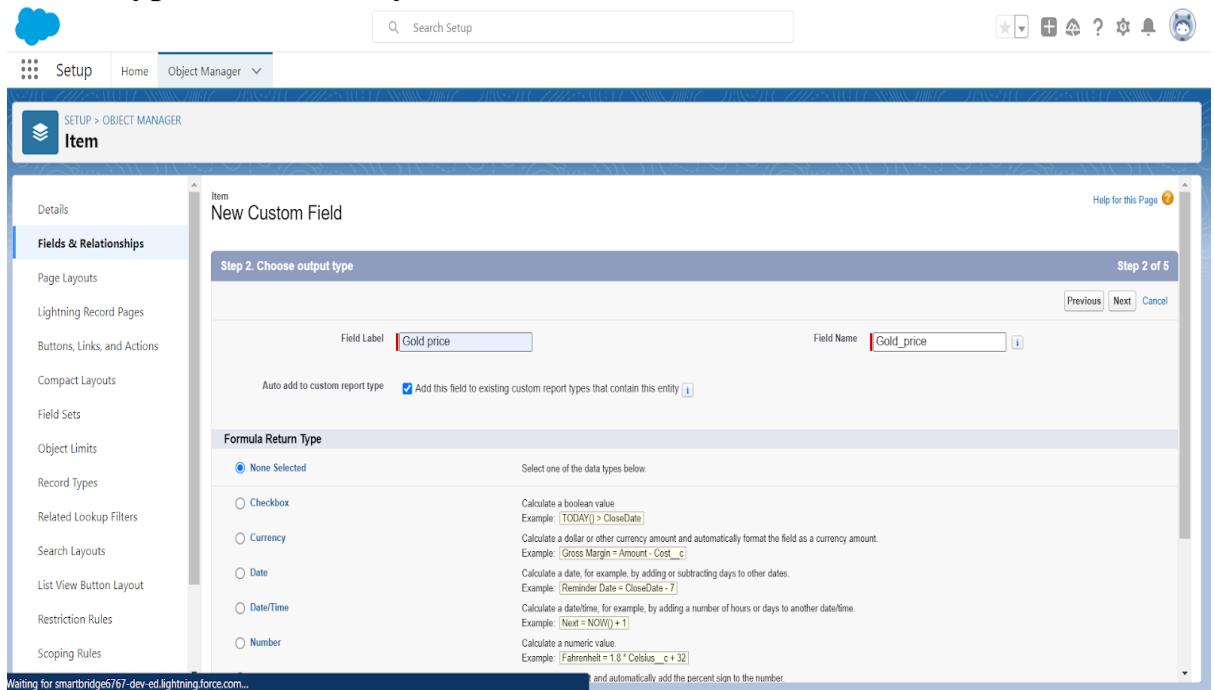
## **Creating Formula Field(Cross Object) in Item Object :**

To create fields in an object:

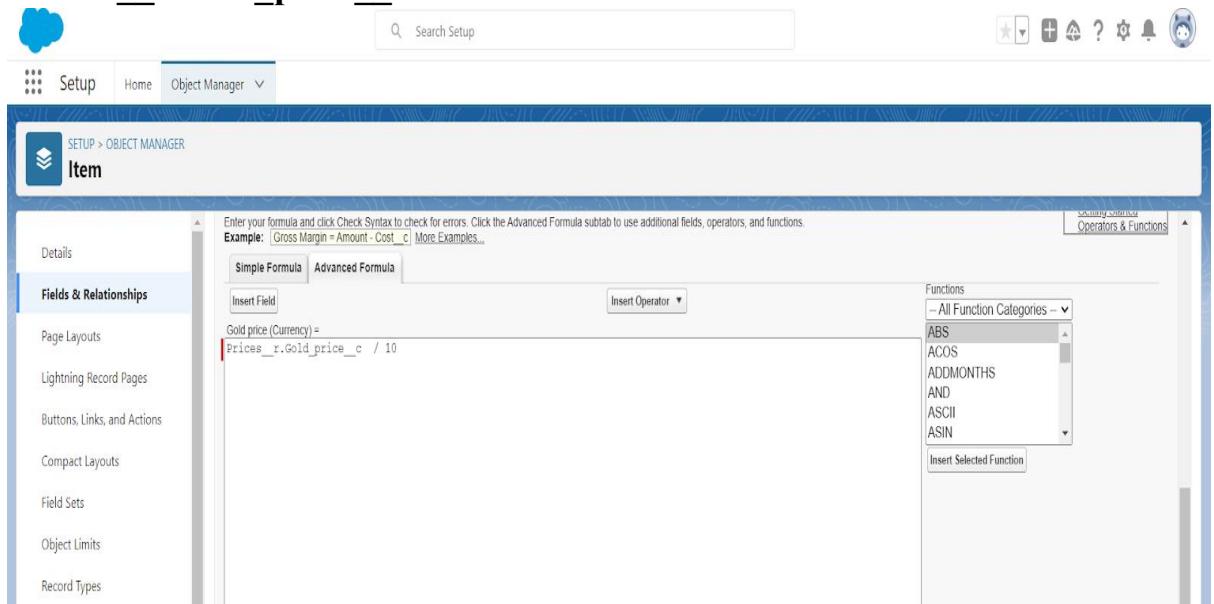
(Note:Create a Lookup Relationship in Item Object to Price Object with Field Name:Prices)

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.**



- 5. Under Advanced Formula write down the formula :Prices\_\_r.Gold\_price\_\_c / 10.**



- 6. click “Check Syntax” and Next >> Next >> Save & New.**

## **Creating Remaining Fields in Objects :**

**Now create the remaining fields using the data types mentioned.**

s.no	Object name	Fields											
1	Jewel Customer	<table border="1"><thead><tr><th>Field Name</th><th>Data type</th></tr></thead><tbody><tr><td>State</td><td>Text(20)</td></tr><tr><td>Street</td><td>Text(20)</td></tr><tr><td>Country</td><td>Text(18)</td></tr><tr><td>Zip/Postal code</td><td>Text(6)</td></tr></tbody></table>		Field Name	Data type	State	Text(20)	Street	Text(20)	Country	Text(18)	Zip/Postal code	Text(6)
Field Name	Data type												
State	Text(20)												
Street	Text(20)												
Country	Text(18)												
Zip/Postal code	Text(6)												

2	Price		
		Silver Price	Currency (Length=8,Decimal=5)

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3	<b>Item</b>	
	<b>Field Label:</b> Customer Name	<b>Lookup Relationship with Jewel Customer Object</b>
	<b>Orname nt</b>	<b>Text(20)</b>
	<b>Weight</b>	<b>Number</b> <b>(Length=8,Decimal=5)</b>
	<b>Stone Weight</b>	<b>Number</b> <b>(Length=5,Decimal=5)</b>
	<b>Percentage</b>	<b>Number</b> <b>(Length=2,Decimal=0)</b>
	<b>Stone/Other Price</b>	<b>Currency</b> <b>(Length=8,Decimal=2)</b>
	<b>Expected Days Of Return</b>	<b>Picklist</b>

		<p><b>1-3 Days</b></p> <p><b>4-5 Days</b></p> <p><b>6-7 Days</b></p> <p><b>8-10 Days</b></p>
	<p><b>Priority</b></p>	<p><b>Picklist</b></p> <p><b>Low</b></p> <p><b>Medium</b></p> <p><b>High</b></p> <p><b>Critical</b></p>
	<p><b>Silver Price</b></p>	<p><b>Formula</b></p> <p><b>(Return Type:Number)</b></p> <p><b>(Decimal=3)</b></p> <p><b>(Prices__r.Silver_price__c / 1000)</b></p>
	<p><b>Purity Gold Price</b></p>	<p><b>Formula</b></p>

		<p><b>(Return Type:Currency)</b></p> <p><b>(Decimal=2)</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math display="block">((\text{Prices\_r.Gold\_price\_c} * \text{Purity\_c}) / 24) / 10</math> </div>
	<p><b>Total Weight</b></p>	<p><b>Formula</b></p> <p><b>(Return Type:Number)</b></p> <p><b>(Decimal=3)</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math display="block">(\text{Weight\_c} - \text{Stone\_weight\_c})</math> </div>
	<p><b>Amount</b></p>	<p><b>Formula</b></p> <p><b>(Return Type:Currency)</b></p> <p><b>(Decimal=3)</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math display="block">\text{IF}(\text{ISPICKVAL( Item\_Type\_c , "Gold")}, \text{Total\_weight\_c} * \text{Purity\_Gold\_price\_c} , \text{Total\_weight\_c} * \text{Silver\_price\_c})</math> </div>

	<b>KDM</b>	<p><b>Formula</b></p> <p>(Return Type:Currency)</p> <p>(Decimal=0)</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <math display="block">(\text{Amount\_c} * \text{Percentage\_c}) / 100</math> </div>
	<b>Making Charges</b>	<p><b>Formula</b></p> <p>(Return Type:Currency)</p> <p>(Decimal=0)</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <math display="block">\text{IF}(\text{ISPICKVAL}(\text{Item\_Type\_c}, \text{"Gold"}), \text{Weight\_c} * 300, \text{Weight\_c} * 10)</math> </div>

<b>4</b>	<b>Customer Order</b>		
		<b>Order Status</b>	<b>Picklist</b>

			<p><b>Started</b></p> <p><b>Not Started</b></p> <p><b>On Hold</b></p> <p><b>Completed</b></p> <p><b>Not Completed</b></p>
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<p><b>Now create the remaining fields using the data types mentioned.</b></p> <p><b>5</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">s. n o</td><td style="width: 10%;">Obje ct nam e</td><td style="width: 80%;">Fields</td></tr> </table>	s. n o	Obje ct nam e	Fields	<p><b>Fie ld La bel : Ite m</b></p> <p><b>Lookup Relationship with Item Object</b></p> <p><b>Or na me nt</b></p> <p><b>Formula (Return Type:Text)</b></p> <p><b>Item__r.Ornament__c</b></p>
s. n o	Obje ct nam e	Fields		

		Jewe l Cust ome r	Field Name	Data Type	
1			State		Formula (Return Type:Number) (Decimal=2)
			Street		
			Country		
			Zip/Postal code		
2	Pr ice		Silver Price	Curren (Length)	Formula Return Type:Number (Decimal=2)
3	It em				Formula (Return Type:Currency) (Decimal=2)
					Item_r.Amount_c

<b>Field Label:</b> <b>Customer Name</b>	<b>Lookup Relationship with Jewel Customer Object</b>	
<b>Ornament</b>	<b>Text(20)</b>	<b>Gol d/S ilver Price</b> <b>Formula (Return Type:Currency) (Decimal=2)</b>  <pre>IF(ISPICKVAL( Item__r.Item_Type__c , "Gold"), Item__r.Gold_price__c , Item__r.Silver_price__c )</pre>
<b>Weight</b>	<b>Number (Length=8,Decimal =5)</b>	<b>KD M Ch arg e</b> <b>Formula (Return Type:Currency) (Decimal=0)</b>  <pre>Item__r.KDM__c</pre>
<b>Stone Weight</b>	<b>Number (Length=5,Decimal =5)</b>	
<b>Percentage</b>	<b>Number (Length=2,Decimal =0)</b>	
<b>Stone/ Other Price</b>	<b>Currency (Length=8,Decimal =2)</b>	<b>Makin g Ch arg es</b> <b>Formula (Return Type:Currency) (Decimal=2)</b>  <pre>Item__r.Making_Charges__c</pre>
<b>Expected Days Of Return</b>	<b>Picklist</b>  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"><b>1-3 Days</b> <b>4-5 Days</b> <b>6-7 Days</b></div>	

		<b>8-10 Days</b>	
Priorit y	Picklist	<b>Low</b> <b>Medium</b> <b>High</b> <b>Critical</b>	<b>Formula</b> <b>(Return Type:Currency)</b> <b>(Decimal=2)</b> <div style="border: 1px solid black; padding: 5px;"><code>Item__r.Stone_other_price__c</code></div>
Silver Price	<b>Formula</b> <b>(Return Type:Number)</b> <b>(Decimal=3)</b>  <div style="border: 1px solid black; padding: 5px;"><code>(Prices__r.Silver_price__c / 1000)</code></div>		<b>Formula</b> <b>(Return Type:Currency)</b> <b>(Decimal=0)</b> <div style="border: 1px solid black; padding: 5px;"><code>Amount__c + KDM_Charge__c + Stones_other_price__c + Making_Charges__c</code></div>

Purity Gold Price	<p><b>Formula</b>  <b>(Return</b>  <b>Type:Currency)</b></p> <p><b>(Decimal=2)</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math>((Prices\_r.Gold\_price\_c * Purity\_c) / 24) / 10</math> </div>	
Total Weight	<p><b>Formula</b>  <b>(Return</b>  <b>Type:Number)</b></p> <p><b>(Decimal=3)</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <math>(Weight\_c - Stone\_weight\_c)</math> </div>	
Amount	<p><b>Formula</b>  <b>(Return</b>  <b>Type:Currency)</b></p> <p><b>(Decimal=3)</b></p>	

		<pre>IF(ISPICKVAL( Item_Type_c , "Gold"), Total_weight_c * Purity_Gold_p rice_c , Total_weight_c * Silver_price_c )</pre>
KDM	<b>Formula</b>  <b>(Return</b> <b>Type:Currency)</b>  <b>(Decimal=0)</b>	<pre>(Amount_c * Percentage_c ) / 100</pre>
Makin g Charge s	<b>Formula</b>  <b>(Return</b> <b>Type:Currency)</b>  <b>(Decimal=0)</b>	

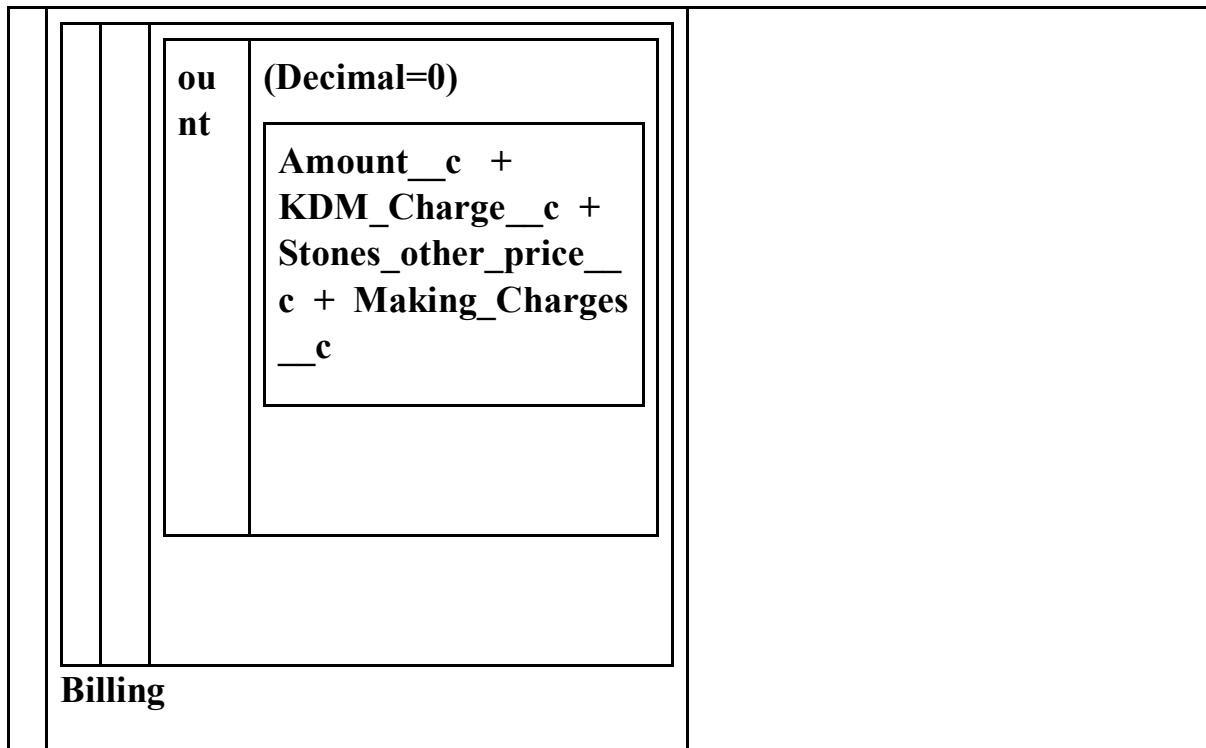
```
IF(ISPICKVAL(  
Item_Type_c  
, "Gold"), Weight  
_c * 300  
, Weight_c * 1  
0 )
```

4	Cust ome r Ord er	Order Status	Pi

5	B il li ng	<p><b>File ld La bel :Ite m</b></p> <p><b>Lookup Relationship with Item Object</b></p>
	Or na me nt	<p><b>Formula (Return Type:Text)</b></p> <p><b>Item_r.Ornament_c</b></p>
	Sto ne wei ght	<p><b>Formula (Return Type:Number) (Decimal=2)</b></p> <p><b>Item_r.Stone_weight _c</b></p>
	W	<p><b>Formula</b></p>

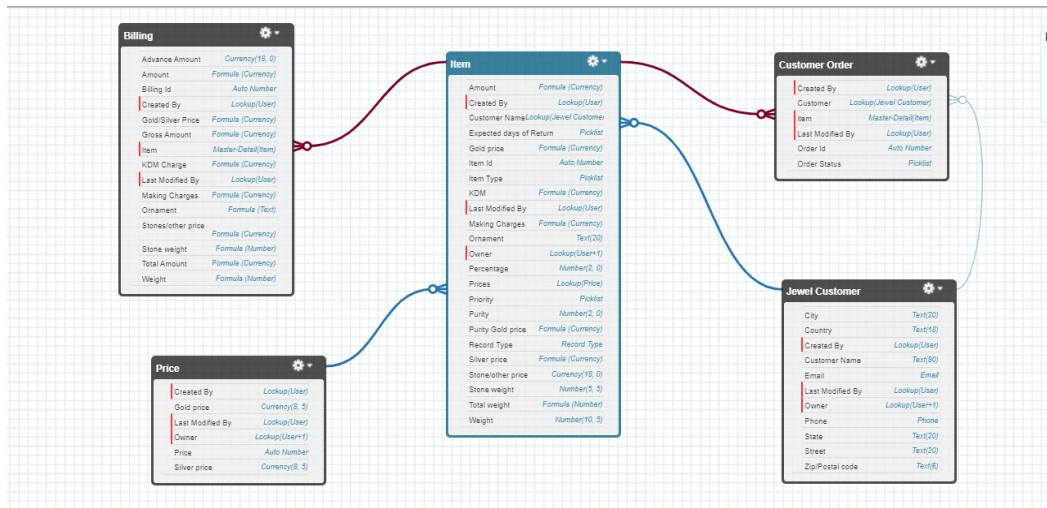
eig ht		<p style="text-align: center;"><b>Return Type:Number (Decimal=2)</b></p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"><b>Item_r.Total_weight_c</b></div>		
Am ou nt		<p style="text-align: center;"><b>Formula (Return Type:Currency) (Decimal=2)</b></p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"><b>Item_r.Amount_c</b></div>		
Gol d/S ilve r Pri ce		<p style="text-align: center;"><b>Formula (Return Type:Currency) (Decimal=2)</b></p> <div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"><b>IF(ISPICKVAL( Item_r.Item_Type_c , "Gold"), Item_r.Gold_price_c , Item_r.Silver_price_c )</b></div>		

KD M Ch arg e	<b>Formula</b>  (Return Type:Currency)  (Decimal=0)  <div style="border: 1px solid black; padding: 5px; text-align: center;">Item_r.KDM_c</div>
Ma kin g Ch arg es	<b>Formula</b>  (Return Type:Currency)  (Decimal=2)  <div style="border: 1px solid black; padding: 5px; text-align: center;">Item_r.Making_Ch arges_c</div>
Sto nes /ot her pri ce	<b>Formula</b>  (Return Type:Currency)  (Decimal=2)  <div style="border: 1px solid black; padding: 5px; text-align: center;">Item_r.Stone_other_ price_c</div>
Total Am	<b>Formula</b>  (Return Type:Currency)



## 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.

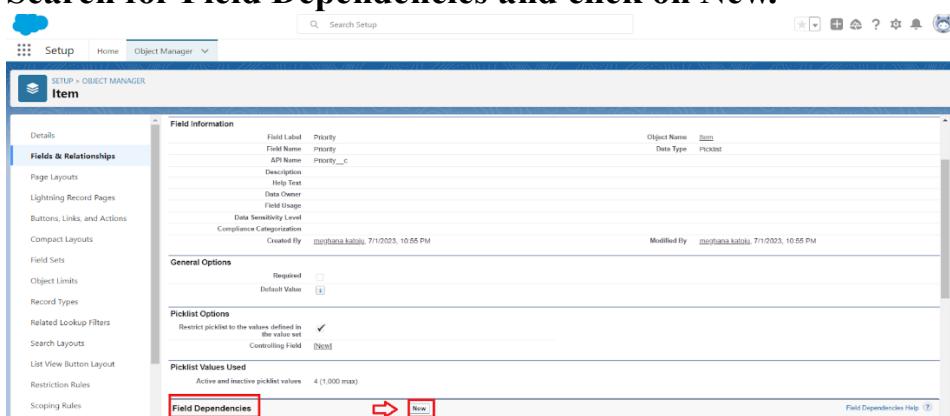


## Creating the Field Dependencies :

### 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.

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.**

New Field Dependency

Create a dependent relationship that causes the values in a picklist or multi-select picklist to be dynamically filtered based on the value selected by the user in another field.

- The field that drives filtering is called the “controlling field.” Standard and custom checkboxes and picklists with at least one and less than 300 values can be controlling fields.
- The field that has its values filtered is called the “dependent field.” Custom picklists and multi-select picklists can be dependent fields.

**Step 1.** Select a controlling field and a dependent field. Click Continue when finished.

**Step 2.** On the following page, edit the filter rules that control the values that appear in the dependent field for each value in the controlling field.

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

## 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.

SETUP > OBJECT MANAGER  
Jewel Customer

**Validation Rules**

No items to display.

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
-----------	----------------	---------------	--------	-------------

**Validation Rules**

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))
)
```

)

SETUP > OBJECT MANAGER  
Jewel Customer

**Validation Rule Edit**

Rule Name: **Postal Code**

Active:

Description:

Error Condition Formula

Example: `Discount_Percent__c>0.30` [More Examples...](#)  
Display an error if Discount is more than 30%  
If this formula expression is true, display the text defined in the Error Message area

Functions

- All Function Categories -
- ABS
- ACOS
- ADDMONTHS
- AND
- ASCII
- ASIN

Insert Selected Function  
ABS(number)  
Returns the absolute value of a number, a number without its sign

Check Syntax: No errors found

Error Message

Example: `Discount percent cannot exceed 30%`  
This message will appear when Error Condition formula is true

Error Message: **Must contain 6 digits**

This error message can either appear at the top of the page or below a specific field on the page

Error Location:  Top of Page  Field **Zip/Postal code**

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 “.**
- 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.**

## **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.**

## **Profiles :**

**A profile is a group/collection of settings and permissions that define what a user can do in salesforce. Profile controls “Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function. For example System Administrator, Developer, Sales Representative.**

**Types of profiles in salesforce**

## **1. Standard profiles:**

**By default salesforce provides below standard profiles.**

- **Contract Manager**
- **Read Only**
- **Marketing User**
- **Solutions Manager**
- **Standard User**
- **System Administrator.**

**We cannot deleted standard ones**

**Each of these standard ones includes a default set of permissions for all of the standard objects available on the platform.**

## **2. Custom Profiles:**

**Custom ones defined by us.**

**They can be deleted if there are no users assigned with that particular one.**

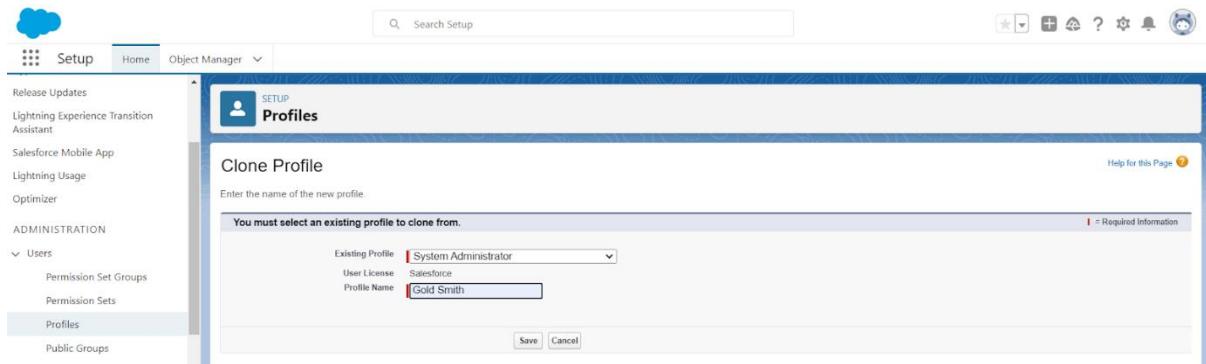
**Use Case:**

**Great work Admin, you have done so good till now. The GoldSmith wants to differentiate the users based on their functionalities, position and based on this those users need to have the minimum access to the database object in the organisation. Now it's time to use your Admin skills to focus on the users, their functionality and position in the organisation in order to achieve the Goldsmith Smith requirements.**

## **Gold Smith Profile :**

**To create a new 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 .

	Basic Access						Data Administration	
	Read	Create	Edit	Delete	View All	Modify All		
Assets	<input type="checkbox"/>							
Asset Services	<input type="checkbox"/>							
<b>Billings</b>	<input checked="" type="checkbox"/>							
Book1	<input type="checkbox"/>							
Book2	<input type="checkbox"/>							
Bot Commands	<input type="checkbox"/>							
Brokers	<input type="checkbox"/>							
Buyers	<input type="checkbox"/>							
Candidates	<input type="checkbox"/>							
<b>Customer Orders</b>	<input checked="" type="checkbox"/>							

	Basic Access						Data Administration	
	Read	Create	Edit	Delete	View All	Modify All		
Items	<input checked="" type="checkbox"/>							
Jewel Customers	<input checked="" type="checkbox"/>							
Job Applications	<input type="checkbox"/>							
Job Postings	<input type="checkbox"/>							
Job Posting Sites	<input type="checkbox"/>							
Positions	<input type="checkbox"/>							
<b>Prices</b>	<input checked="" type="checkbox"/>							
Projects	<input type="checkbox"/>							
Properties	<input type="checkbox"/>							

4. Scroll down and Click on Save.

## 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.

# Creating Gold Smith Role :

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

The screenshot shows the Salesforce Setup interface for Roles. The left sidebar has a search bar and navigation sections for Users, Feature Settings, Sales, Service, and Case Teams. The 'Roles' section is selected and highlighted with a red box. The main content area displays a 'Sample Role Hierarchy' diagram. At the top is 'Executive Staff' (CEO, President, CFO, VP Sales). Below them are 'Western Sales Director' (Dir of W. Sales), 'Eastern Sales Director' (Dir of E. Sales), and 'International Sales Director' (Dir of Int'l Sales). Each director oversees several sales representatives (Rep CA, Rep MA, Rep EU). A note next to the hierarchy states: 'View & edit data, roll up forecasts, & assign permissions for all users below this role or its children. \* Can't access data or reports of other Executive Staff'. At the bottom right of the main area is a 'Set Up Roles' button, also highlighted with a red box.

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

This screenshot shows the 'Your Organization's Role Hierarchy' page. It lists various roles under 'Nick Enterprises': CEO, HR, Manager, On Site Emp, and Remote Emp. Under each role, there is an 'Add Role' button. The 'Expand All' button at the top left is highlighted with a red box. The 'Add Role' button under the 'HR' node is also highlighted with a red box.

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

This screenshot shows the 'Role Edit' page for 'Gold Smith'. The 'Label' field contains 'Gold Smith'. The 'Role Name' field also contains 'Gold Smith'. The 'This role reports to' dropdown is set to 'CEO'. The 'Role Name as displayed on reports' field also contains 'Gold Smith'. At the bottom of the form are 'Save', 'Save & New', and 'Cancel' buttons. The 'Save' button is highlighted with a red box.

# Create one more role as Worker which reports to Gold Smith :

Creating the Role Hierarchy

You can build on the existing role hierarchy shown on this page. To insert a new role, click Add Role.

Your Organization's Role Hierarchy

Collapse All Expand All

- Meghana
  - Add Role
    - CEO Edit | Del | Assign
    - CFO Edit | Del | Assign
    - COO Edit | Del | Assign
    - Gold Smith Edit | Del | Assign
      - Add Role
      - Worker Edit | Del | Assign
        - Add Role
    - HR Edit | Del | Assign
    - Manager Edit | Del | Assign
    - SVP\_Customer Service & Support Edit | Del | Assign
    - SVP\_Human Resources Edit | Del | Assign
      - Add Role

# Users :

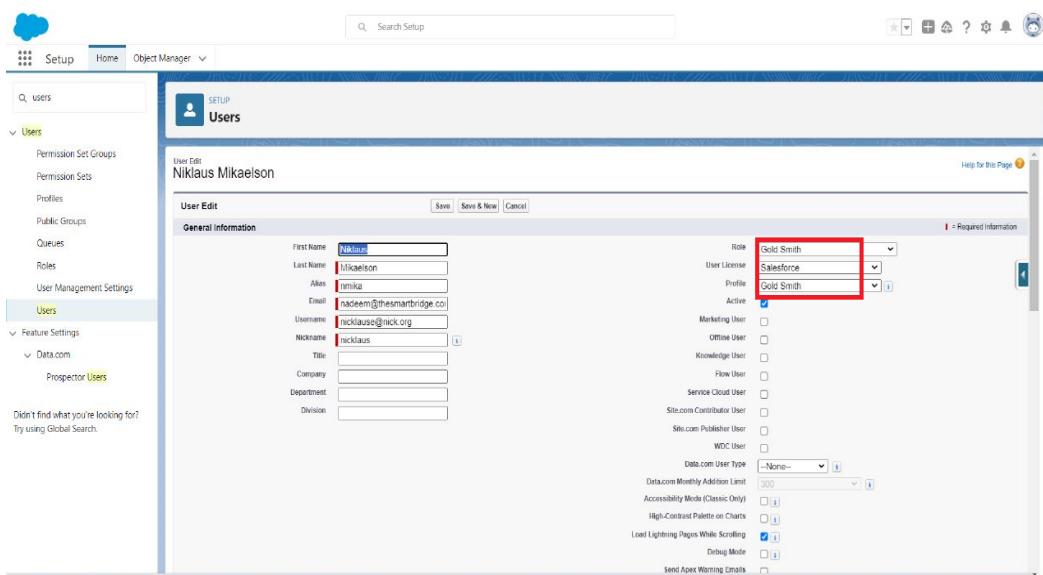
**A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what features and records the user can access.**

**Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what features and records the user can access. Each user account contains at least the following:**

- **Username**
- **Email Address**
- **User's First Name (optional)**
- **User's Last Name**
- **Alias**
- **Nickname**
- **Licence**
- **Profile**

## 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: Salesforce
  9. Profiles : Gold Smith



1. Save.

## 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.**

## **Page layouts :**

**Page Layout in Salesforce allows us to customise the design and organise detail and edit pages of records in Salesforce. Page layouts can be used to control the appearance of fields, related lists, and custom links on standard and custom objects' detail and edit pages.**

**Use Case:**

**Hurray!! you have completed the data model structure for your organisation but while looking at the detailed and edit pages it seems to be so clumsy, so decide to organise the page in a pleasant way for the sake of good and pleasant appearance and assemble all different kinds of information in different sections in order.**

## **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.**

The screenshot shows the Salesforce Object Manager with 'Page Layouts' selected in the sidebar. The main area displays a table with one row: 'Item Layout'. At the top right of the table, there is a 'Page Layout Assignment' button, which is highlighted with a red box. Below the table, there are 'Quick Find' and 'Search Setup' fields, and standard navigation buttons.

**3. Give Page layout Name as “Page Layout for Gold” and click on Save and New.**

The screenshot shows the 'Create New Page Layout' dialog. In the 'Page Layout Name' field, the text 'Page Layout for Gold' is entered and highlighted with a red box. There is also a note above the input field stating: 'As an option, you may select an existing layout to clone. If you create a page layout without cloning, your page layout will not include the standard sections whose names are translated for your international users.' Below the input field are 'Save' and 'Cancel' buttons.

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

The screenshot shows the 'Page Layout Editor' interface. The left sidebar has 'Page Layouts' selected. The main area shows a table of fields. A red box highlights the 'Section' header in the table. A yellow box highlights the 'Purity' field under the 'Prices' section, which includes sub-fields like 'Gold price', 'Purity Gold price', 'Weight', and 'Purity'. The 'Information' section at the bottom is also highlighted with a red box. The 'Layout Properties' tab is visible at the top.

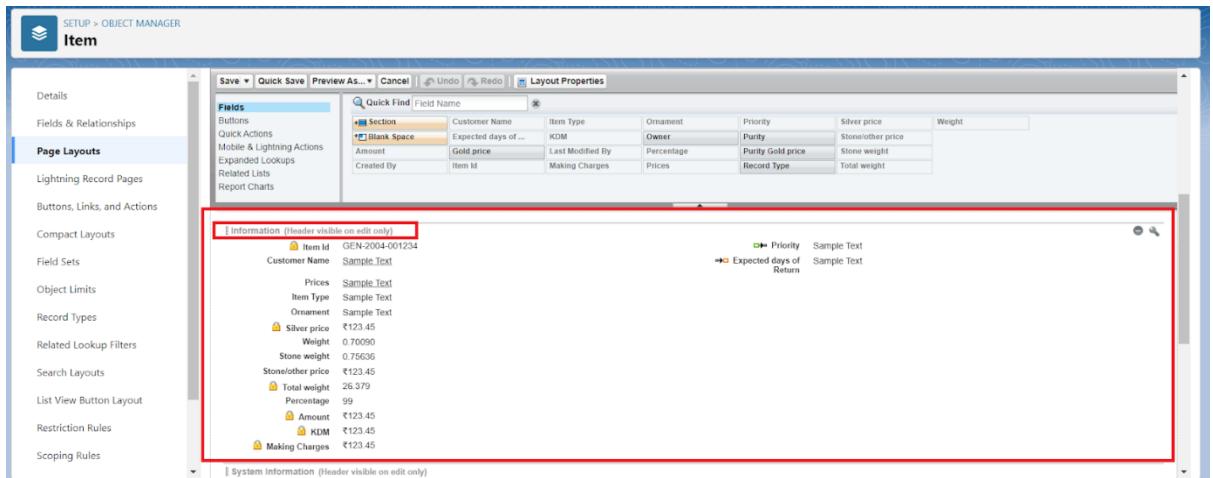
**5. Click Save.**

**6. Make sure your page layout looks like the picture above.**

## To Create a Silver 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 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.



## Record Types :

Record Types are a way of grouping many records of one type for that object. These can be applied to any standard or custom object, and allow you to have a different page layout, fields, required fields, and picklist values. Record types allow administrators to create a different page layout with custom picklist fields and values for the same business process and various business processes.

### Use Case:

All things done for the organisation. But some of the organisations feel it difficult to fill up all the details while creating a record, so GoldSmith assigned you a task to create different forms for Gold and Silver records based on their mode of work. As an Admin, you know how to achieve this.

## 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.

SETUP > OBJECT MANAGER  
Item

Record Types

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
Gold	Gold items information	✓	meghana katoju, 7/18/2023, 11:45 AM
Silver	Silver items information	✓	meghana katoju, 7/18/2023, 11:45 AM

Details  
Fields & Relationships  
Page Layouts  
Lightning Record Pages  
Buttons, Links, and Actions  
Compact Layouts  
Field Sets  
Object Limits  
**Record Types** ←  
Related Lookup Filters

## 3. Select Existing Record as “Master”, Record type Label as “Gold”, Description as “Gold items information”.

SETUP > OBJECT MANAGER  
Item

Edit Record Type  
Gold

Enter a new name for the selected record type and click Save.

Record Type
Record Type Label: <input type="text" value="Gold"/> <span style="color:red"> </span>
Record Type Name: <input type="text" value="Gold"/> <span style="color:red"> </span>
Namespace Prefix: <input type="text" value="Gold items information"/>
Description: <input type="text" value="Gold items information"/>
Active: <input checked="" type="checkbox"/>

Save Cancel

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

## 4. Uncheck for “Make Available”.

Profile Name	Record Types Currently Available	Make Available	Make Default
Analytics Cloud Integration User		<input type="checkbox"/>	<input type="checkbox"/>
Analytics Cloud Security User		<input type="checkbox"/>	<input type="checkbox"/>
Chatter External User		<input type="checkbox"/>	<input type="checkbox"/>
Chatter Free User		<input type="checkbox"/>	<input type="checkbox"/>

**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”, and change page layout to “Page Layout for Gold”for Gold Smith,Worker and System**

Force.com - Free User	Item Layout
Gold Partner User	Item Layout
Gold smith	Page layout for Gold
High Volume Customer Portal	Item Layout
High Volume Customer Portal User	Item Layout
HR	Item Layout
HR Recruiter	Item Layout
Identity User	Item Layout
Manager	Item Layout
Marketing User	Item Layout
Minimum Access - Salesforce	Item Layout
Partner App Subscription User	Item Layout
Partner Community Login User	Item Layout
Partner Community User	Item Layout
Read Only	Item Layout
s1	Item Layout
Salesforce API Only System Integrations	Item Layout
Sales User	Item Layout
Sales User.	Item Layout
Silver Partner User	Item Layout
Solution Manager	Item Layout
Standard Platform User	Item Layout
Standard User	Item Layout

**Administrator ? save & new.**

HR	Item Layout
HR Recruiter	Item Layout
Identity User	Item Layout
Manager	Item Layout
Marketing User	Item Layout
Minimum Access - Salesforce	Item Layout
Partner App Subscription User	Item Layout
Partner Community Login User	Item Layout
Partner Community User	Item Layout
Read Only	Item Layout
s1	Item Layout
Salesforce API Only System Integrations	Item Layout
Sales User	Item Layout
Sales User.	Item Layout
Silver Partner User	Item Layout
Solution Manager	Item Layout
Standard Platform User	Item Layout
Standard User	Item Layout
Support User	Item Layout
Support User.	Item Layout
System Administrator	Item Layout
Work.com Only User	Item Layout
Worker	Page layout for Gold

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

**Note:** Use page layout for Silver.

## Permission sets :

A standard permission set consists of a group of common permissions for a particular feature associated with a permission set licence. Using a standard permission set saves you time and facilitates administration because you don't need to create the custom permission set.

## Creating permission set :

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.

Setup Home Object Manager

Q Permission sets

Users

Permission Sets

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

Help for this Page

All Permission Sets ▾ Edit | Delete | Create New View

New

Action	Permission Set Label	Description	License
<input type="checkbox"/>	Adding Employee	Allows access to the store. Lets users see products and categories...	B2B Buyer Permission Set One Seat
<input type="checkbox"/>	Buyer	Includes all Buyer capabilities, and allows access to manage carts...	B2B Buyer Manager Permission Set One Seat
<input type="checkbox"/>	Buyer Manager	Denotes that the user is a Sales Cloud or Service Cloud user.	CRM User
<input type="checkbox"/>	CRM User	Allow access to commerce admin features.	Commerce Admin Permission Set License Seat
<input type="checkbox"/>	Commerce Admin	Manage Service Cloud Voice contact centers that use Amazon Conn...	Service Cloud Voice User
<input type="checkbox"/>	Contact Center Admin	Access agent features in Service Cloud Voice contact centers that u...	Service Cloud Voice User
<input type="checkbox"/>	Contact Center Agent		

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All |

## 2. Enter the label name as “Per to Worker”, API will be auto populated ? save.

SETUP Permission Sets

Permission Set Clone: Per to Worker Help for this Page

Enter a new label and description for the cloned permission set.

Save Cancel

Enter permission set information

Label: Per to Worker

API Name: Per\_to\_Worker

Description:

Session Activation Required

License:

Save Cancel

## 3. Under Apps Select object settings.

Apps

**Assigned Apps**  
Settings that specify which apps are visible in the app menu

**Assigned Connected Apps**  
Settings that specify which connected apps are visible in the app menu

**Object Settings**  
Permissions to access objects and fields, and settings such as tab availability

**App Permissions**  
Permissions to perform app-specific actions, such as "Manage Call Centers"

**Apex Class Access**  
Permissions to execute Apex classes

**Visualforce Page Access**  
Permissions to execute Visualforce pages

**External Data Source Access**  
Permissions to authenticate against external data sources

**Flow Access**  
Permissions to execute Flows

**Named Credential Access**  
Permissions to authenticate against named credentials

**Custom Permissions**  
Permissions to access custom processes and apps

**Custom Metadata Types**  
Permissions to access custom metadata types

**Custom Setting Definitions**  
Permissions to access custom settings

## 4. Click on Items object ? click on Edit ? under Item:Record Type Assignments,enable Gold,Silver ? Object permission check for read ,edit and create.

Permission Set Overview > Object Settings > Items

**Tab Settings**

Available	Visible
<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Item: Record Type Assignments**

Record Types	Assigned Record Types
Gold	<input checked="" type="checkbox"/>
Silver	<input checked="" type="checkbox"/>

**Object Permissions**

Permission Name	Enabled
Read	<input checked="" type="checkbox"/>
Create	<input checked="" type="checkbox"/>
Edit	<input checked="" type="checkbox"/>
Delete	<input type="checkbox"/>
View All	<input type="checkbox"/>
Modify All	<input type="checkbox"/>

**Field Permissions**

**5. Click on Save.**

**6. After saving the permission click on the Manage assignment**

**7. Now click on the Add Assignment.**

**Current Assignments**

**Add Assignment**

**Per to Worker**

... > PERMISSION SET 'PER TO WORKER' > MANAGE ASSIGNMENT EXPIRATION

Select Users to Assign

**All Users**

9 items • Sorted by Full Name • Filtered by All users • Updated a few seconds ago

Full Name	Alias	Username	Role	Action	Profile
Chatter Expert	Chatter	chatty.00d5i000003ksyzea4.t4i5wtjeybt4@chatter.salesforce.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Chatter Free User
Integration User	integ	integration@00d5i000003ksyzea4.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Analytics Cloud Integration User
Mani deepak	mdeep	manideepak143@gmail.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Worker
Megha Katoju Site Guest User	guest	megha_katoju@00d5i000003ksyzea4.org.force.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Megha Katoju Profile
Meghana Katoj Site Guest User	guest	meghana_katoj@00d5i000003ksyzea4.org.force.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Meghana Katoj Profile

**Cancel** **Next**

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

Full Name	Role	Profile	Active	User License	Expires On
Mani deepak	Worker	Worker	✓	Salesforce Platform	Never Expires

## Trigger :

### Use Case:

Trigger and Trigger handler is designed to handle scenarios where we used to update the "Paid Amount" field on a custom object called "Billing" based on the value in a field named "Paying Amount" during both record insertion and update operations. It Calculates and updates the "Paid Amount" field based on the existing "Paid Amount" and the new "Paying Amount" during record updates. This approach ensures that the "Paid Amount" accurately reflects the payments made by customers and provides a history of changes to the "Paid Amount" over time.

### Trigger :

A trigger is a piece of Apex code that automatically runs before or after specific events, like record insertion, update, or deletion. Triggers are used to customise and automate actions in response to these events.

## Create 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.Id);  
            Decimal oldPaidAmount = oldBilling.Paid_Amount__c;  
            billing.Paid_Amount__c = oldPaidAmount +  
                billing.Paying_Amount__c;  
        }  
    }  
}
```

**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.old
Map, Trigger.new);
}
}

```

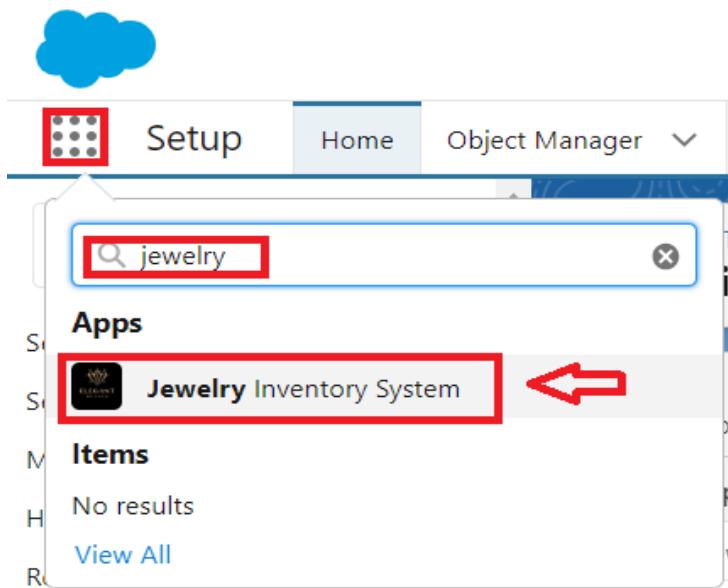
## User Adoption :

### Use Case:

**As a new Administrator, you perform user management tasks like creating and editing users, resetting passwords, granting permissions, configuring data access, and much more. In this unit, you will learn about users and how you add users to your Salesforce org.**

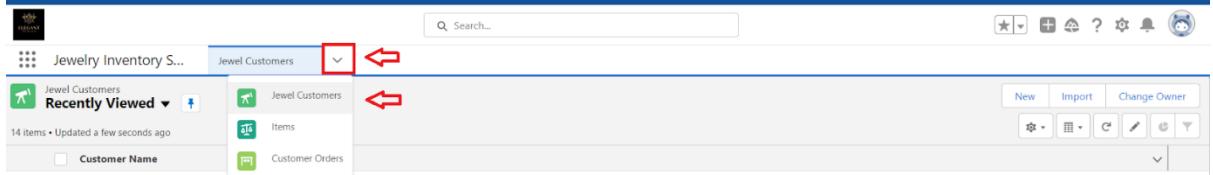
## Create a Record (Jewel Customer) :

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.**

### **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.**

### **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.

### **Reports :**

Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

#### **Types of Reports in Salesforce**

- 1. Tabular**
- 2. Summary**
- 3. Matrix**
- 4. Joined Reports**

### Use Case:

The GoldSmith of an organisation wants to have a brief data on Gold Items, Silver Items, Customer Orders and Billings. So he can have a clear picture of his organisation and be able to make any decisions required based on this data. So he calls you on this task and wants you to represent the data in an appropriate way.

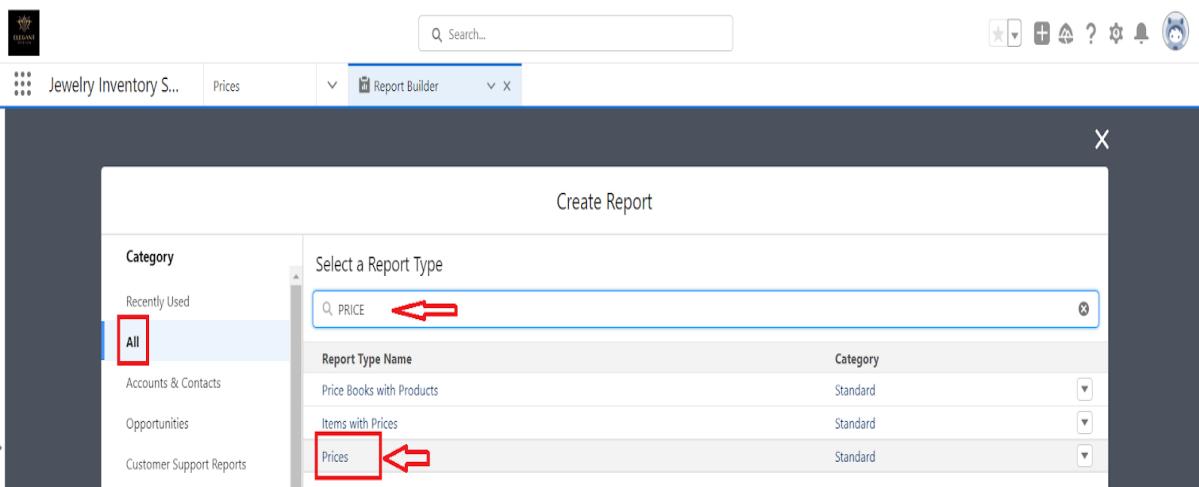
Let's create a Report.

## Create Report :

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

Folder	Created By	Created On	Subscribed
Private Reports	meghana katoju	7/19/2023, 4:34 AM	
Private Reports	meghana katoju	7/19/2023, 4:30 AM	
Private Reports	meghana katoju	7/19/2023, 4:27 AM	
DreamHouse Reports	meghana katoju	5/31/2022, 11:25 PM	
Private Reports	meghana katoju	7/12/2023, 8:45 PM	✓
Private Reports	meghana katoju	7/10/2023, 8:48 PM	
Private Reports	meghana katoju	7/12/2023, 12:03 AM	
Private Reports	meghana katoju	7/12/2023, 12:01 AM	
Private Reports	meghana katoju	7/11/2023, 11:49 PM	
Private Reports	meghana katoju	7/11/2023, 11:39 PM	
Private Reports	meghana katoju	6/20/2023, 11:19 PM	
Private Reports	meghana katoju	6/20/2023, 11:08 PM	

- 3. Select report type from category or from report type panel or from search panel ? click on start report.**



## 4. Customise your report

The screenshot shows the Report Builder interface with the 'Outline' tab selected. On the left, there's a 'Fields' pane with 'Groups' and 'Columns' sections. Under 'Columns', the 'Add column...' button is highlighted with a red box. The main area displays a preview of a table with columns 'Price: Price', '# Gold price', and '# Silver price'. The 'Run' button at the top right is also highlighted with a red box.

- Add fields from the left pane as shown below

## 5. Save or run it.

The screenshot shows the Report Builder interface with the 'Outline' tab selected. The 'Fields' pane on the left shows 'Groups' and 'Columns' sections. The 'Run' button at the top right is highlighted with a red box. The main area displays a preview of a table with columns 'Price: Price', 'Gold price', and 'Silver price'.

	Price: Price	Gold price	Silver price
1	p-022	₹60,000,0000	₹71,000,0000
2	p-021	₹63,000,0000	₹72,000,0000
3	p-027	₹62,350,0000	₹70,200,0000
4	p-029	₹58,700,0000	₹69,000,0000
5	p-030	₹66,000,0000	₹78,000,0000
6	p-026	₹62,000,0000	₹70,000,0000
7	p-025	₹58,000,0000	₹69,000,0000
8	p-028	₹59,900,0000	₹73,000,0000
9	p-024	₹62,000,0000	₹73,000,0000
10	p-023	₹58,000,0000	₹69,000,0000
11		₹69,950,0000	₹714,200,0000

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

## Reports :

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

## Dashboards :

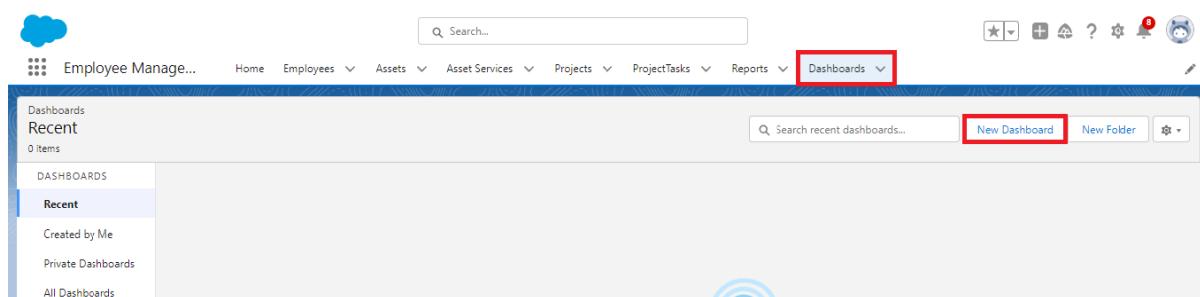
**Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.**

### Use Case:

**As an Admin for the organisation you keep pushing yourself to reach out the business requirements to take the organisation to peak heights and all your superiors are very much impressed with your efforts and work dedication. In addition with reports you make an ease for the GoldSmith in viewing the reports with data visualisation. So he doesn't have to search for the data he wants to check.**

## Create Dashboard :

1. Go to the app >> click on the Dashboards tabs.



2. Give a Name and click on Create.

## New Dashboard

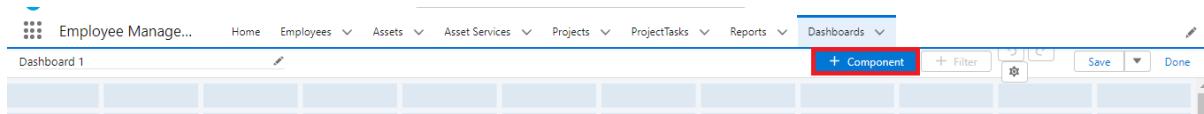
\* Name  
Dashboard 1

Description

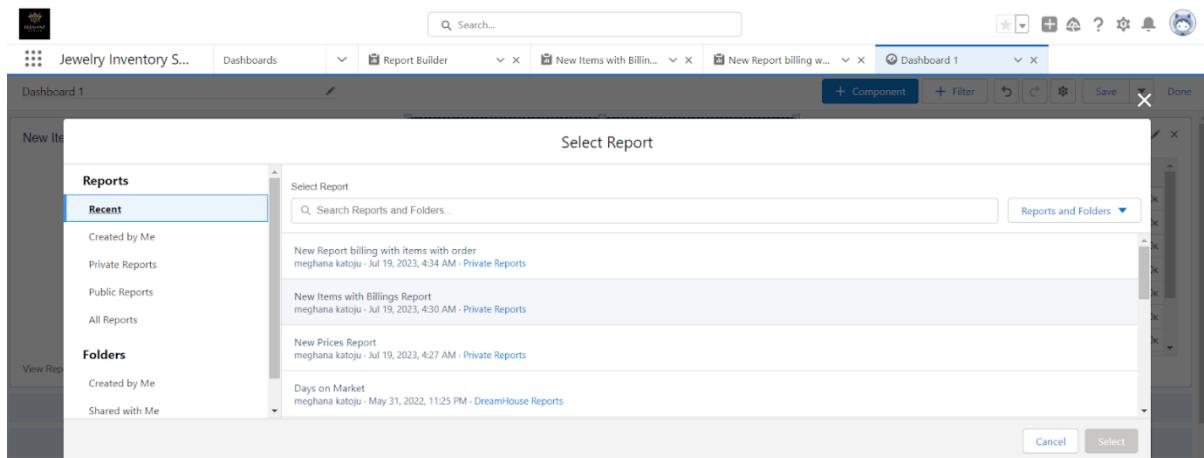
Folder  
Private Dashboards      Select Folder

Cancel      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.

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

This screenshot shows a dashboard with three distinct components. On the left is a funnel chart titled 'New Items with Billings Report' showing the sum of total weight (92.9) and count (75) for Gold and Silver items. In the center is a bar chart titled 'New Report billing with items with order' showing the sum of amount for various ornaments: Bracelet (~€40k), NECKLACE (~€60k), ring (~€10k), Silver Article (~€5k), and Toe ring (~€5k). On the right is a table titled 'New Prices Report' listing item IDs, prices, and gold/silver prices. The table data is as follows:

Item: Item Id	Price: Price ↑	Gold price	Silver price
Item-218	p-021	€63.00000k	€72.00000k
Item-220	p-022	€60.00000k	€71.00000k
Item-215	p-023	€58.00000k	€69.00000k
Item-222	p-024	€62.00000k	€73.00000k
Item-219	p-025	€58.00000k	€69.00000k
Item-221	p-026	€62.00000k	€70.00000k
	p-027	€62.35000k	€70.20000k

## Flows :

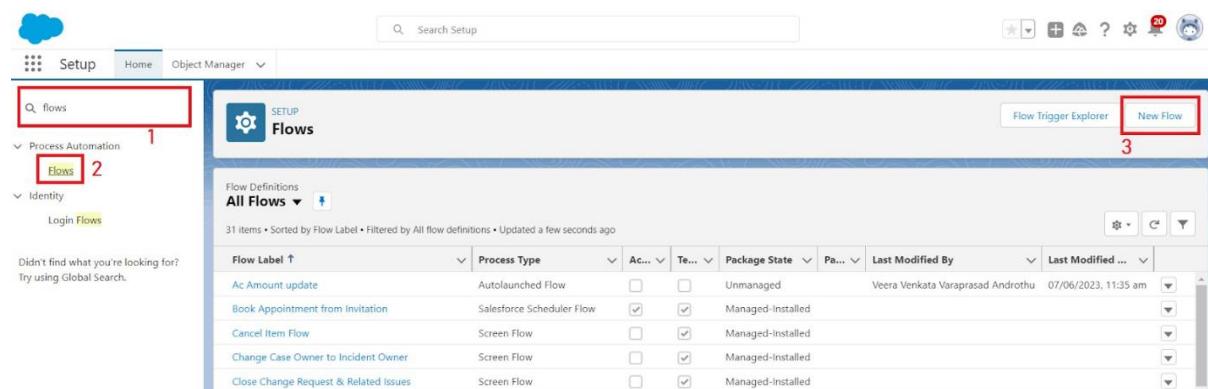
In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.

### Use Case:

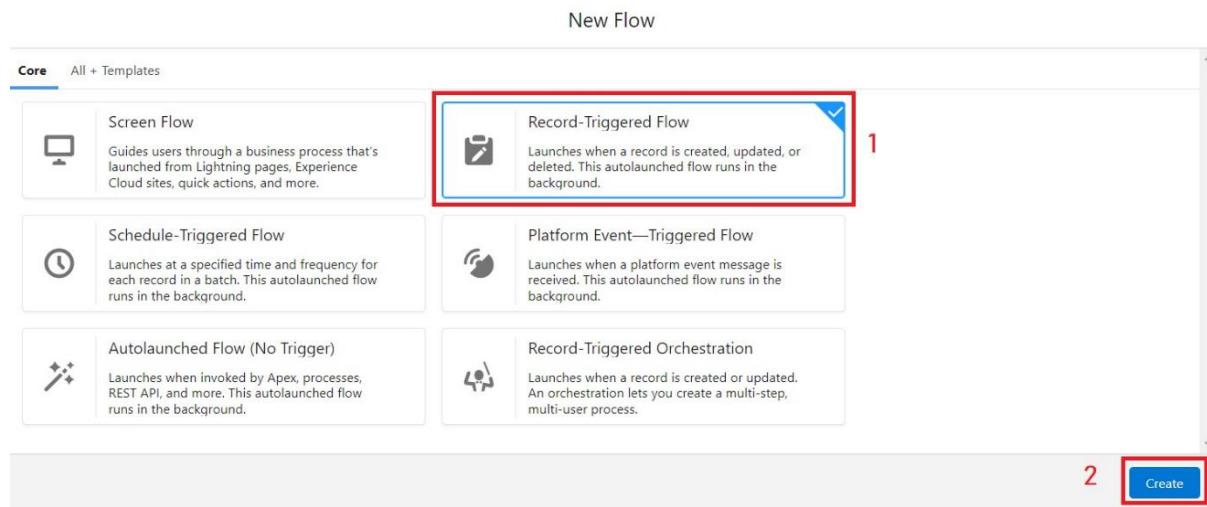
Flows, also known as Salesforce Flows or Visual Flows, are powerful declarative automation tools in Salesforce that allow users to create and manage complex business processes without the need for code. Flows are designed using a drag-and-drop interface, making them easy to use for both administrators and developers. They can be used for various automation tasks like email triggers including data entry, record updates, and guided user interactions.

## 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.**

Configure Start

Select Object

Select the object whose records trigger the flow when they're created, updated, or deleted.

\* Object

Configure Trigger

\* Trigger the Flow When:

- A record is created
- A record is updated
- A record is created or updated
- A record is deleted

Set Entry Conditions

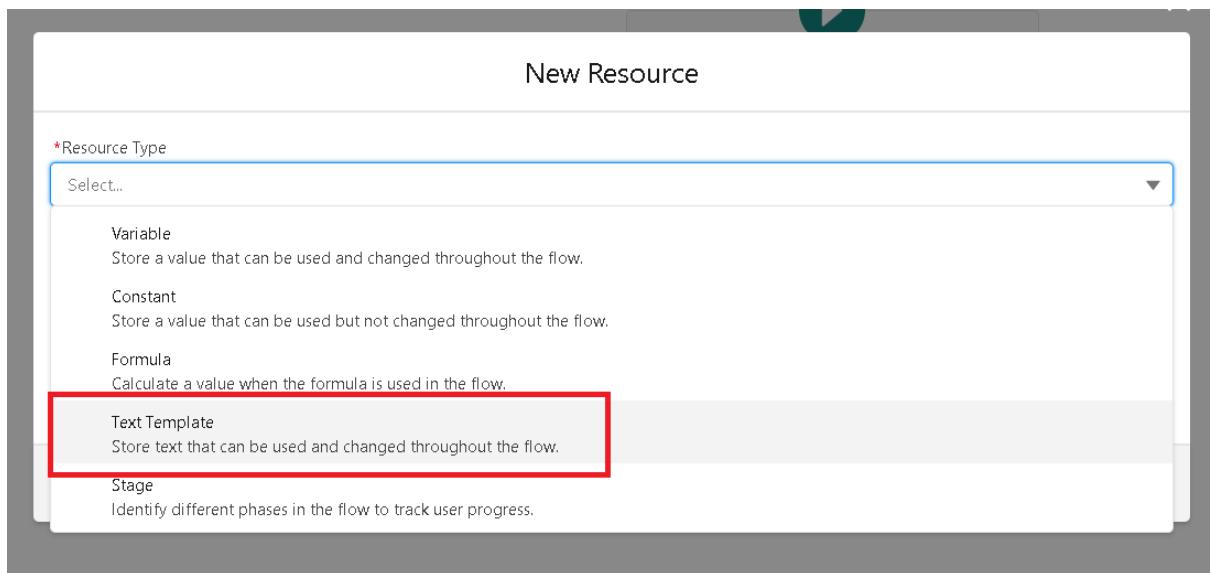
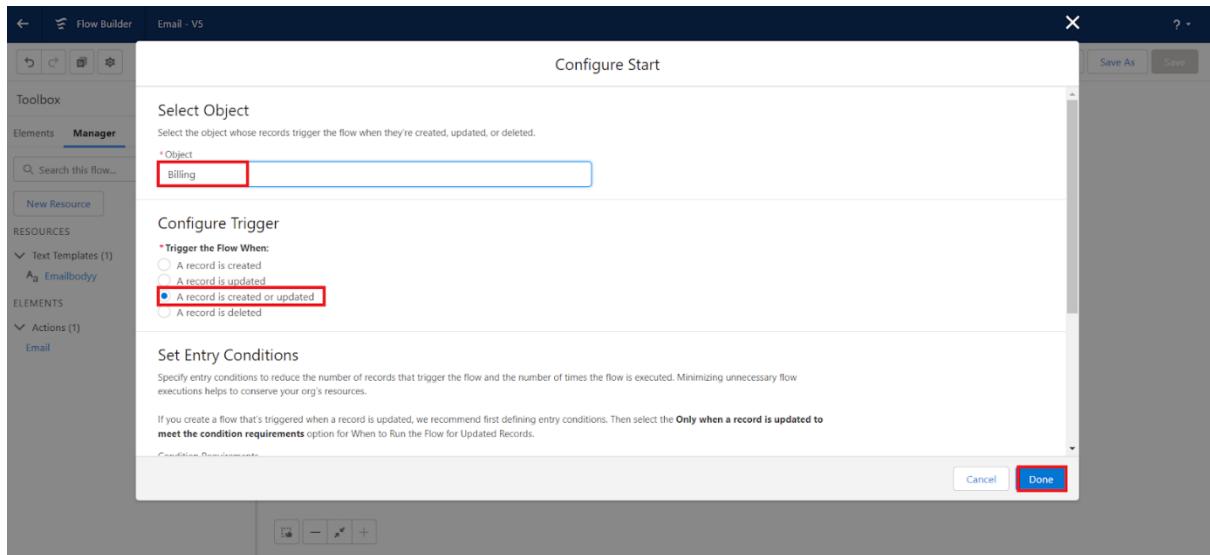
Specify entry conditions to reduce the number of records that trigger the flow and the number of times the flow is executed. Minimizing unnecessary flow executions helps to conserve your org's resources.

If you create a flow that's triggered when a record is updated, we recommend first defining entry conditions. Then select the **Only when a record is updated to meet the condition requirements** option for When to Run the Flow for Updated Records.

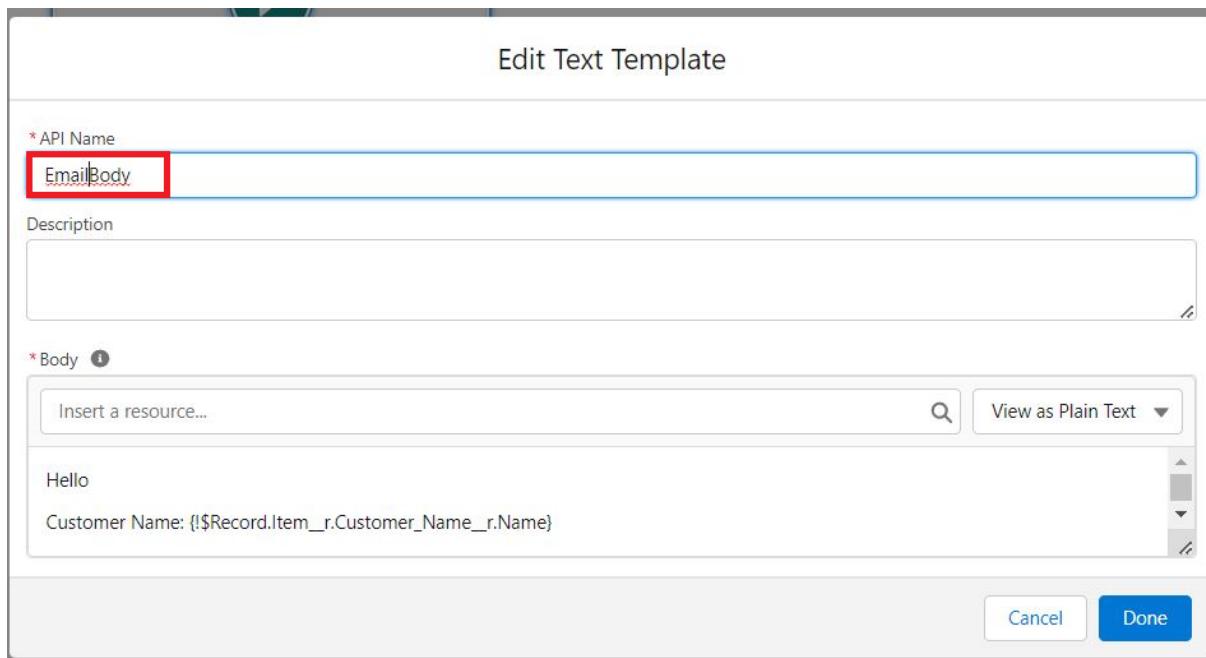
Condition Requirements

[Cancel](#) [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.**

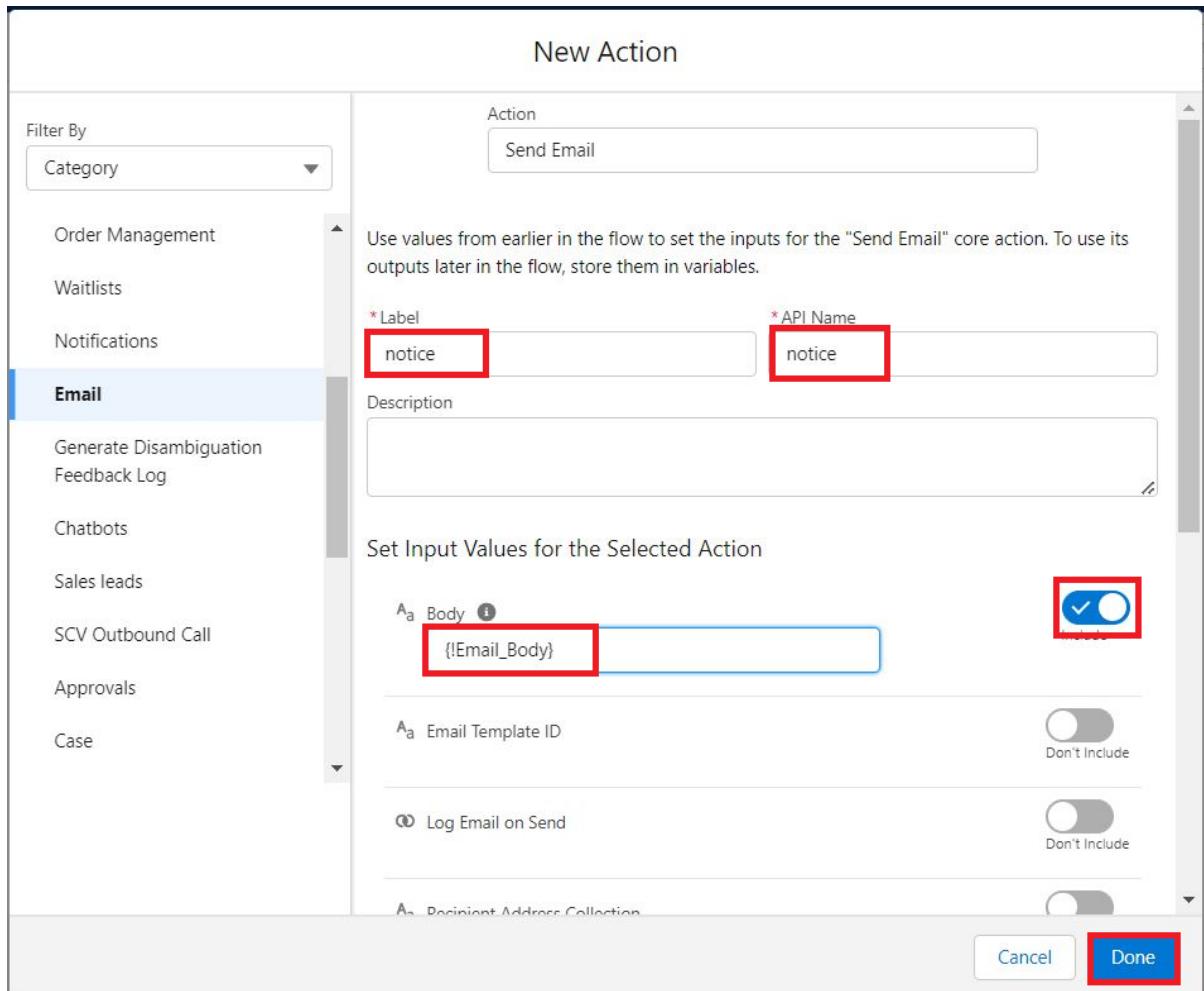
**14. Their action bar will be opened in that search for “ send email ” and click on it.**

**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.**

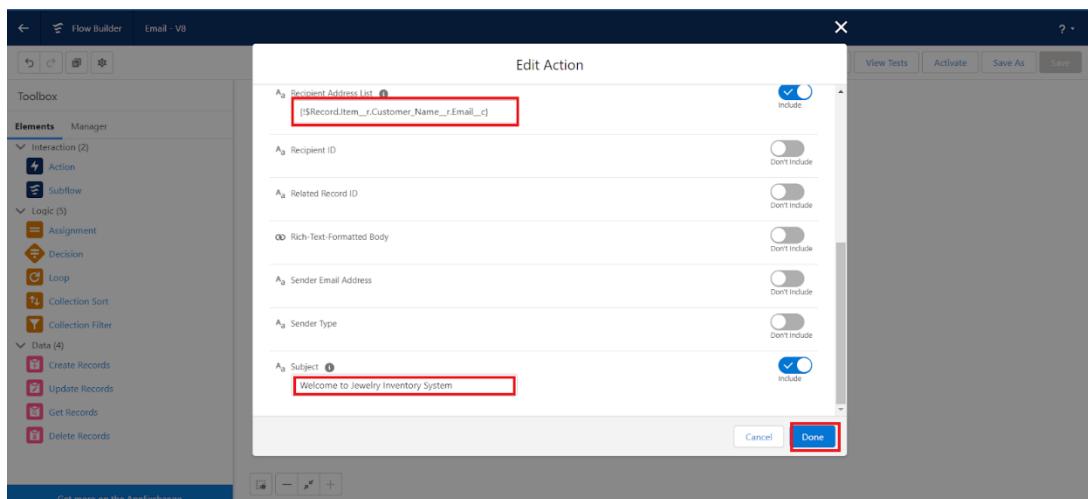


**19. Include Recipient Address list, select the email form the record.**

({!!\$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.**

