

CRMApplicationforJewelManagement

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CRMApplicationforJewelManagement

Project Overview :

The CRM Application for Jewel Management is a software solution designed to help jewelry businesses efficiently manage their customers, inventory, sales, and services. Unlike generic CRM systems, this application focuses on the specific needs of jewelers, such as tracking jewelry items by karat, weight, stone type, and certification, while also maintaining strong customer relationships.

The system provides a centralized platform where jewelers can:

Store and manage detailed customer information.

Track inventory of gold, silver, diamond, and platinum jewelry.

Handle billing, invoices, repairs, and returns.

Generate insights and sales reports for business decisions.

Improve customer loyalty through personalized offers and reminders.

By automating routine tasks and offering analytics, the application reduces manual work, increases accuracy in billing and inventory, and supports targeted marketing campaigns. It benefits both small jewel shops and multi-branch jewelry chains by streamlining operations and enhancing customer satisfaction.

Objectives:

1. Customer Relationship Management–Maintain detailed customer profiles including purchase history, preferences, and loyalty points to build long-term relationships.
2. Efficient Inventory Control–Track jewelry items based on karat, weight, stone type, and certification, with real-time stock updates and low-stock alerts.
3. Sales & Billing Automation–Generate accurate invoices with GST/tax calculations, discounts, and installment options, reducing manual errors.

4. OrderCRRepairManagement–Managecustomjewelryorders,repairrequests, returns, and exchanges seamlessly.
5. AnalyticsCReporting–Providebusinessinsightsthroughsalesreports,profit analysis,andcustomerbehaviortrackingforbetterdecision-making.
6. MarketingCNotifications–Sendpersonalizedoffers,festivalgreetings,and reminders(birthdays/anniversaries)viaSMS/Emailtoimprovecustomer engagement.
7. SecurityCUserRoles–Ensuresecureaccessthroughauthenticationandassign role-basedpermissions(Admin,SalesExecutive,Accountant).
8. Multi-BranchSupport –Allowcentralizedmanagementforjewelrybusinesses operating across multiple branches.

Student Outcomes :

1. PracticalApplicationofCRMConcepts–GainedknowledgeonhowCRMsystems workinreal-worldindustries,especiallyinthejewelrydomain.
2. SystemDesignCDevelopmentSkills–Learnedhowtoanalyzerequirements, designERdiagrams,anddevelopmoduleslikecustomer,inventory,sales,and billingmanagement.
3. Technical SkillsEnhancement –Improvedskillsinfrontend(React/Angular/Flutter), backend(Node.js/Django),database(MySQL/PostgreSQL),andAPIintegration.
4. Problem-SolvingAbility–Appliedlogicalthinkingtosolvechallengeslikeinventory tracking,ordermanagement,andsecurebilling.
5. TeamCollaborationCProjectManagement–Experiencedworkingasateam, dividingmodules,usingversioncontrol(GitHub),andfollowingSDLCstages.
6. DataHandlingCANalytics–Learnedhowtogenerateandanalyzesales/customer reports for decision-making.
7. Real-World Business Understanding –Understood jewelrybusiness processes (karat/weighttracking,repairs,loyaltyprograms)andtranslatedthemintosoftware solutions.
8. ProfessionalPresentation–Enhancedabilitytodocument,present,and demonstrateacompleteprojecttoevaluatorsandindustryprofessionals

SystemRequirements:

HardwareRequirements:

- * Computerwithmin/sum4GBRAM,Dual-coreprocessor
- * Stableinternetconnection

Software Requirements:

- * Salesforce Developer Edition Org

- * Modern Web Browser (e.g., Google Chrome, Firefox)

Project Duration :

31 Hours

Phases Overview:

Phase No.

Phase Name Description Page Numbers

1 Requirement

Analysis & Planning

Gathering requirements from

donors, volunteers, and receivers;

defining scope and goals; planning data

model and workflows.

2 Salesforce

Development

Backend

Configurations

Creating custom objects, fields,

relationships; setting up Flows

and Apex Triggers for automation.

4-11

3

UI/UX Development

Customization

Building Lightning App,

customizing layouts, adding fields,
implementing Flows, and developing
UI logic.

11-28

4 Data Migrat

ion,

Testing C Security

Creating Users, Profiles, Public

Groups, Sharing Rules;

configuring Report Types, Reports, Dashboards; testing functionalities and ensuring data security.

28-37

5 Deployme

nt,

Documentation C

Maintenance

Designing and finalizing Home

Page, deploying solution to live

environment, preparing

documentation, conclusion, and

ongoing system maintenance.

37-40

Phase 1: Requirement Analysis Planning:-

CRM Application for Jewel Management-(Developer)

The Jewel Inventory System is a comprehensive software Solution designed to streamline and manage the inventory and sales processes of a jewellery store or a jewellery manufacturer. The system aims to provide an efficient and user-friendly solution to track and control the inventory of various jewellery items, maintain accurate records, and facilitate seamless sales transactions.

What you'll learn

1. RealTimeSalesforceProject
2. DataModelling
3. CreatinganApplication
4. UserInterfaceCustomization
5. Object&RelationshipinSalesforce
6. FormulafieldsandValidationrules.
7. FieldDependencies
8. Record Types
9. Crossobjectformulafields.
10. Conditionalformatting.
11. Flows
12. Emailalertsandemailtemplates
13. Reports&Dashboards

Phase2:SalesforceDevelopment–BackendsConfigurations:-

Milestone1:Salesforce

Introduction:

Are you new to Salesforce? Not sure exactly what it is, or how to use it? Don't know where you should start on your learning journey? If you've answered yes to any of these questions, then you're in the right place. This module is for you.

Welcome to Salesforce! Salesforce is game-changing technology, with a host of productivity-boosting features, that will help you sell smarter and faster. As you work toward your badge for this module, we'll take you through these features and answer the question, "What is Salesforce, anyway?"

What Is Salesforce?

Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers.

Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.

Sowhatdoesthatreallymean?Well,beforeSalesforce,yourcontacts,emails,follow-uptasks, and prospective deals might have been organised something like this: <https://youtu.be/r9EX3lGde5k>
Activity1:CreatingDeveloperAccount

Creatingadeveloperorginsalesforce.

1. Goto<https://developer.salesforce.com/signup>
2. Onthesignupform,enterthefollowingdetails:

Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud.

Sign up for your Developer Edition.

- ✓ Build apps fast with drag-and-drop tools
- ✓ Go further with Apex code
- ✓ Build AI agents with Agentforce
- ✓ Harmonize your data with Data Cloud
- ✓ Ground Agentforce with structured and unstructured data
- ✓ Integrate with anything using APIs

Sign up for your Developer Edition.

A free Salesforce Platform environment with Agentforce and Data Cloud.

First name: Aadhi, Last name: Ifran

Job title: Student, Work email: laadhi467@gmail.com

Company: Nandha Arts and Sci, Country/Region: India

☒ I agree to the Main Services Agreement - Developer Services and Salesforce Program Agreement. I acknowledge, as described in the Developer Documentation (1) the Developer Edition includes autonomous and other generative AI features; and (2) Salesforce may limit use of those features and the org, and may terminate any org that has been inactive for 45 days.

☐ I'm not a robot

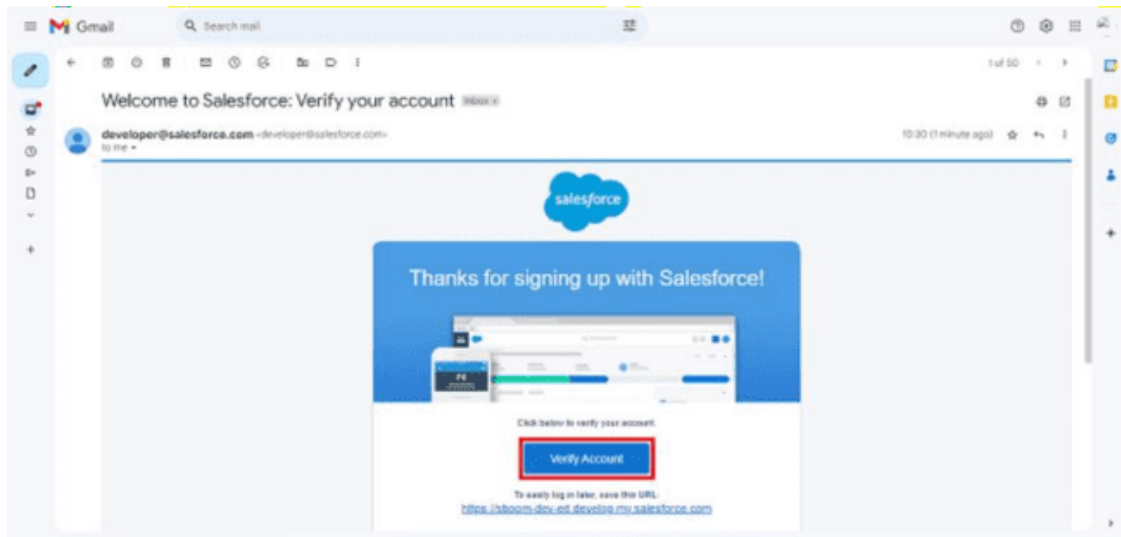
Sign Me Up

1. Firstname&Lastname
2. Email
3. Role:Developer
4. Company:CollegeName
5. County:India
6. PostalCode:pincode
7. Username:shouldbeacombinationofyournameandcompany

Thisneednotbeanactualemailid,youcangiveanythingintheformat:username@organization.com
Clickonsignmeupafterfillingthese.

Activity2:AccountActivation

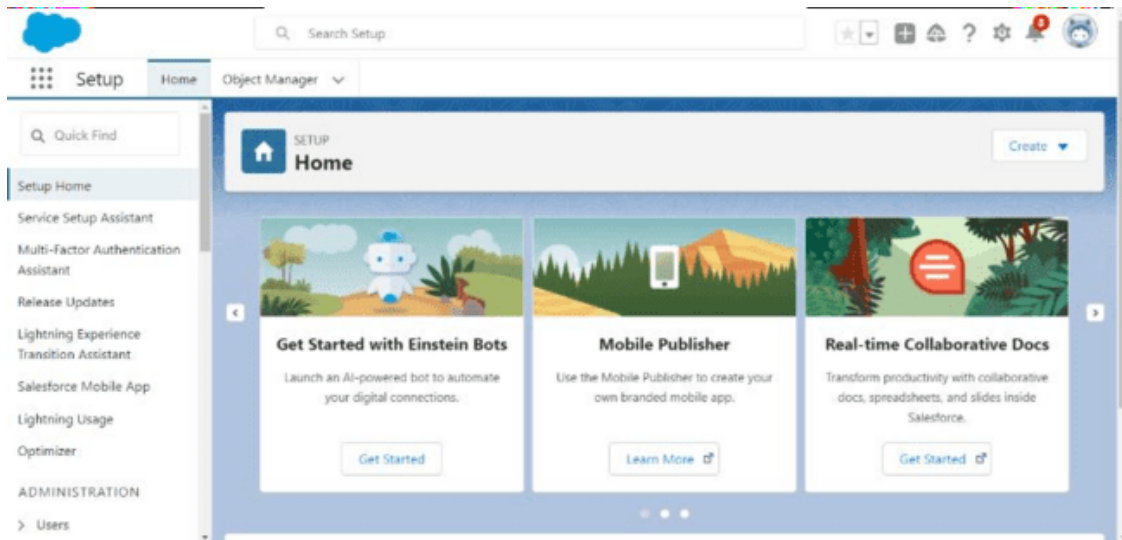
1. Gototheinboxoftheemailthatyouusedwhilesigningup.Clickontheverify accounttoactivateyouraccount.Theemailmaytake 5-10mins.



2. Click on Verify Account
3. Give a password and answer a security question and click on change password.

A screenshot of the 'Change Your Password' form. The form is titled 'Change Your Password' and is for the user 'lead@sb.com'. It includes a list of requirements: '8 characters', '1 letter', and '1 number', all marked with green checkmarks. The form has four main sections: 'New Password' with a text input field and a 'Good' status indicator; 'Confirm New Password' with a text input field and a 'Match' status indicator; 'Security Question' with a dropdown menu showing 'In what city were you born?'; and 'Answer' with a text input field containing 'asdfghikl'. A blue 'Change Password' button is at the bottom. A red rectangle highlights the 'New Password' field, the 'Confirm New Password' field, the 'Security Question' dropdown, the 'Answer' field, and the 'Change Password' button.

4. Then you will be redirected to your Salesforce setup page.



Milestone2:Object

What Is an Object?

Salesforce objects are database tables that permit you to store data that is specific to an organization. What are the types of Salesforce objects?

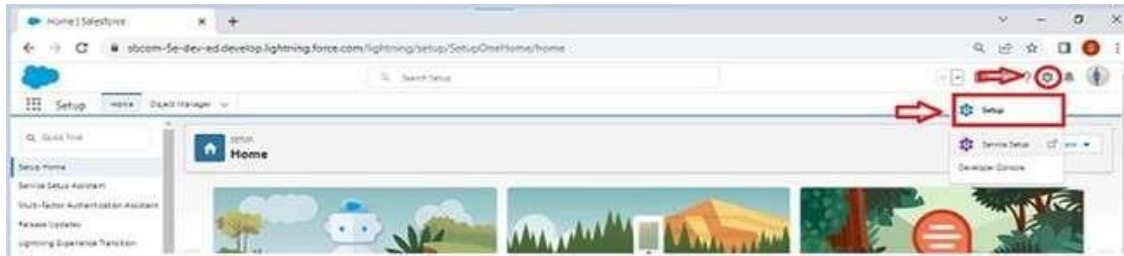
Salesforce objects are of two types:

1. **Standard Objects:** Standard objects are the kind of objects that are provided by Salesforce.com, such as users, contracts, reports, dashboards, etc.
2. **Custom Objects:** Custom objects are those objects that are created by users. They supply information that is unique and essential to their organization. They are the heart of any application and provide a structure for sharing data.

Use Case:

Creating an object in a Salesforce organization is essential for efficient data management and process automation. By defining custom objects, businesses can structure and store data specific to their needs, enabling streamlined workflows, personalized reporting, and enhanced user experiences. Objects serve as the foundation for organizing and leveraging critical information within Salesforce. To navigate to the Setup page:

Click on the gear icon >> click setup.



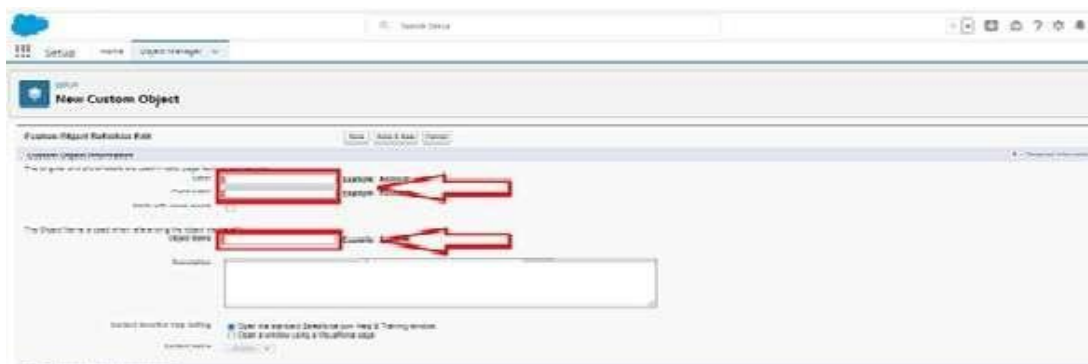
Activity1:CreateJewelCustomerObject

ThepurposeofcreatingaJewelCustomercustomobjectistostoreandmanageinformationabout Customer.
Tocreateanobject:

1. Fromthesetuppage>>ClickonObjectManager>>ClickonCreate>>ClickonCustom Object.



1. Enterthelabelname: JewelCustomer
2. Plurallabelname: JewelCustomers



3. EnterRecordNameLabelandFormat
 - RecordName>>Customername
 - DataType>>Text

Enter Record Name Label and Format

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.

Record Name: Example: Account Name

Data Type:

Optional Features

- ☒ Allow Reports
- ☐ Allow Activities
- ☐ Track Field History
- ☐ Allow in Chatter Groups
- ☐ Enable Licensing [i](#)

Object Classification

When these settings are enabled, this object is classified as an Enterprise Application object. When these settings are disabled, this object is classified as a Light Application object. [Learn more](#)

- ☒ Allow Sharing
- ☒ Allow Bulk API Access
- ☒ Allow Streaming API Access

Deployment Status [What is this?](#)

- ☐ In Development
- ☒ Deployed

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

Activity 2: Create Item Object

The purpose of creating an 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).

Milestone 3: Tabs

What is Tab: A tab is like a user interface that is used to build records for objects and to view the records in the objects.

Types of Tabs:

1. CustomTabs

Custom object tabs are the user interface for custom applications that you build in salesforce.com. They look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

2. WebTabs

Web Tabs are custom tabs that display web content or applications embedded in the salesforce.com window. Web tabs make it easier for your users to quickly access content and applications they frequently use without leaving the salesforce.com application.

3. VisualforceTabs

Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

4. LightningComponentTabs

Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app.

5. LightningPageTabs

Lightning Page Tabs let you add Lightning Pages to the mobile app navigation menu. Lightning Page tabs don't work like other custom tabs. Once created, they don't show up on the All Tabs page when you click the Plus icon that appears to the right of your current tabs. Lightning Page tabs also don't show up in the Available Tabs list when you customize the tabs for your apps.

UseCase:

Creating Objects and storing Jewels data is the very first step in the requirements they want. Now to access the stored data by an Owner (Gold Smith) in the organisation Admin needs to create Tabs.

By designing a dedicated Tab, businesses can improve user experience, simplify navigation, and provide quick access to critical information, enhancing productivity and ensuring efficient utilisation of Salesforce's capabilities.

Activity 1: 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)

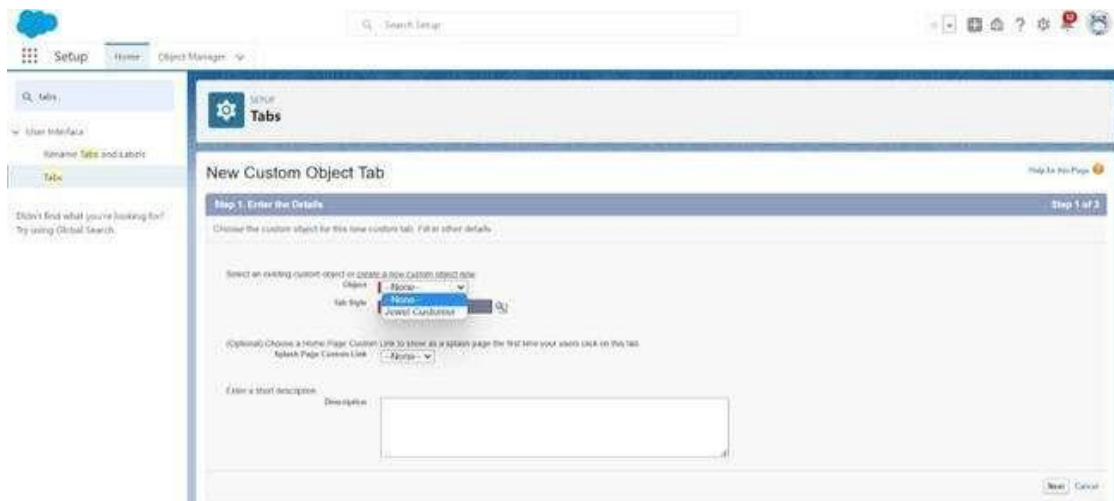
Custom Tabs

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 content, such as Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation bar. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.



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



Activity 2: 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 profile 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 Lightning App

An app is a collection of items that work together to serve a particular function. In Lightning Experience, Lightning app gives users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar.

Lightning apps let you brand your apps with a custom color and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.

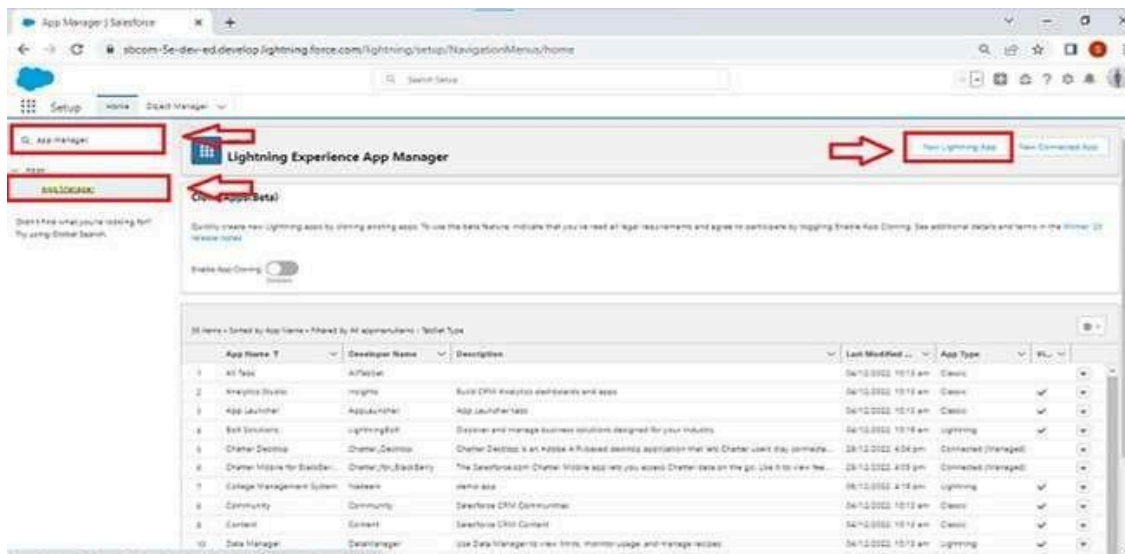
UseCase:

Well done you have reached close to your requirement by creating the objects to store the organization's data. Making a database for an organization is just not enough to reach out the requirements, the task is how the users at the organization can access the objects you have created for them. As an Admin for the organization it's your duty to make sure every user of the organization is able to access the data modelling structure.

Activity 1: Create a Lightning App

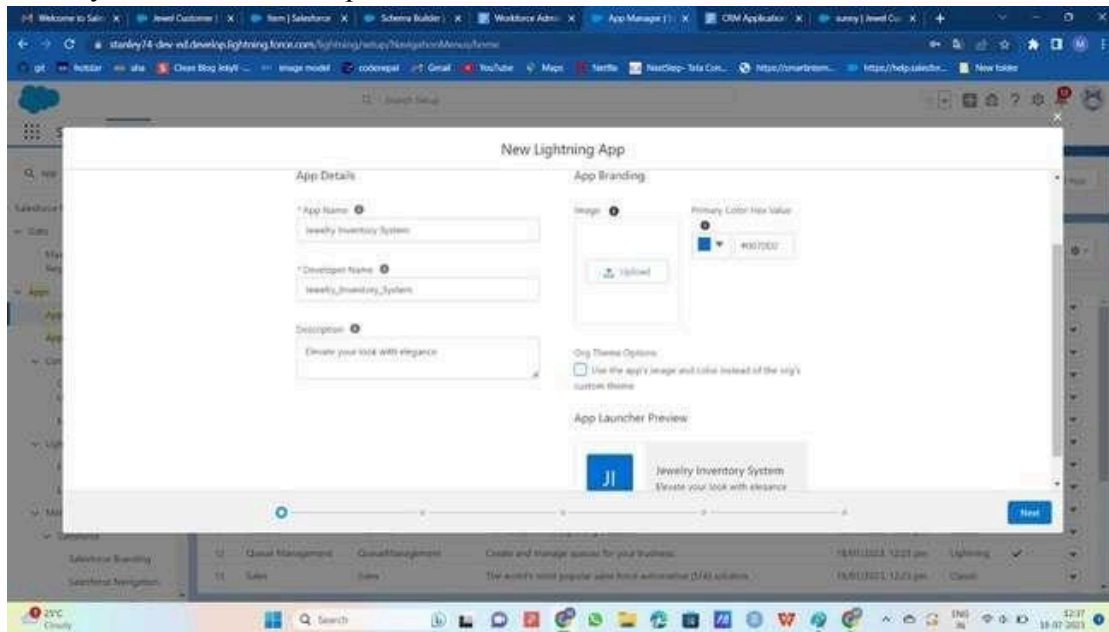
To create a lightning app page:

1. Go to setup page >> search "appmanager" in quick find >> select "appmanager" >>
2. click on New lightning App.



3. Fill the app name in app details and brand it as follows:
App Name : Jewellery Inventory System.
Developer Name : This will auto populate
Description : Elevate your look with elegance
Image : optional (if you want to give any image you can, otherwise not mandatory)

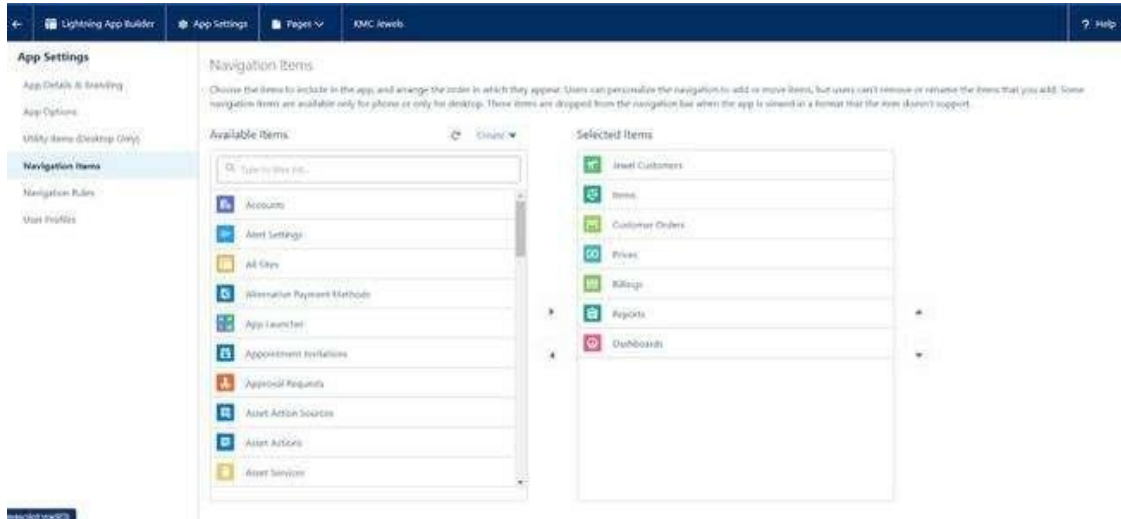
Primarycolourhexvalue:keepthisdefault.



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

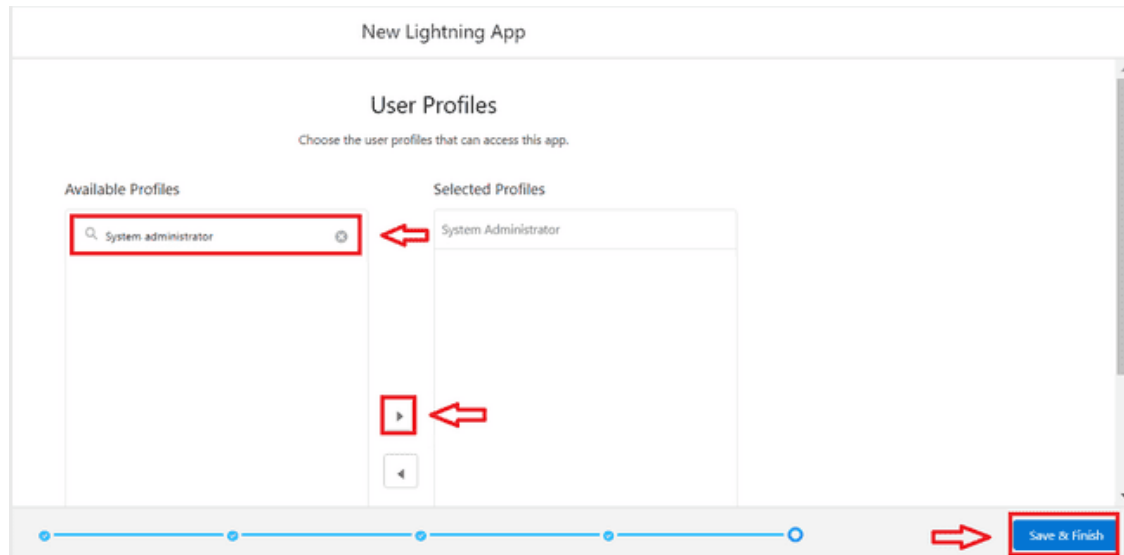


4. (Utility Items) keep it as default >> Next.
5. To Add Navigation Items: Search for the



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

6. ToAddUserProfiles:



Searchprofiles(Systemadministrator)inthesearchbar>> clickonthearrowbutton>> save&finish.

Milestone5:Fields

When we talk about Salesforce, Fields represent the data stored in the columns of a relational database. It can hold any valuable information that you require for a specific object. Hence, the overall searching, deletion, and editing of the records become simpler and quicker.

Types of Fields:

1. Standard Fields
2. Custom Fields

Standard Fields:

As the name suggests, the Standard Fields are the predefined fields in Salesforce that perform a standard task. The main point is that you can't simply delete a Standard

Field until it is a non-required standard field. Otherwise, users have the option to delete them at any point from the application freely. Moreover, we have some fields that you will find common in every Salesforce application. They are,

>> Created By

>> Owner

>>LastModified

>>FieldMadeDuringobjectCreation

CustomFields:

On the other side of the coin, Custom Fields are highly flexible, and users can change them according to requirements. Moreover, each organisation or company can use them if necessary. It means you need not always include them in the records, unlike Standard fields. Hence, the final decision depends on the user, and he can add/remove Custom Fields of any given form.

Use Case:

Now it's time for you to think out of the box for your organisation. You have successfully created the database objects for the organisation but now all eyes turn on you as you have to define what sort of information the objects store which you have created. As a life saver of your organisation you come up with the idea of creating fields to store different types of data.

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.

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.

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 quick find bar >> click on the object.
2. Click on fields & relationships >> click on New.

3. Select “Master-Detail relationship” as datatype 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:

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 Datatype as “Text”.



- 4.. Click on Next



4. Fill the above as following:
 - Field Label: City
 - Length: 20
 - Field Name: gets autogenerated
 - 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".

Setup - Object Manager - Item

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

New Custom Field

Step 2 of 4: Enter the details

Field Label: Item Type

Values: ☐ Use global picklist value set ☒ Enter values, with each value separated by a new line

Field Name: Item_Type

Description:

Previous Next Cancel

6. ClickNext?Next?Next?Save.

Activity8:CreatingCurrencyFieldinPriceObject

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.

Setup - Object Manager - Price

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

New Custom Field

Step 2 of 4: Enter the details

Field Label: Gold price

Please enter the length of the number and the number of decimal places. For example, a number with a length of 8 and 2 decimal places can accept values up to "12345678.90".

Length: 8

Decimal Places: 0

Field Name: Gold_price

Description:

Help Text:

Previous Next Cancel

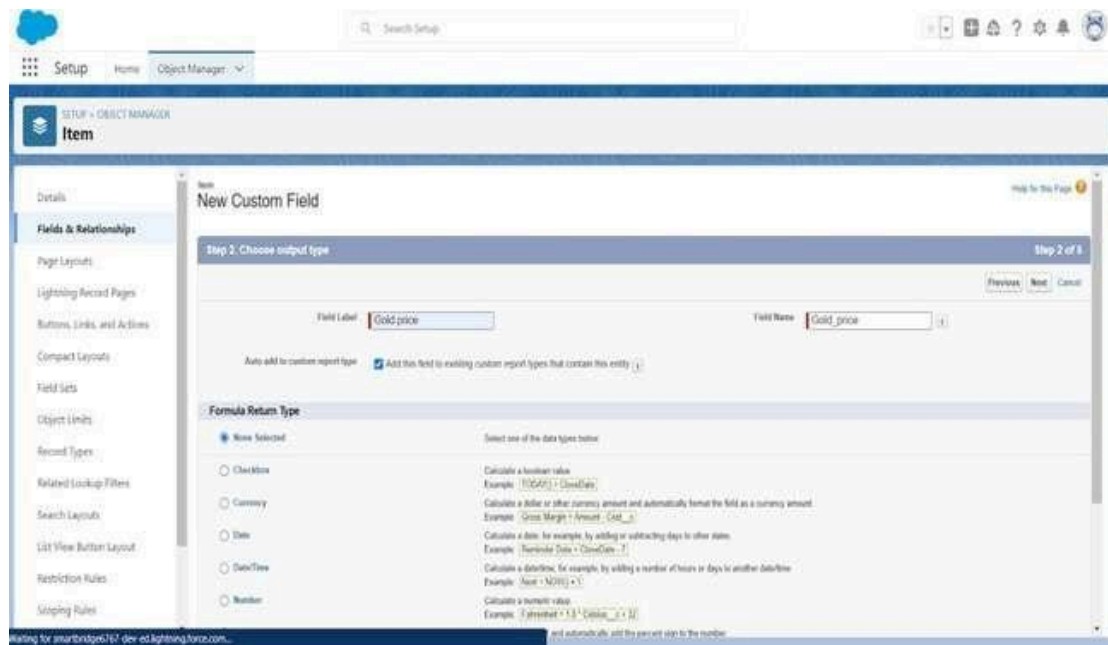
4. Enter Field Label as "GoldPrice" and length as "8" and decimal 0. Field name will be autogenerated.
5. Click Next >> Next >> Next >> Save.

Activity9:CreatingFormulaField(CrossObject)inItemObject

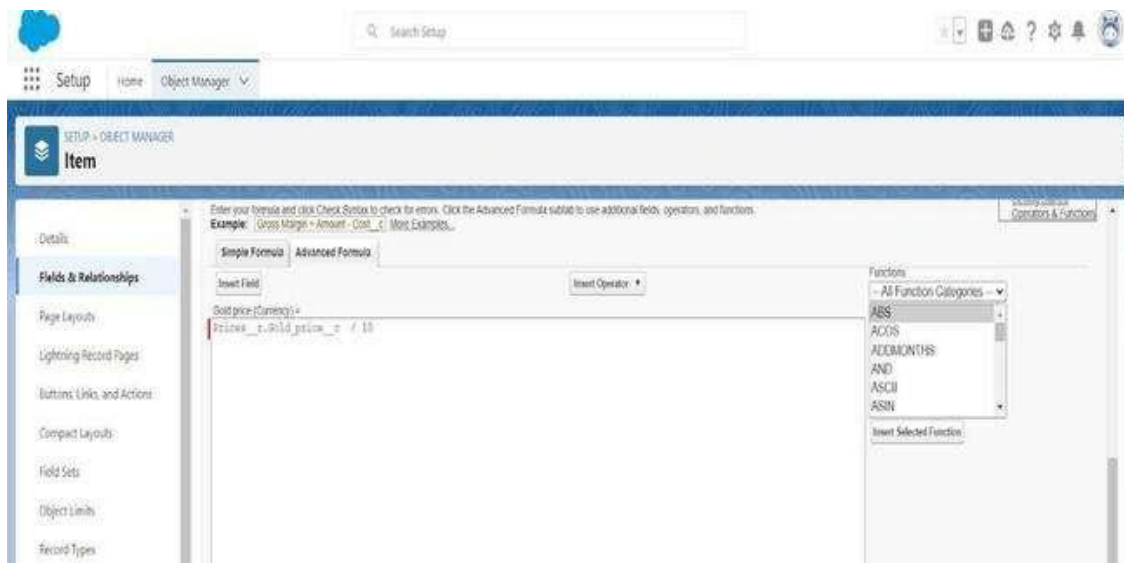
To create fields in an object:

(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: $\text{Prices} \cdot \text{Gold_price} / 10$.



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

Activity10:CreatingRemainingFieldsinObjects

Nowcreatetheremainingfieldsusingthedatatypesmentioned.

s.no	Objectname	Fields	
1	JewelCustomer		
		FieldName	Datatype
		State	Text(20)
		Street	Text(20)
		Country	Text(18)
		Zip/Postalcode	Text(6)

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

3	Item		
		FieldLabel:Customer Name	LookupRelationshipwithJewel CustomerObject
		Ornament	Text(20)
		Weight	Number (Length=8,Decimal=5)

Stone Weight	Number (Length=5,Decimal=5)
--------------	--------------------------------

Percentage	Number (Length=2,Decimal=0)
------------	--------------------------------

Stone/OtherPrice	Currency (Length=8,Decimal=2)
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ExpectedDaysOfReturn	Picklist
	1-3Days 4-5Days 6-7Days 8-10 Days

		Priority	Picklist
			Low
			Medium
			High
			Critical
		SilverPrice	Formula (ReturnType: Number) (Decimal=3) <hr/> (Pricesr.Silver_pricec/ 1000) <hr/>
		PurityGoldPrice	Formula (ReturnType: Currency) (Decimal=2) <hr/> ((Pricesr.Gold_pricec* Purity c) / 24) / 10 <hr/>
		TotalWeight	Formula (ReturnType: Number) (Decimal=3)

			<div>(Weightc- Stone_weightc)</div>
		Amount	Formula (ReturnType:Currency) (Decimal=3) <div>IF(ISPICKVAL(Item_Type____ c ,"Gold"), Total_weightc *Purity_Gold_pricec,Total_weig htc* Silver_pricec)</div>
		KDM	Formula (ReturnType:Currency) (Decimal=0) <div>(Amountc * Percentagec)/100</div>
		MakingCharges	Formula (ReturnType:Currency) (Decimal=0) <div>IF(ISPICKVAL(Item_Type____ c ,"Gold"),Weightc* 300 ,Weightc*10)</div>

4	CustomerOrder	<table><tr><td>OrderStatus</td><td>Picklist<table><tr><td>Started</td></tr><tr><td>NotStarted On</td></tr><tr><td>Hold</td></tr><tr><td>Completed</td></tr><tr><td>NotCompleted</td></tr></table></td></tr></table>	OrderStatus	Picklist <table><tr><td>Started</td></tr><tr><td>NotStarted On</td></tr><tr><td>Hold</td></tr><tr><td>Completed</td></tr><tr><td>NotCompleted</td></tr></table>	Started	NotStarted On	Hold	Completed	NotCompleted
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NotStarted On									
Hold									
Completed									
NotCompleted									

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F      Lookup
i  Relationship
e      withItem
l  Object

```

	Formula
Ornament	(ReturnType:Text)
Itemr.Ornament	

	Formula
Sto	(Return Type: Number) (Decimal=2)

Itemr.Stone_weight
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100

Weighting
 Formula
 Return
 Type: Number
 (Decimal=2)
 Itemr.Total_weight
 c

5 Now createtheremainingfieldsusingthedatatypes mentioned.

s . n o	O bj e ct n a m e	Fields										
1	J e w e l C u s t o m e r	<table><tr><th>FieldName</th><th>Datatype</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <div><div>State</div><div>Text(20)</div></div> <div><div>Street</div><div>Text(20)</div></div> <div><div>Country</div><div>Text(18)</div></div> <div><div>Zip/Postalcode</div><div>Text(6)</div></div>	FieldName	Datatype								
FieldName	Datatype											

2	P r i c e		
		Silver Price	Currency (Length=8,Decimal =5)

3	Item	
---	------	--

F
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Lookup
Relationshipwith
Jewel Customer
Object

O
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Text(20)

W
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Number
(Length=8,Decimal
=5)

S
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W
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Number
(Length=5,Decimal
=5)

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A Formula
m (Return
o Type:Currency)
u (Decimal=2)
n
t Itemr.Amountc

G Formula
o (Return
l Type:Currency)
d (Decimal=2)
/
S IF(ISPICKVAL(Item
il r.Item_Type," Gold"),
v Itemr.Gold_price_
e _c,
r Itemr.Silver_price
P c)
r
i
c
e

K Formula
D (Return
M Type:Currency)
C (Decimal=0)
h
a Itemr.KDMc
r
g
e

M Formula
a (Return
k Type:Currency)
i (Decimal=2)
n
g Itemr.Making_Charges
C c
h
a
r
g
e
s

S Formula
t (Return
o Type:Currency)
n (Decimal=2)

e s / o t h e r p r i c e	Itemr.Stone_other _pricec
T o t a l A m o u nt	Formula (Return Type:Currency) (Decimal=0) Amountc+ KDM_Chargec+ Stones_other_price_ _c+ Making_Chargesc

			u r n	
			P r i o r i t y	Picklist <div> Low Medium High Critical </div>
			S il v e r P r i c e	Formula (Return Type: Number) (Decimal=3) <div> (Pricesr.Silver _pricec/ 1000) </div>
			P u r i t y G o l d P r i c e	Formula (Return Type: Currency) (Decimal=2) <div> ((Pricesr.Gold _pricec * Purityc)/24) /10 </div>
			T o a l W e i	Formula (Return Type: Number) (Decimal=3)

				<div>g h t</div>	(Weightc- Stone_weight____ c)	
				<div>g h t</div>		
				<div>g h t</div>		

A m o u n t	Formula (Return Type:Currency) (Decimal=3) IF(ISPICKVAL(I tem_Type,c," Gold"), Total_weightc * Purity_Gold_price c,Total_weightc * Silver_pricec)
----------------------------	--

K Formula (Return
D Type:Currency)
M (Decimal=0)

(Amountc
* Percentagec
)/100

M a k i n g C h a r g e s	Formula (Return Type:Currency) (Decimal=0) IF(ISPICKVAL(I tem_Type,c," Gold"), Weightc* 300 , Weightc* 10)
---	--

4	Custo merO rder	<table><tr><td>O r d e r S t a t u s</td><td>Picklist <table><tr><td>Started</td></tr><tr><td>NotStarted</td></tr><tr><td>On Hold</td></tr><tr><td>Completed</td></tr><tr><td>NotCompleted a</td></tr></table></td></tr></table>	O r d e r S t a t u s	Picklist <table><tr><td>Started</td></tr><tr><td>NotStarted</td></tr><tr><td>On Hold</td></tr><tr><td>Completed</td></tr><tr><td>NotCompleted a</td></tr></table>	Started	NotStarted	On Hold	Completed	NotCompleted a
O r d e r S t a t u s	Picklist <table><tr><td>Started</td></tr><tr><td>NotStarted</td></tr><tr><td>On Hold</td></tr><tr><td>Completed</td></tr><tr><td>NotCompleted a</td></tr></table>	Started	NotStarted	On Hold	Completed	NotCompleted a			
Started									
NotStarted									
On Hold									
Completed									
NotCompleted a									

5	Billing	<table><tr><td>F i e l d L a b e l : I t e m</td><td>Lookup Relationship withItem Object</td></tr><tr><td>O n a m e n t</td><td>Formula (ReturnType:Text) r <div>Itemr.Ornament_____c</div></td></tr><tr><td>S t o n e</td><td>Formula (Return Type:Number) (Decimal=2)</td></tr></table>	F i e l d L a b e l : I t e m	Lookup Relationship withItem Object	O n a m e n t	Formula (ReturnType:Text) r <div>Itemr.Ornament_____c</div>	S t o n e	Formula (Return Type:Number) (Decimal=2)
F i e l d L a b e l : I t e m	Lookup Relationship withItem Object							
O n a m e n t	Formula (ReturnType:Text) r <div>Itemr.Ornament_____c</div>							
S t o n e	Formula (Return Type:Number) (Decimal=2)							

[illegible]

Formula
Weight
Return
Type: Number
(Decimal=2)
Itemr.Total_weight
c

Formula
Amount
(Return
Type: Currency)
(Decimal=2)
Itemr.Amountc

Formula
Gold
(Return
Type: Currency)
(Decimal=2)
IF(ISPICKVAL(Itemr.Item_Type, "Gold"),
Itemr.Gold_price_
_c,
Itemr.Silver_price_
_c)
Price
Itemr

Formula
KDM
(Return
Type: Currency)
(Decimal=0)
Itemr.KDMc
Price
Itemr

[illegible]

M Formula
a (Return
k Type:Currency)
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n Itemr.Making_Charg
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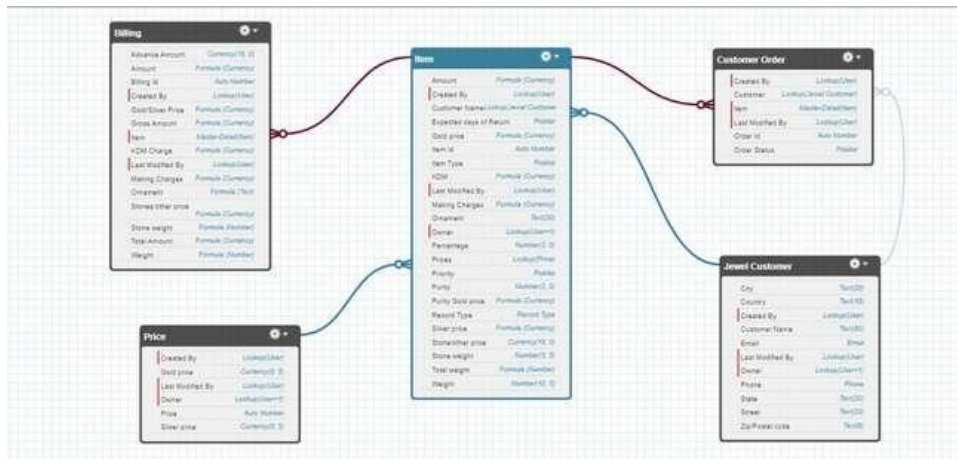
S Formula
t (Return
o Type:Currency)
n (Decimal=2)
e Itemr.Stone_other
s _pricec
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T Formula
o (Return
t Type:Currency)
a (Decimal=0)
l Amountc+
A KDM_Chargec+
m Stones_other_price_
o _c+
u Making_Chargesc
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t

Billing

Activity11:SchemaBuilder

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.

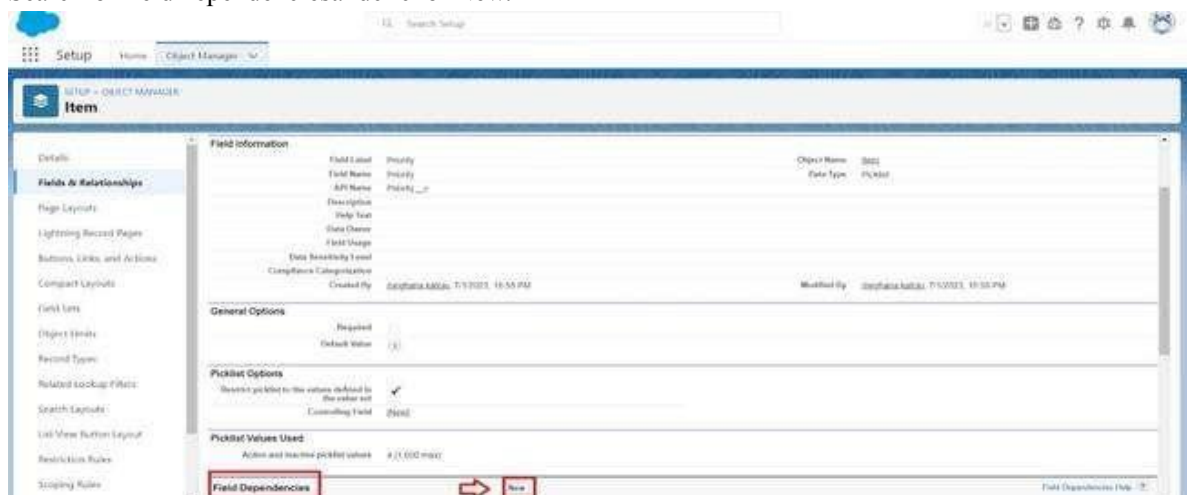


Activity 12: Creating the Field Dependencies

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.

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.

Controlling Field: None

Depending Field: None

Continue Cancel

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

Field Relationships

Controlling Field: Priority

Depending Field: Expected days of Return

Instructions

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells at once.
- Use Shift + Click to select a range of adjacent cells. Use Ctrl + Click to select multiple cells that are not adjacent.
- Use the Refresh button to test the results.

Click button to include or exclude selected values from the dependent picklist.

Priority	Link	Medium	High	Overall
Expected days of Return	1-3 Days	4-7 Days	8-10 Days	1-3 Days
	4-7 Days	8-10 Days	1-3 Days	4-7 Days
	8-10 Days	1-3 Days	4-7 Days	8-10 Days

Click button to include or exclude selected values from the dependent picklist.

Include Values Exclude Values

Save Cancel Preview

Activity 13: Creating the validation rule

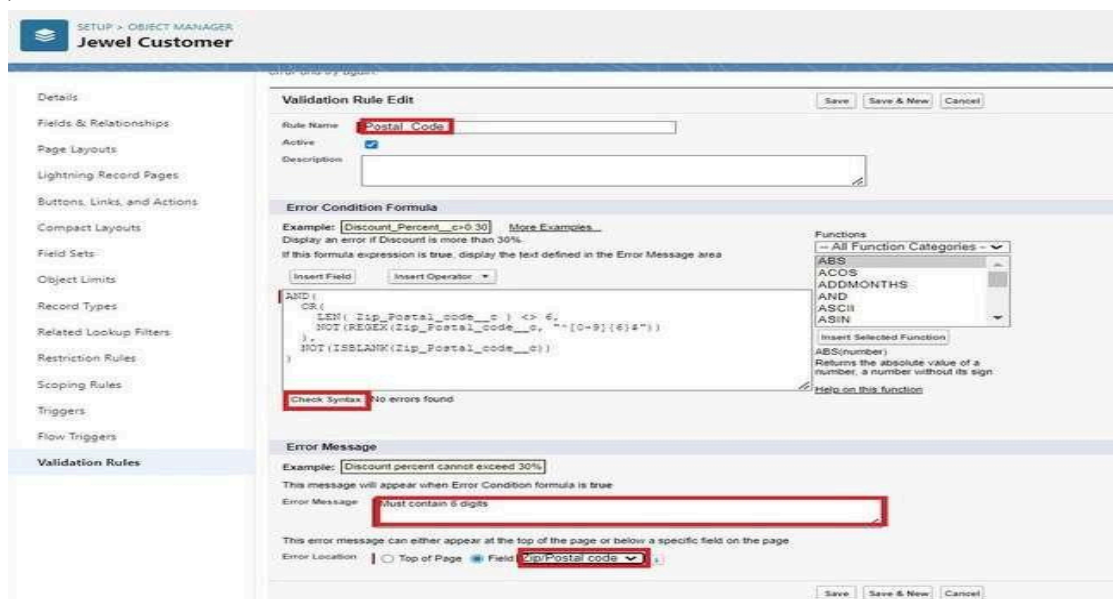
Creating the validation rule for Postal Code field in Jewel Customer object

Note: check whether the fields mentioned in the formula field are recreated or not, if not goto activity 10 and create those fields mentioned in Jewel Customer object.

1. Goto 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) <> 6, NOT(REGEX(Zip_Postal_code, "[0-9]{6}\$")),
 NOT(ISBLANK(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 "Validation Rule For Jewel Customer Object".

2. Insert the Error Condition Formula as:-
OR(ISBLANK(Cityc),
ISBLANK(Countryc),ISBLANK(Phonec),ISBLANK(Statec),ISBLANK(
Streetc))
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 "ValidationRuleForItem".
2. Insert the Error Condition Formula as:-
OR(ISBLANK(Amountc),
ISBLANK(Customer_Namec),ISBLANK(Gold_pricec),ISBLANK(KDMc),ISBLANK(Orna
mentc),ISBLANK(Percentagec),ISBLANK(Making_Chargesc),
ISBLANK(Pricesc),ISBLANK(Stone_weightc),ISBLANK(Silver_pricec),ISBLANK(Stone_
other_pricec),ISBLANK(Stone_weightc),ISBLANK(Weightc))
3. Enter the Error Message as "Please fill Required fields", select the Error location as Top of Page and click Save.

Milestone 6: 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 delete 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.

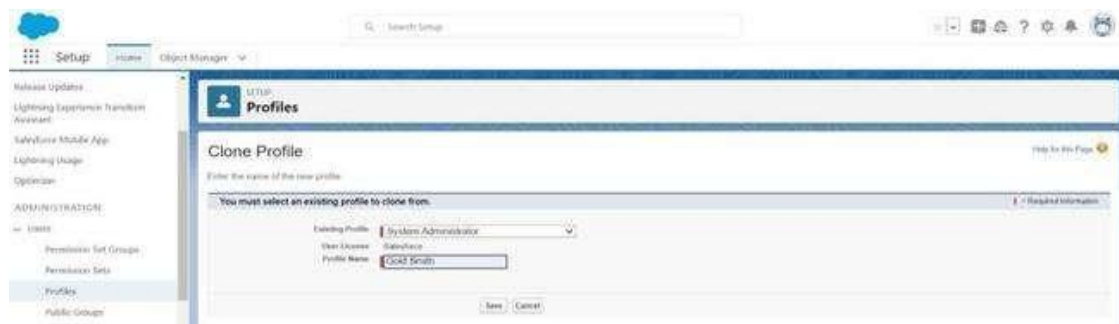
UseCase:

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.

Activity 1: GoldSmith 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.



4. Scroll down and Click on Save.

Milestone 7: Roles

A role in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organisation can have to data. Simply put, it describes what a user could see within the Salesforce organisation.

UseCase:

You have successfully fulfilled the 1st requirement i.e., differentiating the users based on the functionality. Now comes the 2nd task of differentiating the users based on their position, using your excellent admin skills and expanding the custom roles for the organisation and assigning it to the users.

Activity 1: Creating GoldSmith Role

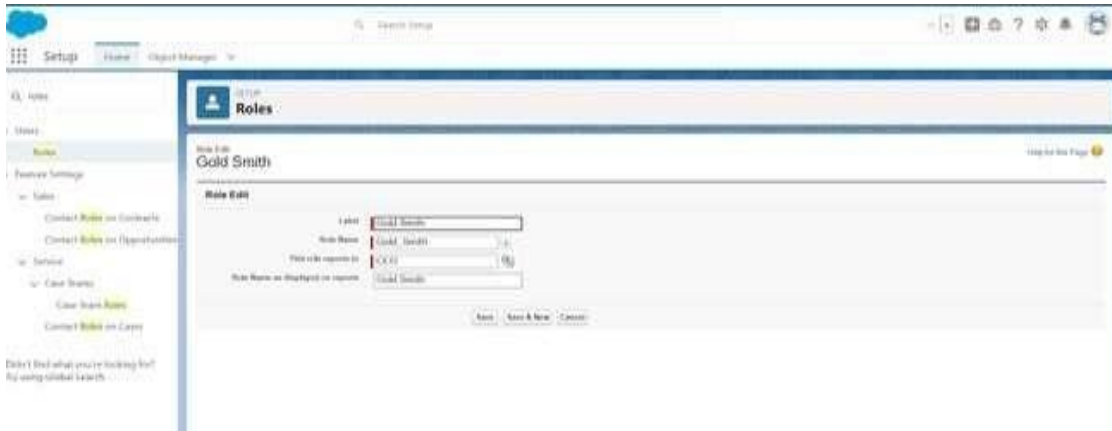
1. From setup, Go to quick find >> Search for Roles >> click on set up roles.



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



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



Activity2:CreateonemorerolesWorkerwhichreportstoGoldSmith.



Milestone8:Users

AuserisanyonewhologsintoSalesforce.Users areemployeesatyour company,such assalesreps,managers,andITspecialists,whoneedaccesstothe company'srecords. EveryuserinSalesforcehasauseraccount.Theuseraccountidentifiestheuser,andthe user account settings determine what features and records the user can access.

EveryuserinSalesforcehasauseraccount.Theuseraccountidentifiestheuser,andthe user account settings determine what features and records the user can access. Each user account contains at least the following:

- Username
- EmailAddress
- User'sFirstName(optional)
- User'sLastName
- Alias
- Nickname
- Licence
- Profile
- Role(optional)

Activity1:CreateUser

1. Gotosetup>>typeusersinquickfindbox>>select users>>clickNewuser.
2. Fillinthe fields
 1. FirstName :Niklaus
 2. LastName :Mikaelson
 3. Alias :GiveaAliasName
 4. Emailid:GiveyourPersonalEmailid
 5. Username :Usernameshouldbeinthisform:text@text.text
 6. NickName :GiveaNickname
 7. Role :GoldSmith
 8. Userlicence :Salesforce
 9. Profiles:GoldSmith

The screenshot shows the 'User Setup' page for a user named 'Niklaus Mikaelson'. The 'General Information' section is active, displaying various fields for user creation. The 'Role' dropdown menu is highlighted with a red box, showing 'Gold Smith' as the selected option. The 'User License' dropdown menu is also visible, showing 'Salesforce' as the selected option. The 'Profile' dropdown menu is also visible, showing 'Gold Smith' as the selected option. The 'Status' dropdown menu is also visible, showing 'Active' as the selected option. The 'Marketing Opt-In' checkbox is checked. The 'Offline Opt-In' checkbox is unchecked. The 'Knowledge Opt-In' checkbox is unchecked. The 'Flow Opt-In' checkbox is unchecked. The 'Service Cloud Opt-In' checkbox is unchecked. The 'B2B Commerce Opt-In' checkbox is unchecked. The 'M2C Opt-In' checkbox is unchecked. The 'Data.com Opt-In' dropdown menu is set to 'None'. The 'Data.com Marketing Edition Opt-In' checkbox is unchecked. The 'Accessibility: Write Elements On' checkbox is unchecked. The 'High Contrast Palette on' checkbox is unchecked. The 'Visual Lightning Page Width Scrolling' checkbox is checked. The 'Zoom Menu' checkbox is unchecked. The 'Send App Warning Emails' checkbox is unchecked.

10.Save.

Activity2:CreateUser

1. Gotosetup>>typeusersinquickfindbox>>select users>>clickNewuser.
2. Fillinthe fields

- FirstName:Kol
 - LastName:Mikaelson
 - Alias:GiveaAliasName
 - Emailid:GiveyourPersonalEmailid
 - Username:Usernameshouldbeinthisform:text@text.text
 - NickName:GiveaNickname
 - Role:Worker
 - Userlicence:SalesforcePlatform
 - Profiles:Worker
3. Save.

Note:Createtwomoreusersasmentionedinactivity2usingthesameprofile.

Milestone9:Pagelayouts

PageLayoutinSalesforceallowsustocustomisethedesignandorganise detailandedit pages ofrecords inSalesforce. Pagelayouts canbeused tocontroltheappearanceof fields,related lists,and custom links onstandardand custom objects' detailand edit pages.

UseCase:

Hurray!! youhavecompletedthedatamodelstructureforyourorganisationbut whilelookingat the detailedandedit pagesit seemstobesoclumsy, sodecidetoorganisethepageinapleasant way for the sake of good and pleasant appearance and assemble all different kinds of information in different sections in order.

Activity1:ToCreateaGoldPagelayout

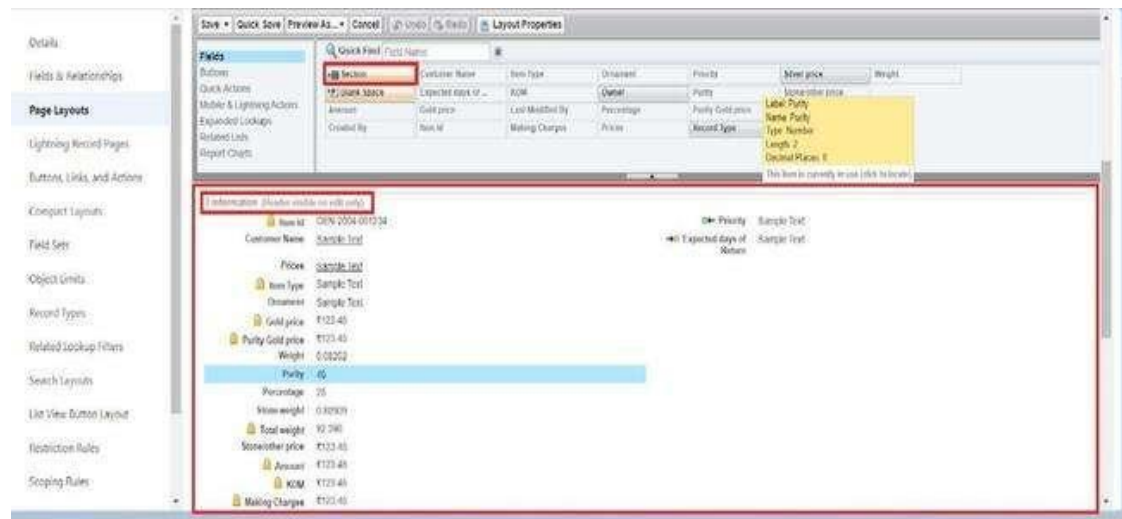
1. GotoSetup>> ClickonObject Manager>> Searchfortheobject (Item)>>Fromdropdown click on Edit.
2. ClickonPagelayout>>ClickonNew.



3. GivePageLayoutNameas“PageLayoutforGold”andclickonSaveandNew.



4. ArrangethefieldasshownintheInformationSection,removefieldswhichare related to Silver and click Ok.

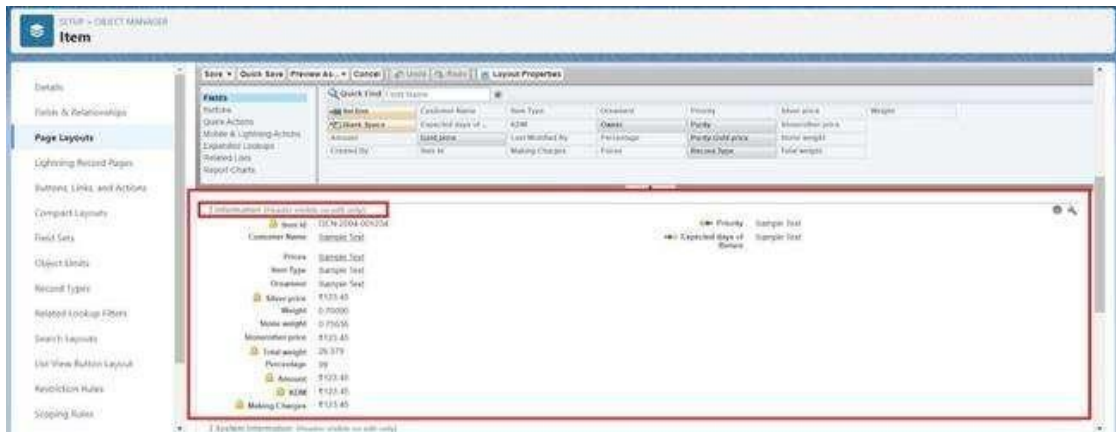


5. ClickSave.
6. Makesureyourpagelayoutlookslikethepictureabove.

Activity2: To Create a Silver Page Layout

1. GotoSetup>> ClickonObject Manager>> Searchfortheobject (Item)>>Fromdropdown click on Edit.
2. ClickonPagelayout >> ClickonNew.
3. GivePagelayout Nameas“PageLayoutforSilver”andclickonSave.

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



Milestone10:RecordTypes

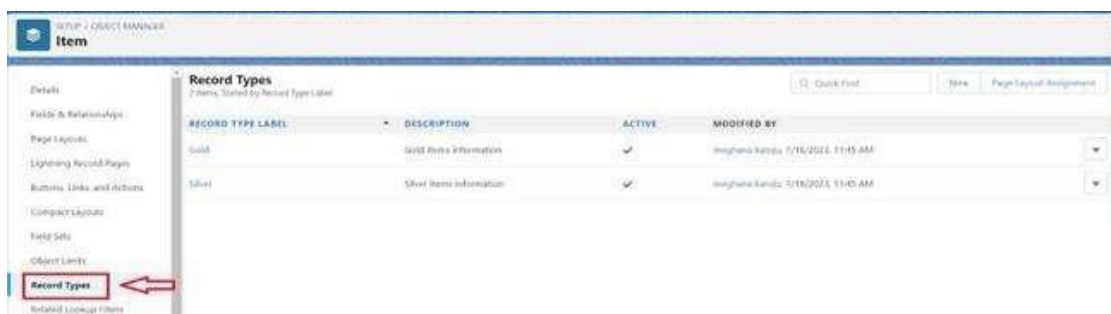
Record Types are a way of grouping many records of one type for that object. These can be applied to any standard or custom object, and allow you to have a different page layout, fields, required fields, and picklist values. Record types allow administrators to create a different page layout with custom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

UseCase:

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.

Activity 1: To create a Record Type

1. Go to setup >> click on Object Manager >> type object name (Item) in quick find bar? click on the object.
2. Click on the Record Types >> click New.



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

Setup > OBJECT MANAGER > Item

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Help for this Page

Record Type

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

Record Type Label: Gold

Record Type Name: Gold

Namespace Prefix:

Description: Gold items information

Active: ☒

Save Cancel

4. Uncheck for “Make Available”.

Profile Name	Record Types Currently Available	<input type="checkbox"/> Make Available	<input type="checkbox"/> 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 GoldSmith, Worker JW & System Administrator profile and click on Next.

Setup > OBJECT MANAGER > Item

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Customer Profile Manager Standard		<input type="checkbox"/>	<input type="checkbox"/>
Customer App User		<input type="checkbox"/>	<input type="checkbox"/>
External Identity User		<input type="checkbox"/>	<input type="checkbox"/>
External User - App Subscription User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
External User - Free User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Gold Partner User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Gold Smith	Gold (Default) Share	<input checked="" type="checkbox"/>	<input type="checkbox"/>
High Volume Customer Profile		<input type="checkbox"/>	<input type="checkbox"/>
High Volume Customer Profile User		<input type="checkbox"/>	<input type="checkbox"/>
HR	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
HR Specialist	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Identity User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Worker	Gold (Default) Share	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worker JW	Gold (Default) Share	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worker JW	Gold (Default) Share	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worker JW	Gold (Default) Share	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Marketing User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Marketing Access - Salesforce	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>
Marketing App Subscription User	Gold (Default) Share	<input type="checkbox"/>	<input type="checkbox"/>

6. Select “Apply different layout for each profile”, and change page layout to “Page Layout for Gold” for Gold Smith, Worker and System Administrator? save & new.

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

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

Activity2: Create another Record Type with name “Silver” following the steps from Activity1.

Note: Use page layout for Silver.

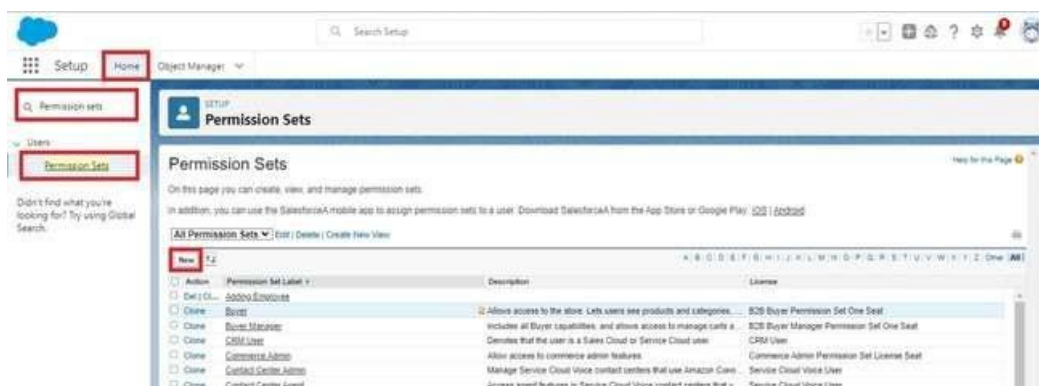
Milestone11:Permissionsets

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.

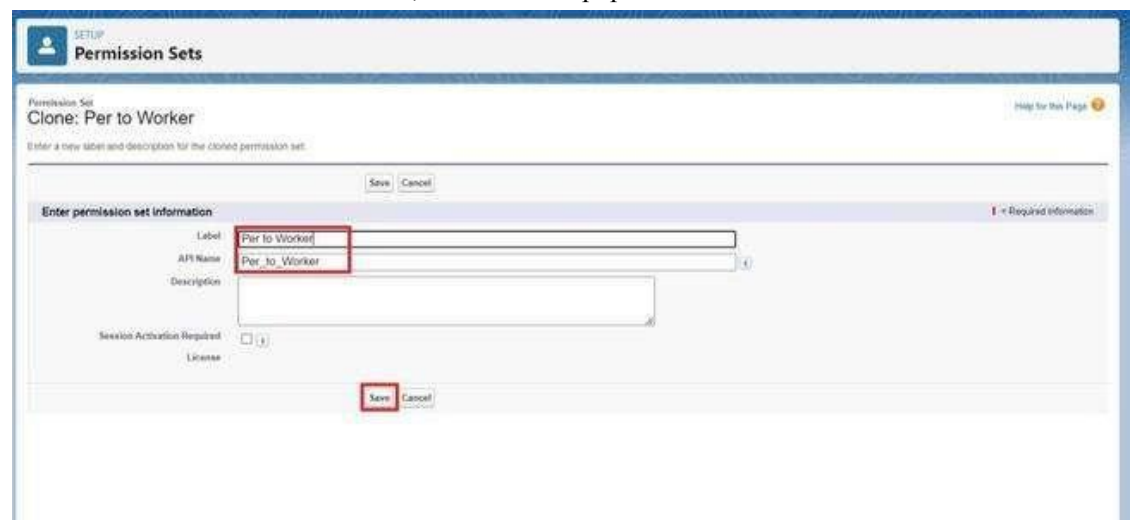
Activity1:Creatingpermissionset

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. Goto setup >> type "permission sets" in quick search >> select permission sets >> New.



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



3. Under App Select object settings.

Apps

Settings that apply to Salesforce apps, such as Sales, and custom apps built on the Lightning Platform
[Learn More](#)

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

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

SETUP
Permission Sets

Permission Set Overview > Object Settings > Items

Items Save Cancel

Tab Settings

Available	Visible
<input checked="" type="checkbox"/>	<input type="checkbox"/> (1)

Item: Record Type Assignments

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

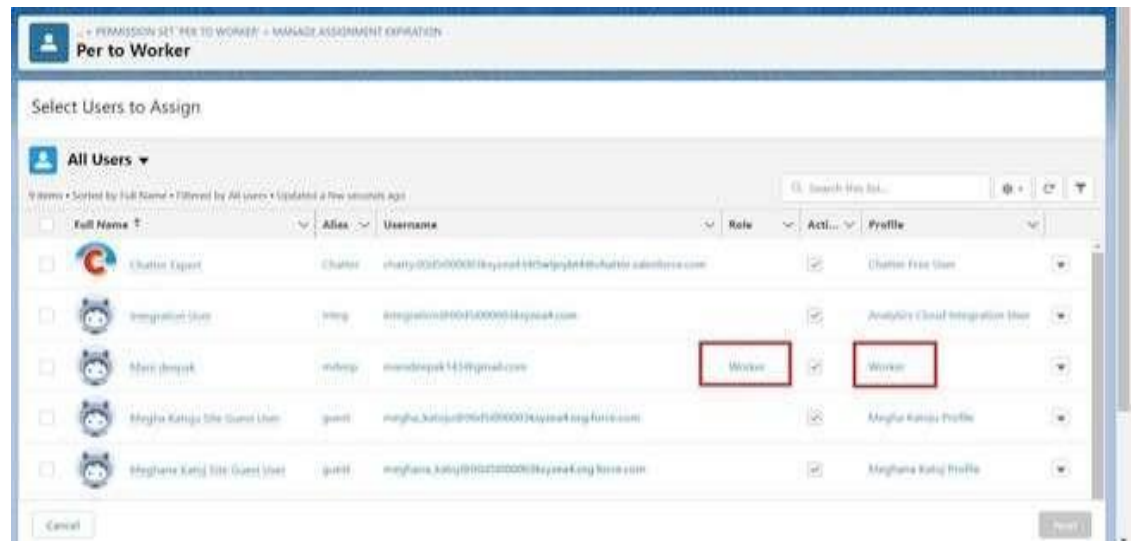
Object Permissions

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"/>

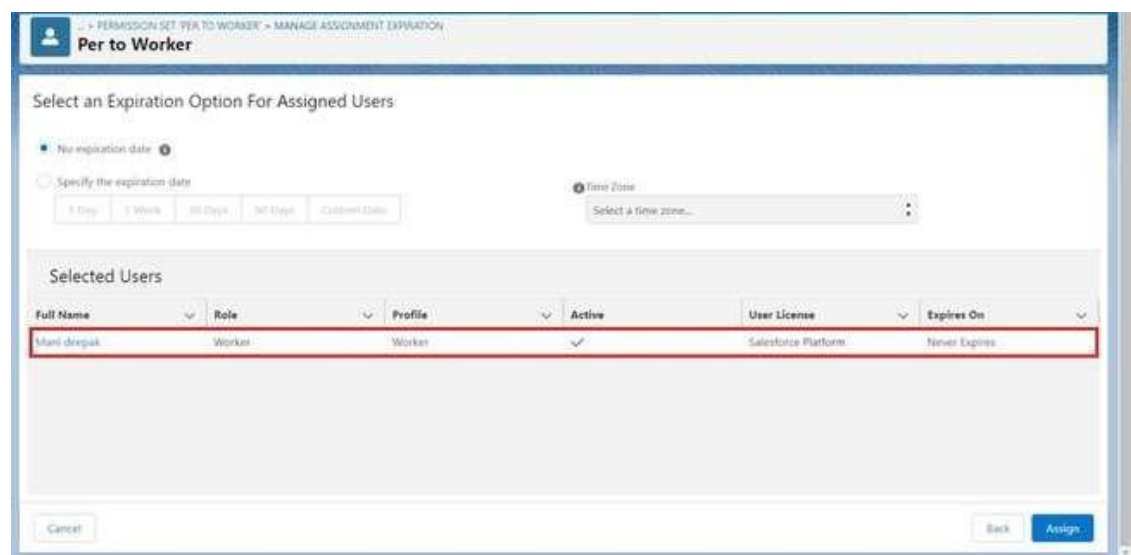
Field Permissions

- Click on Save.
- After saving the permission, click on the Manage assignment
- Now click on the Add Assignment.

Current Assignments Add Assignment



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



Milestone12:Trigger

UseCase:

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.

Activity 1: 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> newBillings) {
        for (Billing billing : newBillings) {
            billing.Paid_Amountc = billing.Paying_Amountc;
        }
    }

    public static void handleBeforeUpdate(Map<Id, Billing> oldBillingsMap, List<Billing> updatedBillings) {
        for (Billing billing : updatedBillings) {
            Billing oldBilling = oldBillingsMap.get(billing.Id);
            Decimal oldPaidAmount = oldBilling.Paid_Amountc;
            billing.Paid_Amountc = oldPaidAmount + billing.Paying_Amountc;
        }
    }
}
```

Activity 2: Create the trigger

CODE:

```
triggerUpdatePaidAmountTriggeronBillingc(beforeinsert,beforeupdate){ if
  (Trigger.isInsert) {
    UpdatePaidAmountTriggerHandler.handleBeforeInsert(Trigger.new);
  } else if (Trigger.isUpdate) {
    UpdatePaidAmountTriggerHandler.handleBeforeUpdate(Trigger.oldMap, Trigger.new);
```

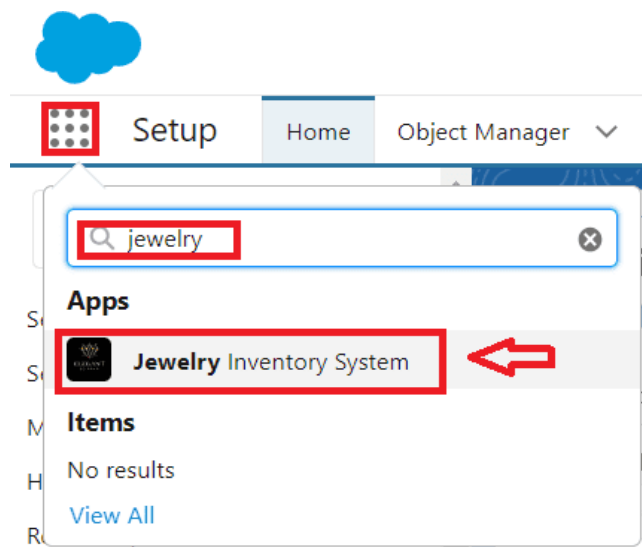
Milestone13:UserAdoption

UseCase:

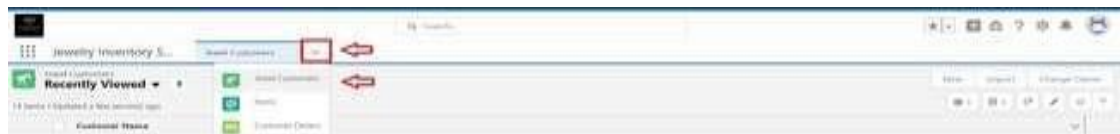
As a new Administrator, you perform user management tasks like creating and editing users, resetting passwords, granting permissions, configuring data access, and much more. In this unit, you will learn about users and how you add users to your Salesforce org.

Activity1:CreateaRecord(JewelCustomer)

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.

Activity2:ViewaRecord(JewelCustomer)

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 detail 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

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:

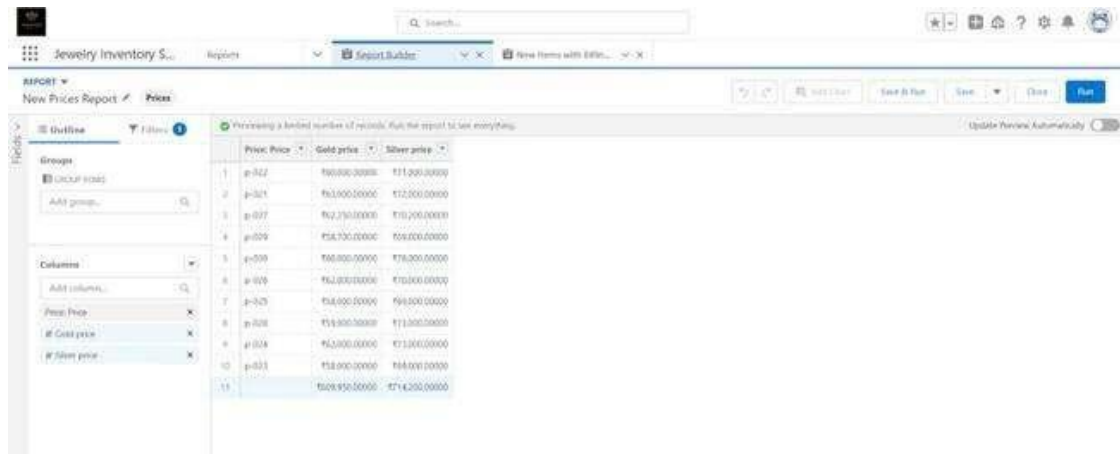
The Gold Smith of an organisation wants to have a brief data on Gold Items, Silver Items, Customer Orders and Billings. So he can have a clear picture of his organisation and be able to make any decisions required based on this data. So he calls you on this task and wants you to represent the data in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

Let's create a Report.

Activity 1: Create Report

1. Go to the app >> click on the reports tab
2. Click New 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. Create a report with report type: "Item with Billings".
2. Create a report with report type: "Billings with item and Customer order".

Milestone 15: Dashboards

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 Gold Smith in viewing the reports with data visualisation. So he doesn't have to search for the data he wants to check.

Activity 1: Dashboards

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Milestone 16: Flows

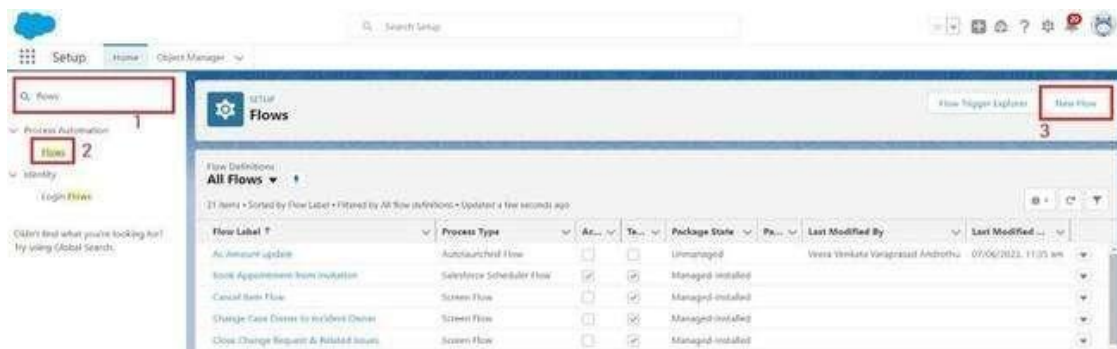
In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.

UseCase:

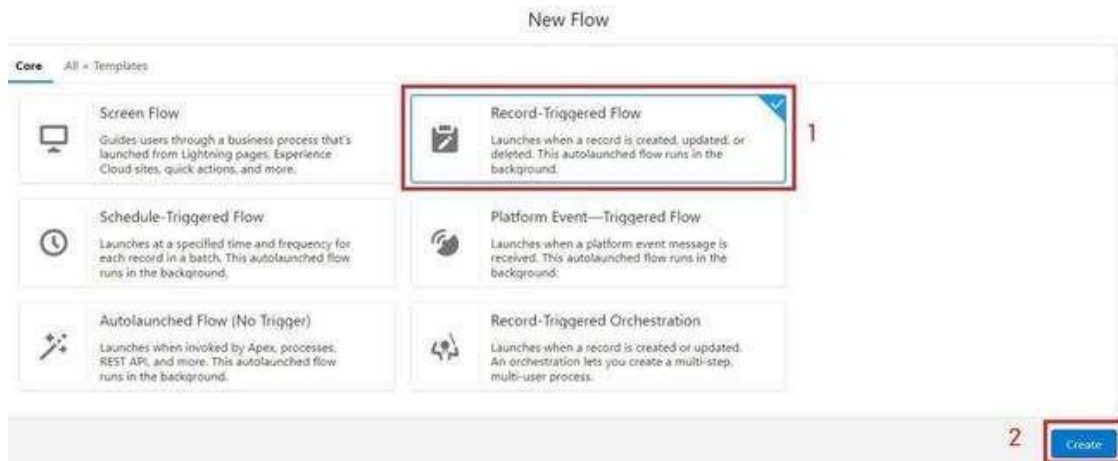
Flows, also known as Salesforce Flows or Visual Flows, are powerful declarative automation tools in Salesforce that allow users to create and manage complex business processes without the need for code. Flows are designed using a drag-and-drop interface, making them easy to use for both administrators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

Activity 1: Create a Flow

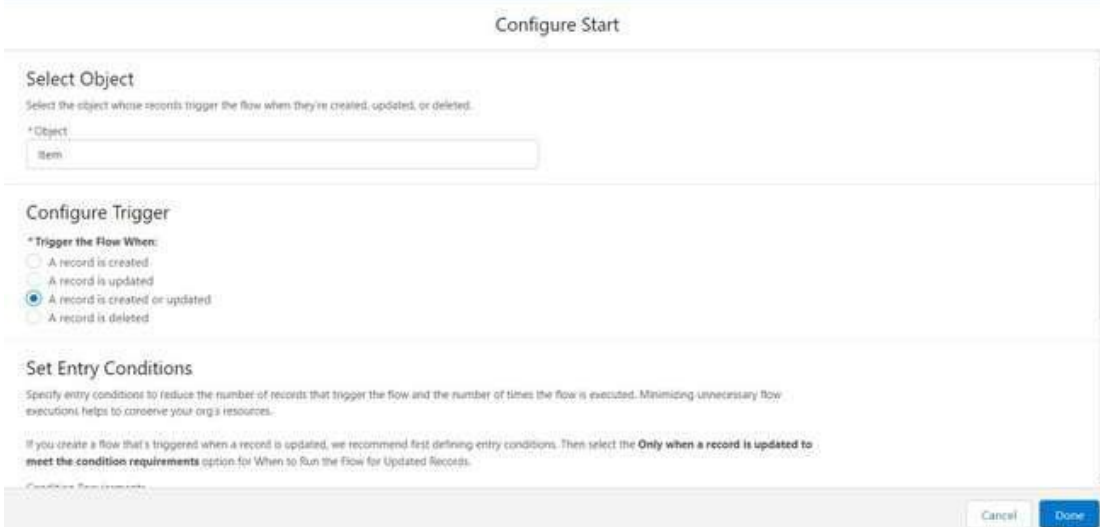
1. Go to setup >> type Flow in quick find box >> Click on the Flow and Select the New Flow.



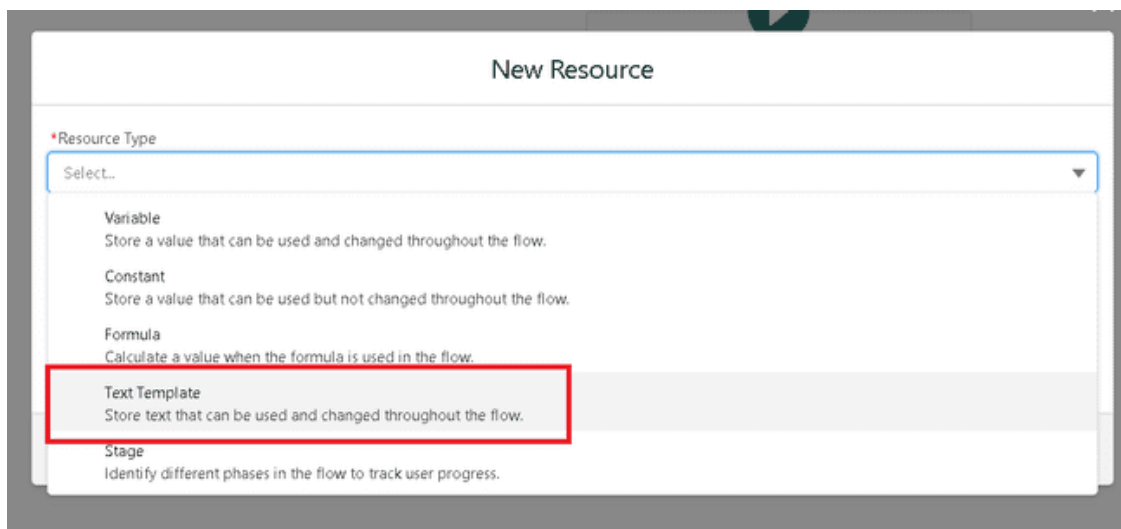
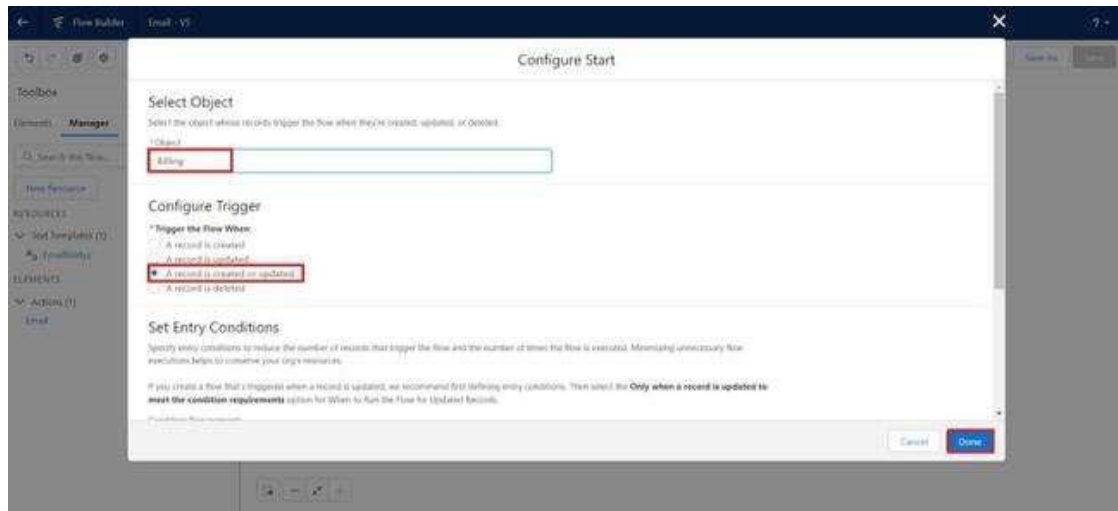
2. Select the Record-triggered flow and Click on Create.



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



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



9. Enter the API name as "Emailbody".

Edit Text Template

*API Name

Description

*Body ⓘ

Hello
 Customer Name: {!\$Record.Item_r.Customer_Name_r.Name}

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

11. In the body field paste the syntax that is given below.

Hello

CustomerName: {!\$Record.Itemr.Customer_Namer.Name}

Here are the details for the item you purchased with Jewellery Inventory System Item

Type: {!\$Record.Itemr.Item_Type}

Ornament: {!\$Record.Ornamentc}

Weight: {!\$Record.Weightc} grams

Amount: {!\$Record.Amountc}

12. Click done.

13. Now click on elements, and drag the action element into the preview pane.

14. The 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 inset input values for these selected action.

18. Select the text template that was created.

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.

Save the flow

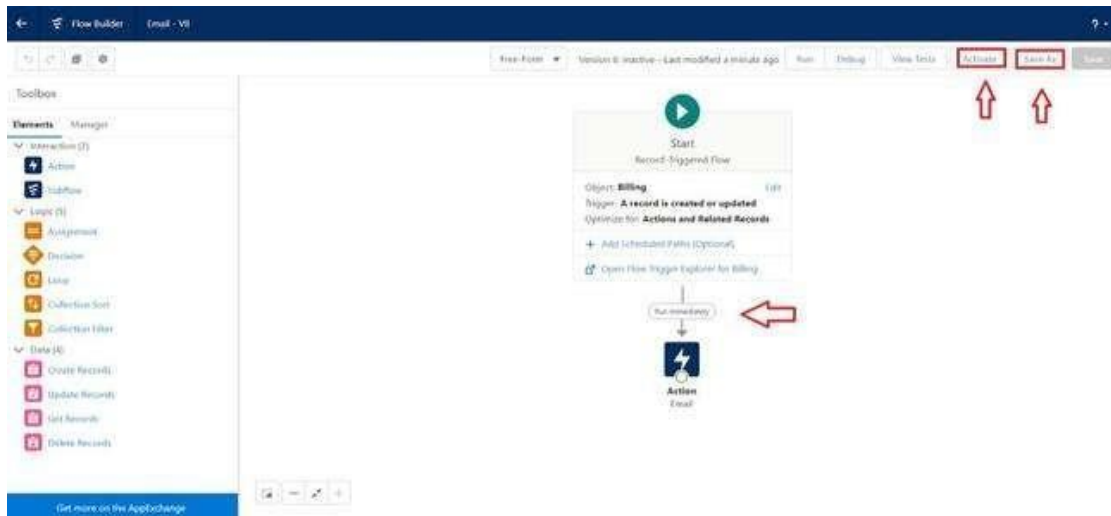
*Flow Label

*Flow API Name

Description

Show Advanced

Cancel Save



Milestone13:HOME PAGE:

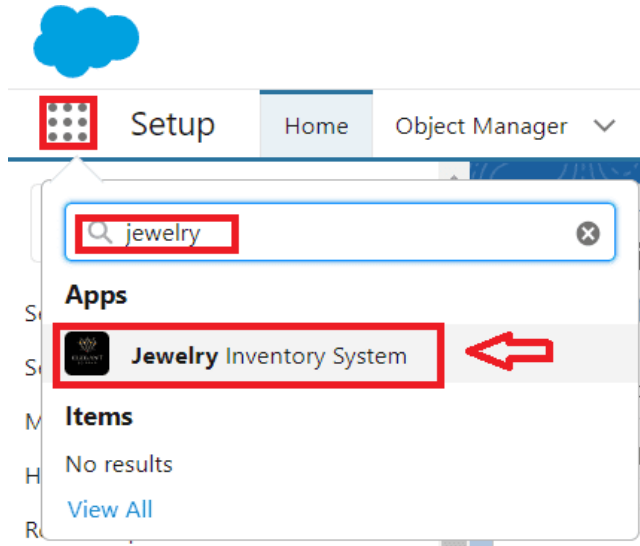
User Adoption

UseCase:

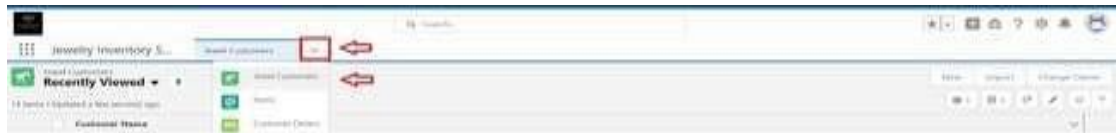
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10. Fill the Details and click on Save.

Activity 2: View a Record (Jewel Customer)

5. Click on App Launcher on the left side of the screen.
6. Search Jewelry Inventory System & click on it.
7. Click on the Jewel Customer Tab.
8. Click on any record name. you can see the details of the Jewel Customer.

Activity 3: Delete a Record (Jewel Customer)

6. Click on App Launcher on the left side of the screen.
7. Search Jewelry Inventory System & click on it.
8. Click on the Jewel Customer Tab.
9. Click on Arrow at right hand side on that Particular record.
10. Click delete.

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

Conclusion:

The CRM Application for Jewel Management successfully demonstrates how technology can transform traditional jewelry business operations into a digital, efficient, and customer-focused system. The application streamlines customer management, inventory tracking, billing, and reporting, ensuring accuracy and reducing manual workload.

By integrating features like custom order management, loyalty programs, and personalized notifications, the system helps jewelers build stronger customer relationships and increase sales. The inclusion of role-based security, analytics, and multi-branch support makes it a reliable solution for both small jewelry shops and large chain stores.

For students, this project provided hands-on experience in system analysis, software development, and real-world problem solving, while also enhancing technical skills in database design, frontend/backend development, and CRM concepts.

In conclusion, the project not only meets its objectives but also proves that a domain-specific CRM solution can greatly improve business efficiency and customer satisfaction in the jewelry industry.

Project Achievements:

1. Successful CRM Prototype Development – Designed and developed a functional CRM application tailored for the jewelry domain.
2. Customer Data Management – Implemented a centralized system to store and manage customer profiles, purchase history, and loyalty points.
3. Automated Billing & Invoicing – Created a billing module that generates accurate invoices with tax and discount calculations.
4. Inventory Tracking – Built an inventory system to manage jewelry items by karat, weight, stone type, and stock availability.
5. Order & Repair Handling – Enabled smooth management of custom orders, repairs, returns, and exchanges.
6. Reporting & Analytics – Developed dashboard to provide sales insights, customer trends, and profit analysis.
7. Role-Based Security – Implemented secure login and access control for Admin, Salesperson, and Accountant roles.
8. Marketing Integration – Added notification features (SMS/Email) for offers, reminders, and customer engagement.
9. Real-World Relevance – Addressed actual challenges faced by jewelry businesses, bridging the gap between theory and industry application.
10. Team & Technical Growth – Enhanced collaboration skills and hands-on experience in full-stack development, database design, and software engineering practices.

Student Learning Outcomes:

1. Understanding of CRM Systems – Gained practical knowledge of how CRM applications function in managing customer data and business operations.
2. Domain Knowledge – Learned the specific requirements of the jewelry business such as karat, weight, stone certification, repairs, and loyalty programs.

3. **Software Development Skills**–Improved technical expertise in frontend, backend, database design, and API integration.
4. **Database Management**–Designed ER diagrams, relational schemas, and implemented CRUD operations effectively.
5. **Problem-Solving Ability**–Applied analytical skills to handle challenges like inventory tracking, billing automation, and secure user access.
6. **Collaboration & Teamwork**–Experienced working in a team environment, sharing modules, and using version control tools like GitHub.
7. **Project Lifecycle Experience**–Understood the stages of SDLC (Requirement analysis, Design, Development, Testing, Deployment).
8. **Report & Analytics Handling**–Learned how to generate sales reports, customer insights, and analyze data for decision-making.
9. **Real-World Application**–Connected academic learning with real-world business needs, preparing for industry-ready solutions.
10. **Professional Skills**–Enhanced documentation, presentation, and project demonstration skills for academic and professional purposes.

Future Scope:

1. **Mobile Application**–Extend the CRM to Android/iOS platforms for jewelers and customers to access on the go.
2. **Online Shopping Integration**–Connect the CRM with an e-commerce website for online jewelry sales and catalog browsing.
3. **AI-Powered Recommendations**–Use AI/ML to suggest jewelry designs based on customer purchase history and preferences.
4. **Barcode/RFID Support**
–Implement barcode or RFID scanning for quick stock updates and theft prevention.
5. **Payment Gateway Integration**–Enable secure online payments through UPI, credit/debit cards, and wallets.
6. **Blockchain for Certification**–Use blockchain to store and verify gemstone/jewelry authenticity certificates.
7. **Cloud Deployment**
–Host the CRM on cloud platforms (AWS, Azure, Google Cloud) for scalability and multi-branch usage.
8. **Advanced Analytics**–Introduce predictive sales forecasting and customer churn analysis.
9. **Chatbot Support**–Add AI-driven chatbots for customer queries, order tracking, and personalized offers.
10. **Multi-Language Support**–Provide regional language support for better usability across different locations.