ANGEL

COLLEGE OF ENGINEERING AND TECHNOLOGY

TIRUPUR – 641665

(AN ISO 9001:2015 CERTIFIED INSTITUTION)

BONAFIDE CERTIFICATE

Register Number……………………………………………...

This is to certify that the bonafide record work done by …………………………………………………………………………………………………… of **B.E. Computer Science And Engineering** branch for the **07** semester during the academic year **2024-2025** in the **SB8067- Salesforce Developer Laboratory**.

Signature of Faculty in-charge

Signature of Head of the Department

Submitted for the University Practical Examination held on ………………………………

INTERNAL EXAMINER

EXTERNAL EXAMINER

A CRM APPLICATION TO ENGINEERING WORKS

College Name : Angel college of Engineering and Technology

College code:7103

Department : Computer Science and Engineering

NM Project : A CRM application to engineering works

Group project

TEAM ID :NM2024TMID03533

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Abstract

An application is required to efficiently manage client information for engineering projects, encompassing details such as company information, owner details, contact information, worker details, and their respective requirements for materials, including measurements. Additionally, the application should automatically calculate the price based on the specified materials and measurements. The available works in Engineering Works comprise Fabrication, Shed Construction, and Pipe Lining. Within the Fabrication work, various processes are involved, namely Drilling, Welding, Cutting, and Folding.

The GMS provides modules for various aspects of garage management, including:

1. Customer Management: Maintains a database of customer profiles, service history, and contact details, enabling personalized service and efficient customer communication.

2. Appointment Scheduling: Allows customers to book service appointments online or via phone, with automatic scheduling to optimize garage capacity and reduce wait times.

3. Vehicle Management: Keeps track of vehicle information, maintenance history, and upcoming service reminders, ensuring that each vehicle receives timely and appropriate care.

4. Inventory Management: Manages spare parts and consumables inventory, monitors stock levels, generates purchase orders, and provides alerts for low-stock items to avoid service delays.

5. Job Card and Work Order Management: Generates job cards for each service request, assigns tasks to technicians, and tracks job progress in real-time, improving accountability and workflow management.

6. Billing and Invoicing: Automates the generation of detailed invoices based on services rendered and parts used, with options for discounts, taxes, and multiple payment methods.

7. Reporting and Analytics: Provides detailed reports on key performance indicators (KPIs) such as revenue, customer retention, technician productivity, and inventory turnover, enabling data-driven decision-making.

8. Notifications and Alerts: Sends automated reminders and alerts to customers for service due dates, appointment confirmations, and promotional offers, enhancing customer engagement.

9. Security and User Access Control: Ensures secure data storage with role-based access control, protecting sensitive information and preventing unauthorized access.

The system is designed to be user-friendly, with an intuitive interface accessible via desktop and mobile devices. It supports integration with third-party systems, such as accounting software and payment gateways, to provide a seamless experience for garage owners and customers.

Key Benefits:

Improved Operational Efficiency: Automates routine tasks, reducing manual errors and freeing up staff to focus on higher-value activities.

Enhanced Customer Experience: Provides a convenient platform for customers to book appointments, track service status, and receive timely updates.

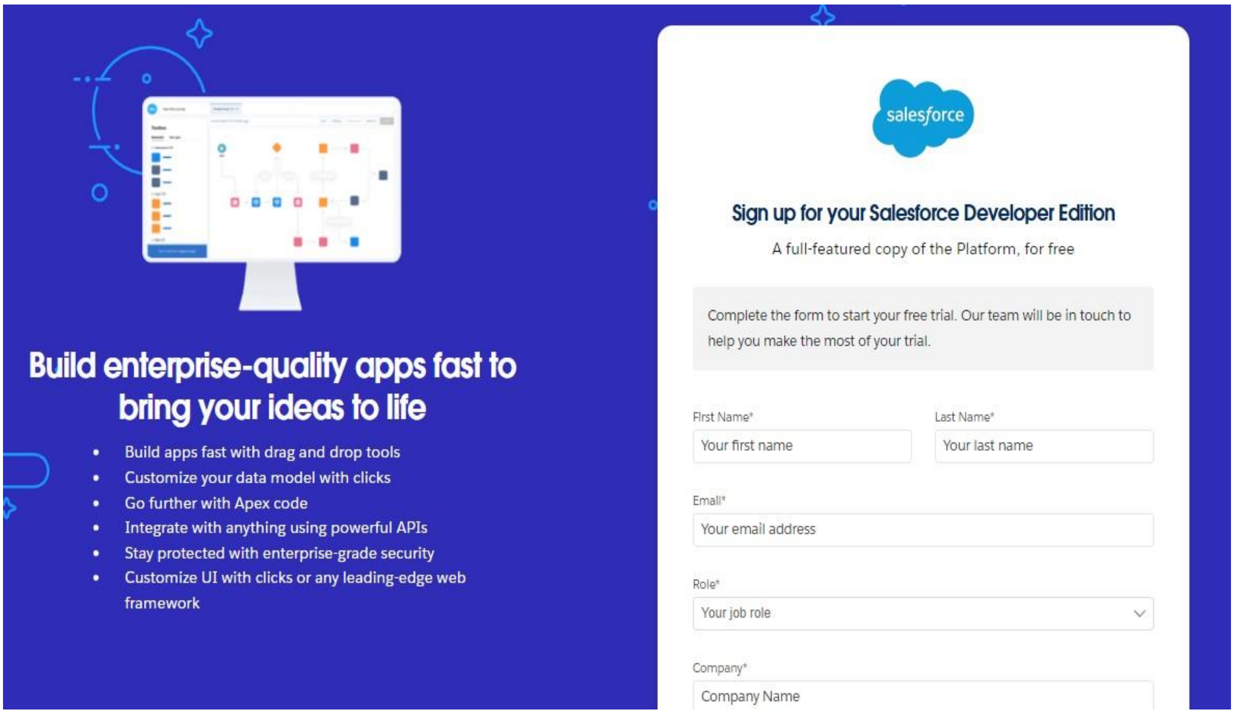
Cost Savings: Optimizes inventory management and job scheduling, reducing waste and maximizing resource utilization.

Scalability: Suitable for small, independent garages as well as larger, multi-location service centers.

The A CRM application to engineering works serves as a comprehensive solution to modernize garage operations,helping businesses stay competitive in a fast-evolving automotive service industry.

SALESFORCE

Creating developer account:

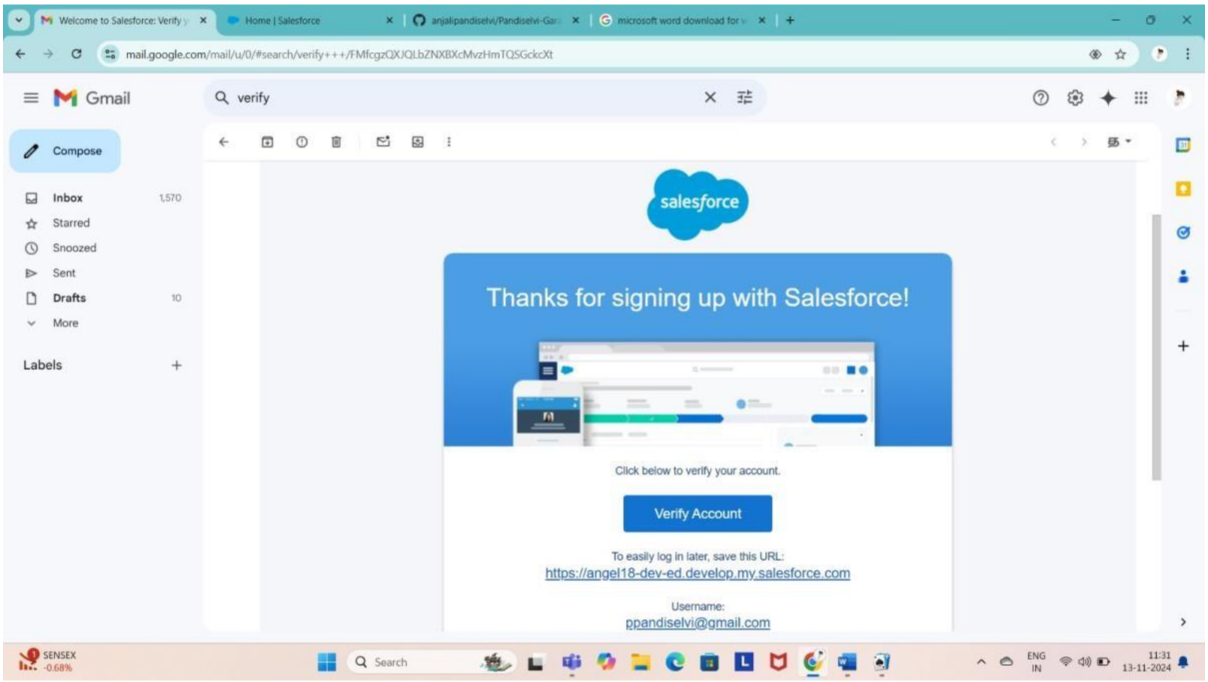


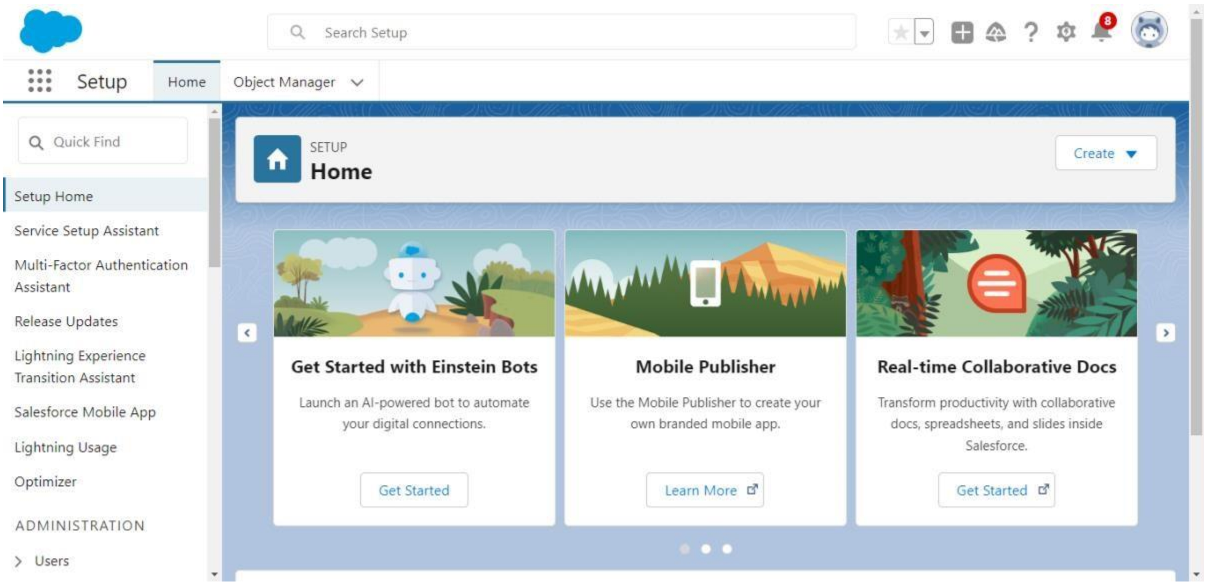
1. First name & Last name
2. Email
3. Role : Developer
4. Company : College Name
5. County : India
6. Postal Code : pin code
7. Username : should be a combination of your name and company

This need not be an actual email id, you can give anything in the format :lusername@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 verify account to activate your account. The email may take 5-10mins.
2. Click on Verify Account
3. Give a password and answer a security question and click on change password.
4. Then you will redirect to your salesforce setup page



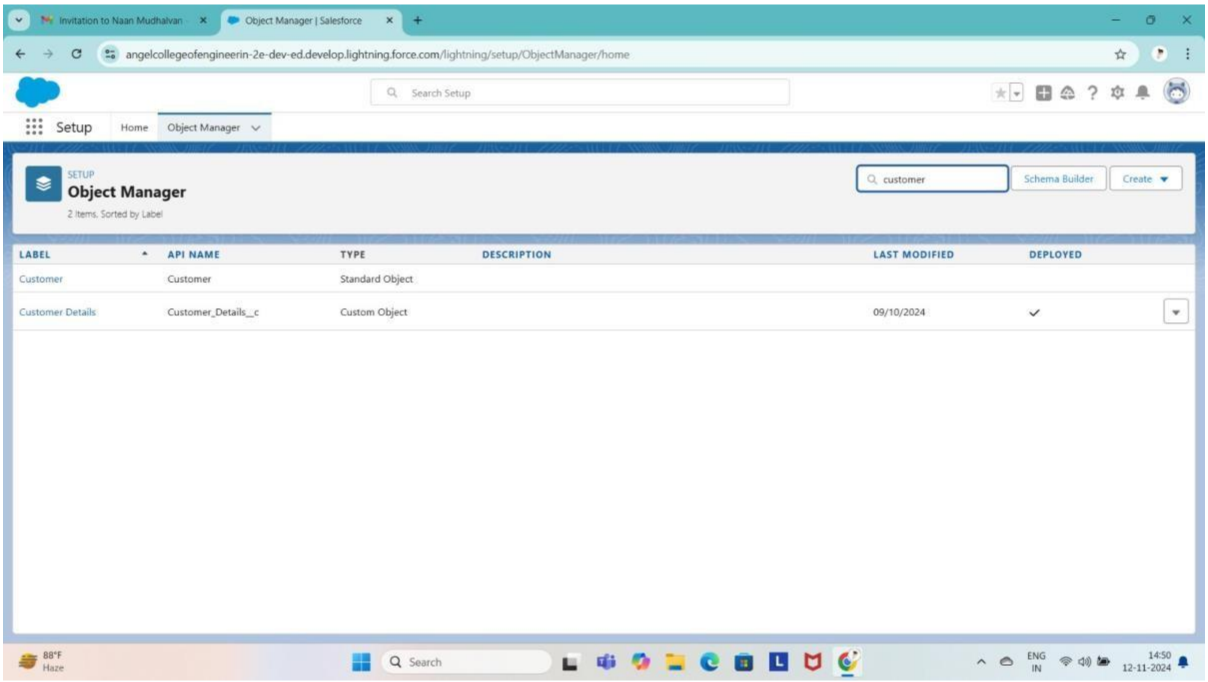


Create Fabrication Object

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>> Fabrication
2. Plural label name >> Fabrications
3. Enter Record Name Label and Format
- Record Name >> Fabrication Name
- Data Type >> Text

2. Click on Allow reports and Track Field History,Allow Activities
3. Allow search >> Save.

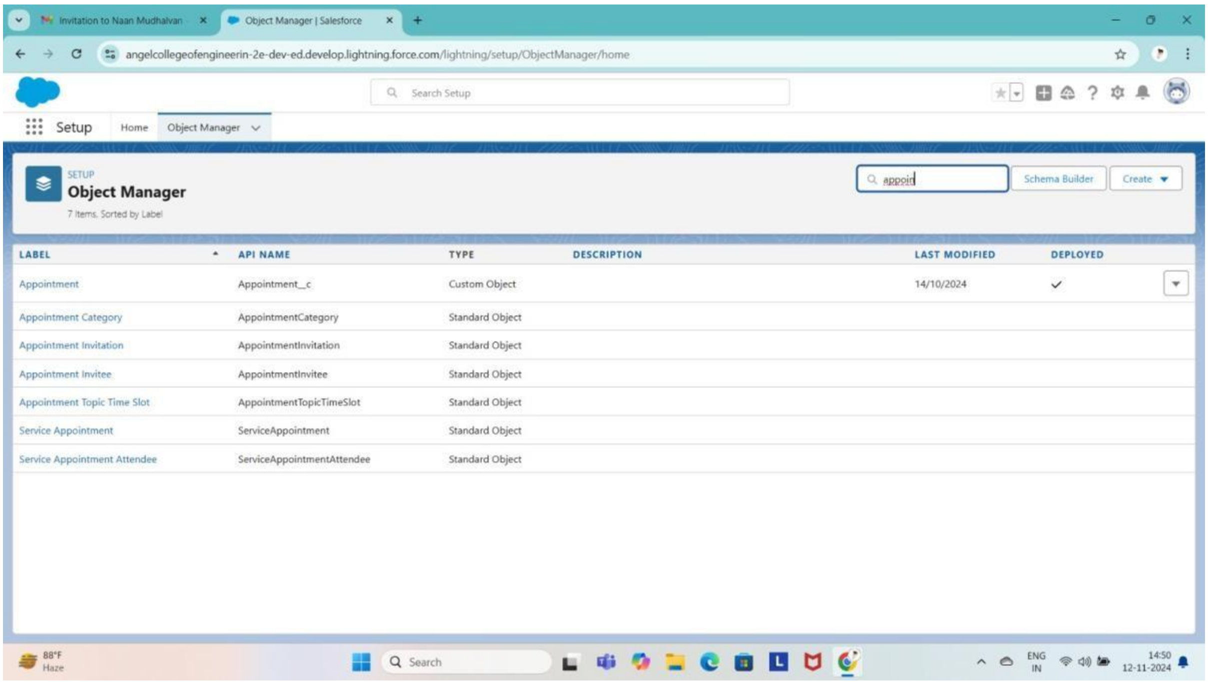


Create Shed-Work Object

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 >> Shed-Work
2. Plural label name >> Shed Works
3. Enter Record Name Label and Format
- Record Name >> Shed Work Name
- Data Type >> Text

2. Click on Allow reports and Track Field History,Allow Activities
3. Allow search >> Save.

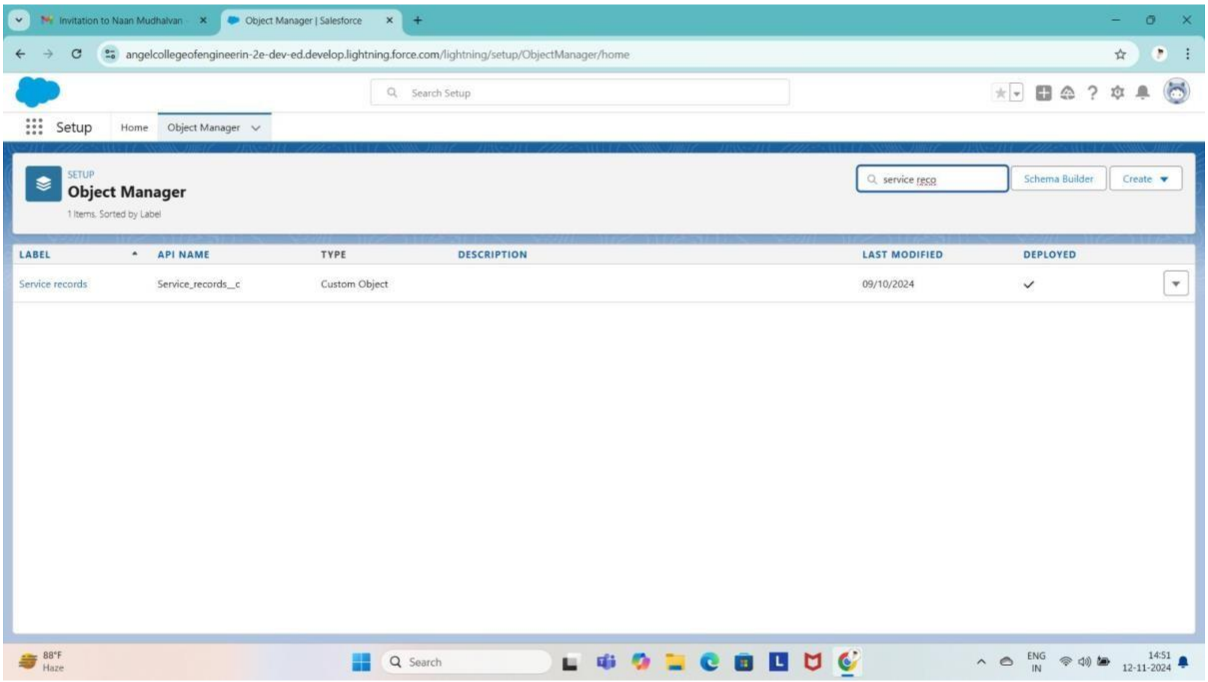


Create Pipe Lining Object

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 >> Pipe Lining
2. Plural label name >> Pipe Linings
3. Enter Record Name Label and Format
- Record Name >> Pipe Lining Name
- Data Type >> Text

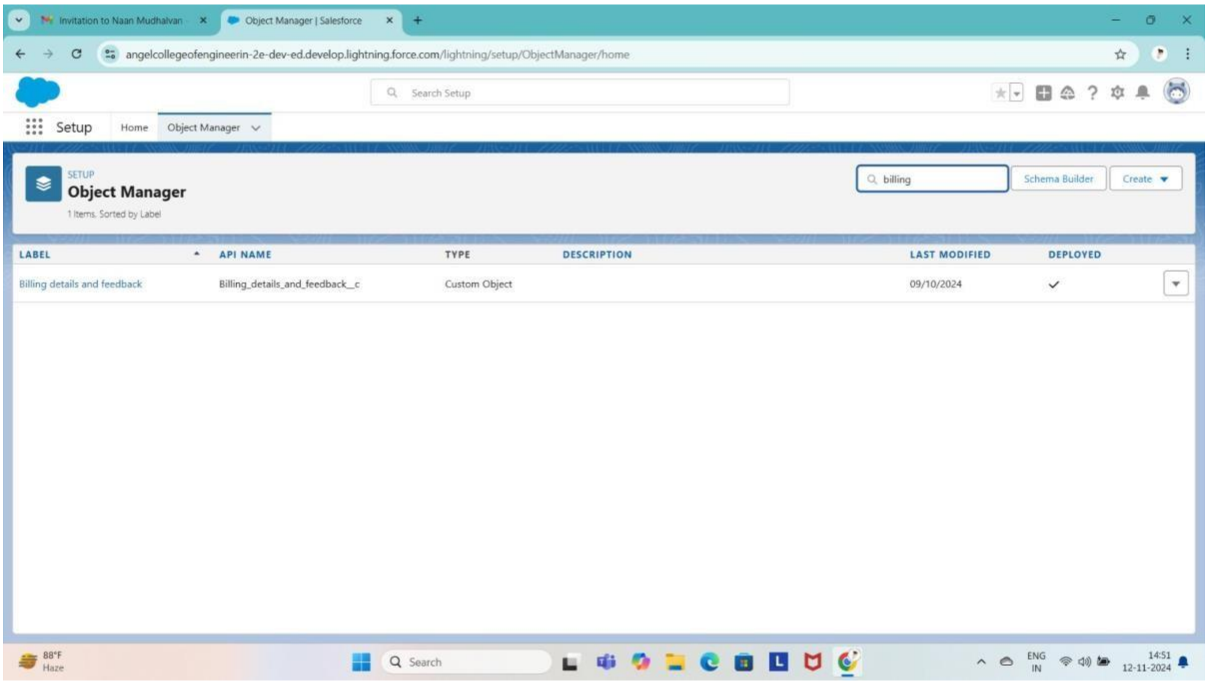
2. Click on Allow reports and Track Field History,Allow Activities
3. Allow search >> Save



Create Worker Object

To create an object:

2. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
3. Enter the label name >> Worker
4. Plural label name >> Workers
5. Enter Record Name Label and Format
6. Record Name >> Worker Name
7. Data Type >> Text
8. Click on Allow reports and Track Field History,Allow Activities
9. Allow search >> Save.



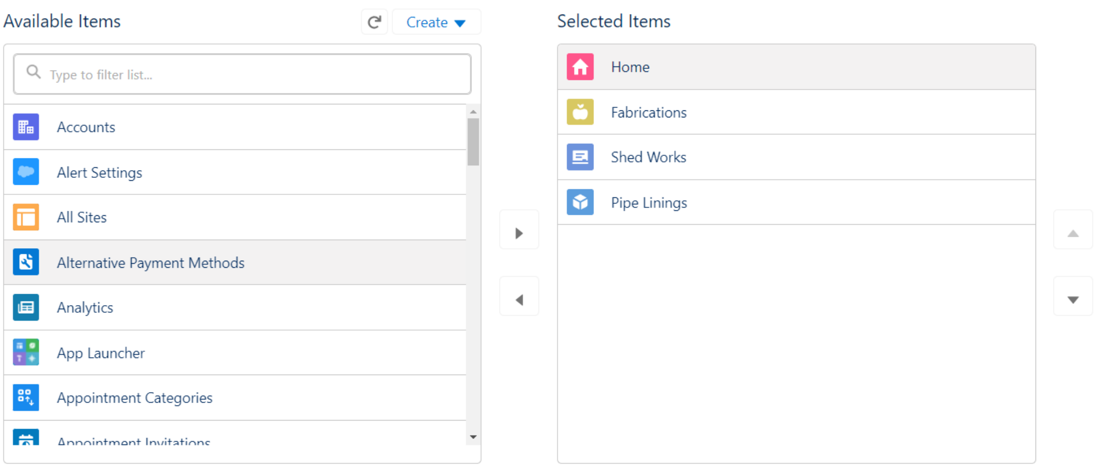
Creating a Custom Tab

To create a Tab:(Customer Details)

1. Select Object(Fabrication) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
2. Make sure that the Append tab to users' existing personal customizations is checked.
3. Click save

Creating Remaining Tabs

1. Now create the Tabs for the remaining Objects, they are "Shed-Work, Pipe lining, Worker".
2. Follow the same steps as mentioned in Activity -1 .



Create a lightning app

To create a lightning app page:

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

2.Fill the app name in app details and branding as follow
App Name : Engineering Works
Developer Name : This will auto populated
Image : optional (if you want to give any image you can otherwise not mandatory) Primary color hex value : keep this default.

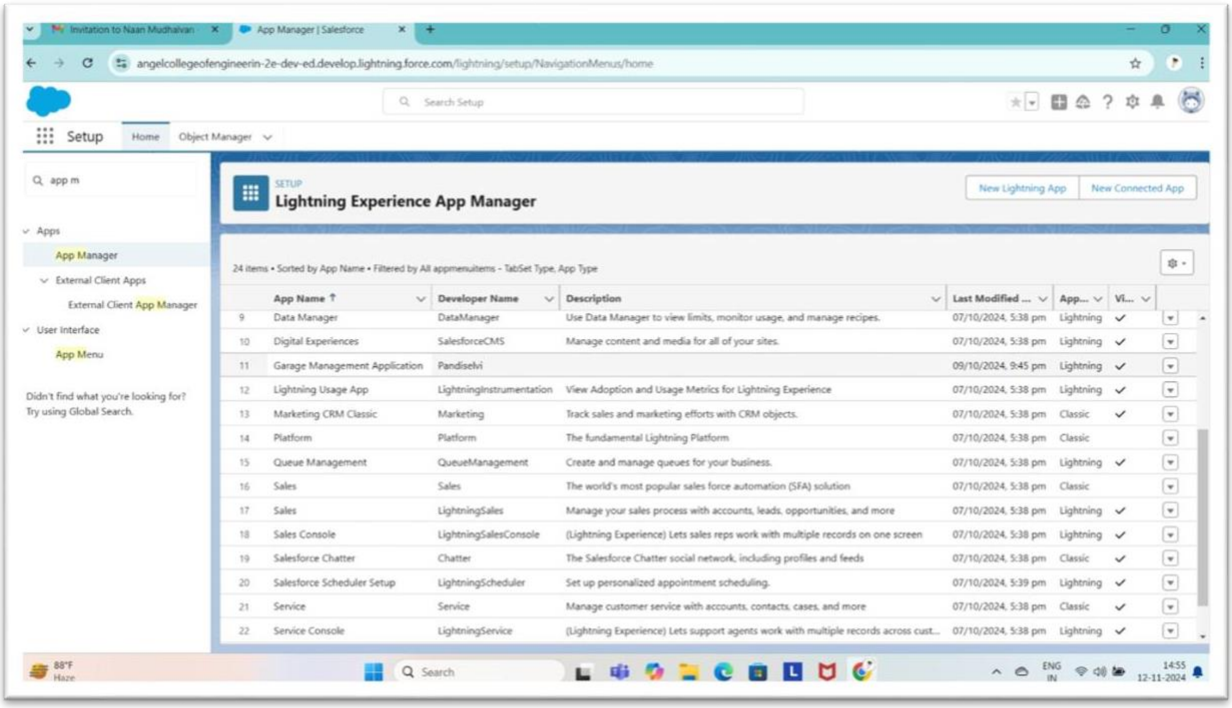
3.Then click Next >> (App option page)Set Navigation Style as Standard Navigation >> Next.

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

5. To Add Navigation Items:

6. To Add User Profiles:

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



Creation of fields for the Customer Details object

1. To create fields in an object:

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

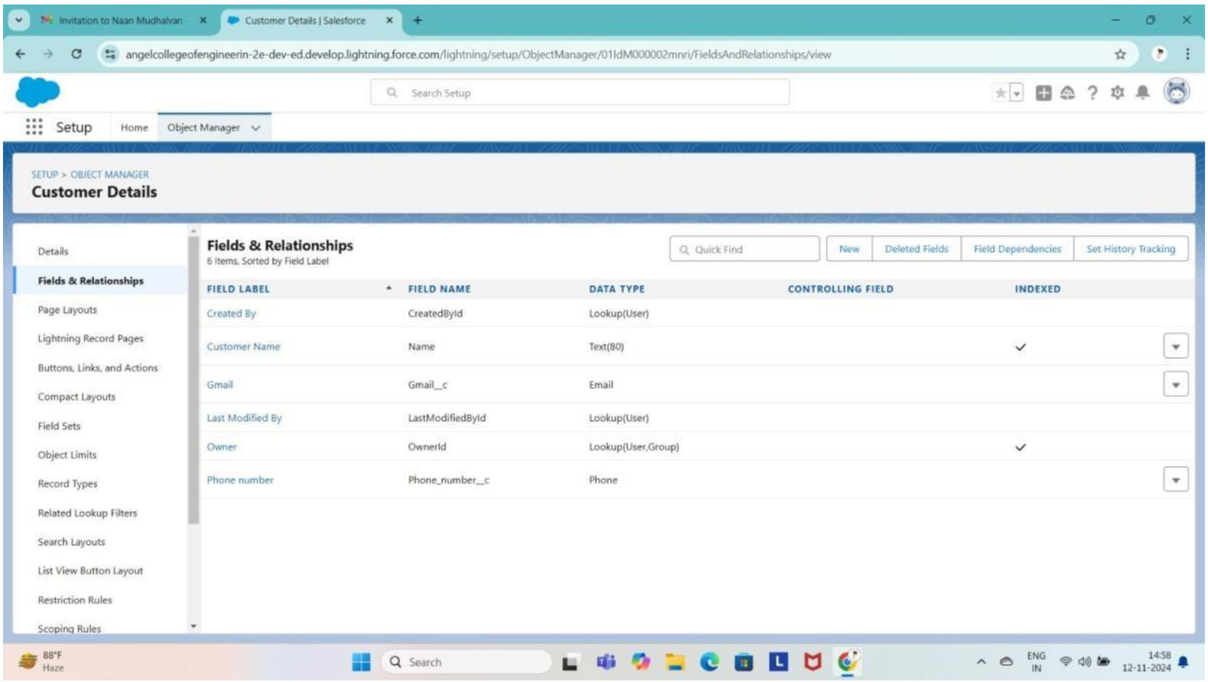
   3. Select Data Type as a "Phone"
   4. Click on next.

5. Fill the Above as following:
   - Field Label: Phone number
   - Field Name : gets auto generated
   - Click on Next >> Next >> Save and new.

Note: Follow the above steps for the remaining field for the same object.

2. To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Customer Details) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select Data type as a "Email" and Click on Next
4. Fill the Above as following:
   - Field Label : Gmail
   - Field Name : gets auto generated
   - Click on Next >> Next >> Save and new.



Creation of Lookup fields

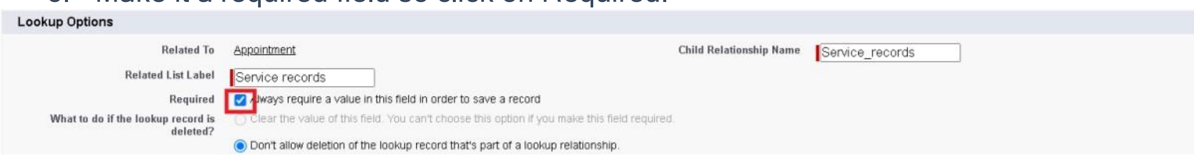
Creation of Lookup Field on Appointment Object :

1. Go to setup >> click on Object Manager >> type object name(Appointment) in the search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select "Look-up relationship" as data type and click Next.
4. Select the related object " Customer Details" and click next.
5. Next >> Next >> Save.

Note: Make sure you complete Activity 4 Before continuing.

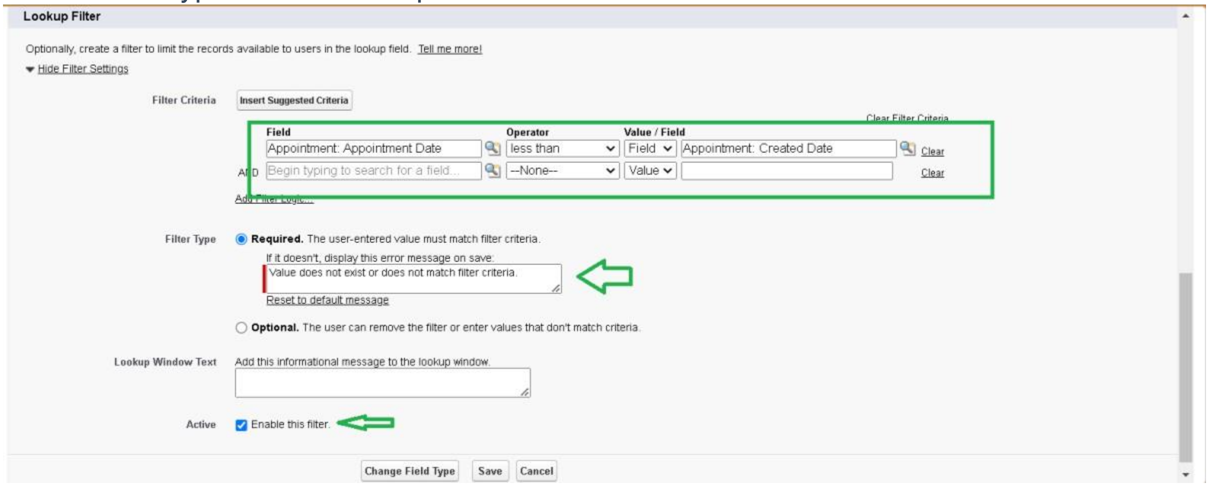
Creation of Lookup Field on Service records Object :

1. Go to setup >> click on Object Manager >> type object name(Service records) in search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New
3. Select "Look-up relationship" as data type and click Next.
4. Select the related object " Appointment " and click next.
5. Make it a required field so click on Required.



6. Scroll down for Lookup Filter and click on Show filter settings.

7. Now add the filter criteria.
8. Field : Appointment: Appointment Date >> Operator : less than >> select field >> Appointment: Created Date
9. Filter type should be Required.



10. Error Message : Value does not match the criteria.
11. Enable the filter by click on Active.
12. Next >> Next >> Save.

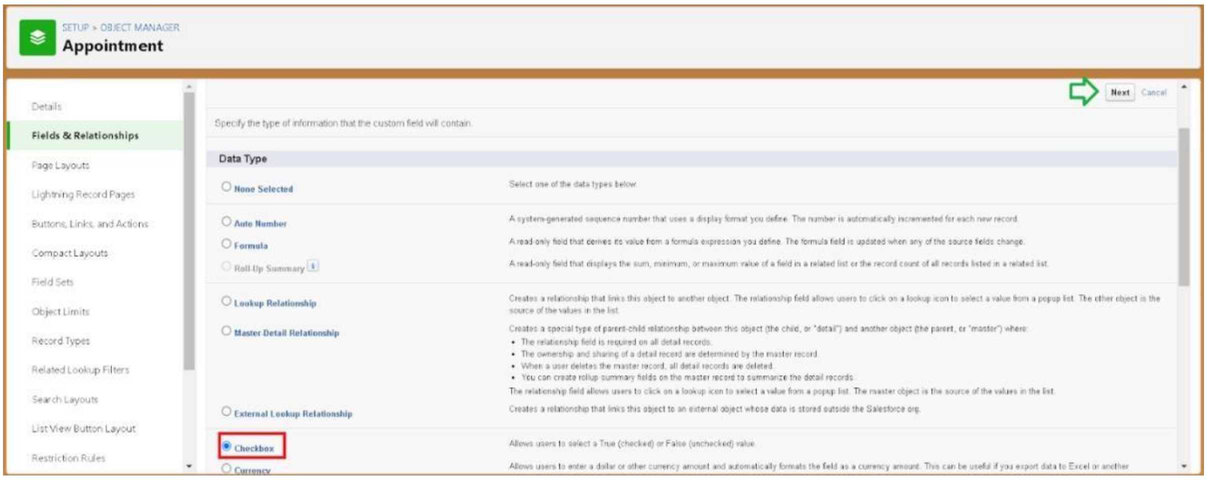
Creation of Lookup Field on Billing details and feedback Object :

1. Go to setup >> click on Object Manager >> type object name(Billing details and feedback) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select “Look-up relationship” as data type and click Next.
4. Select the related object “ Service records” and click next.
5. Next >> Next >> Save & new.

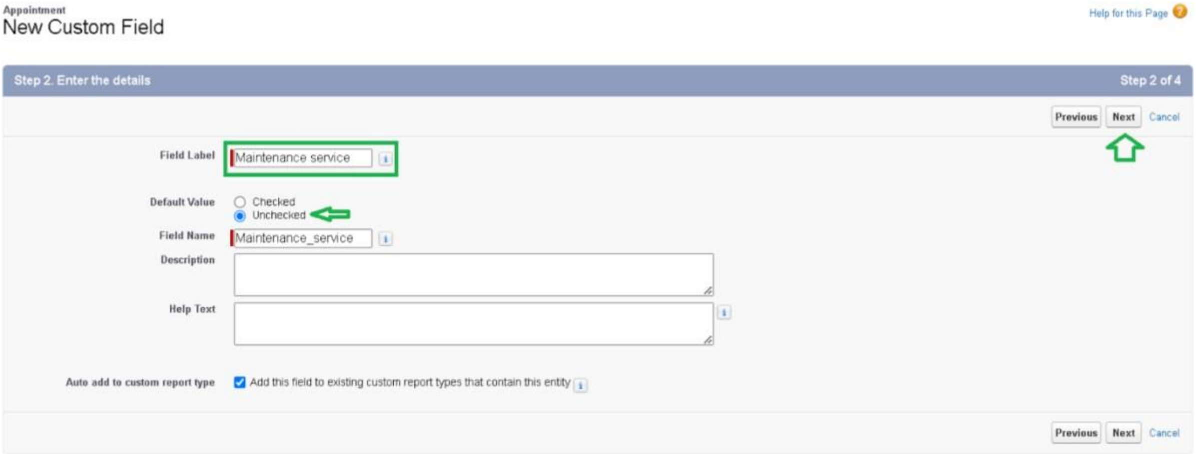
Creation of Checkbox fields

Creation of Checkbox Field on Appointment Object :

1. Go to setup >> click on Object Manager >> type object name(Appointment) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select “Check box” as data type and click Next.



4. Give the Field Label : Maintenance service
5. Field Name : is auto populated
6. Default value : unchecked

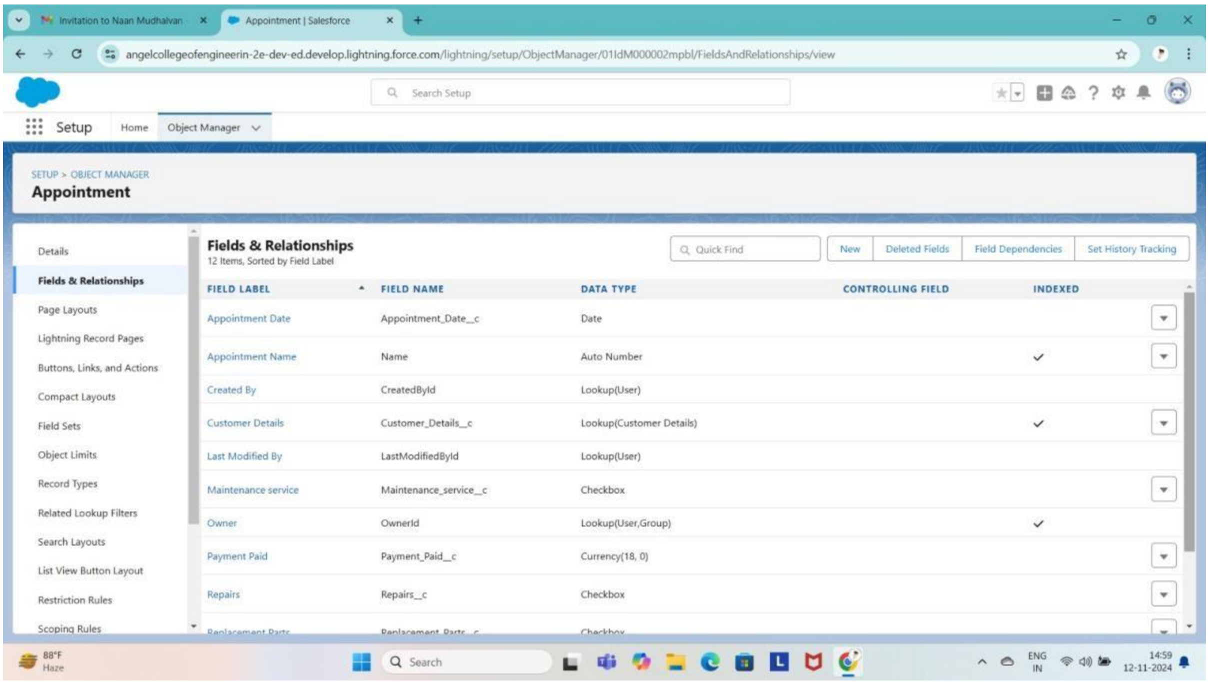


7. Click on next >> next >> save.

Creation of Another Checkbox Field on Appointment Object :

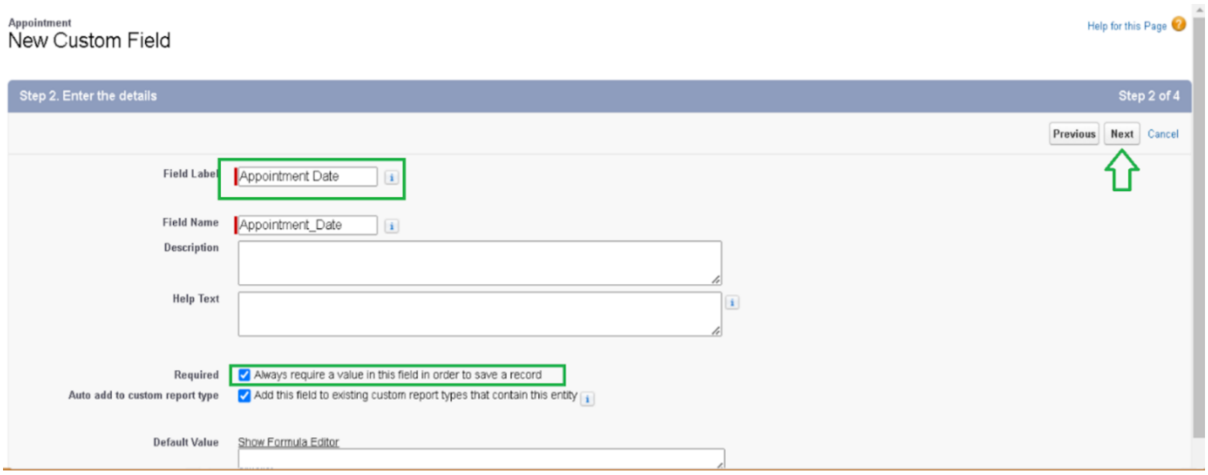
1. Repeat the steps form 1 to 3.
2. Give the Field Label : Repairs
3. Field Nme : is auto populated
4. Default value : unchecked
5. Click on next >> next >> save.

6. Follow the same and create another checkbox with given names
7. Give the Field Label : Replacement Parts
8. Field Nme : is auto populated
9. Default value : unchecked
10. Click on next >> next >> save.



Creation of Checkbox Field on Service records Object :

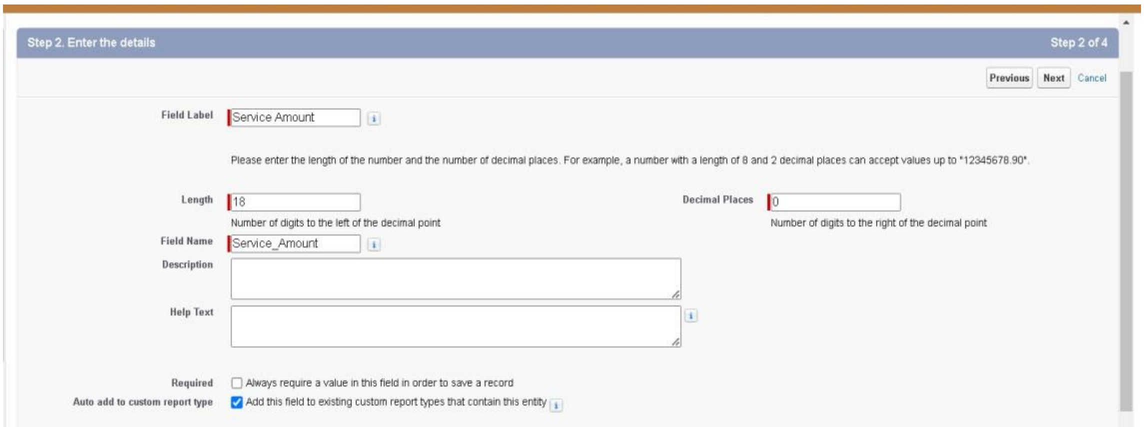
1. Go to setup >> click on Object Manager >> type object name(Service records) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select “Check box” as data type and click Next.
4. Give the Field Label : Quality Check Status
5. Field Nme : is auto populated
6. Default value : unchecked
7. Click on next >> next >> save



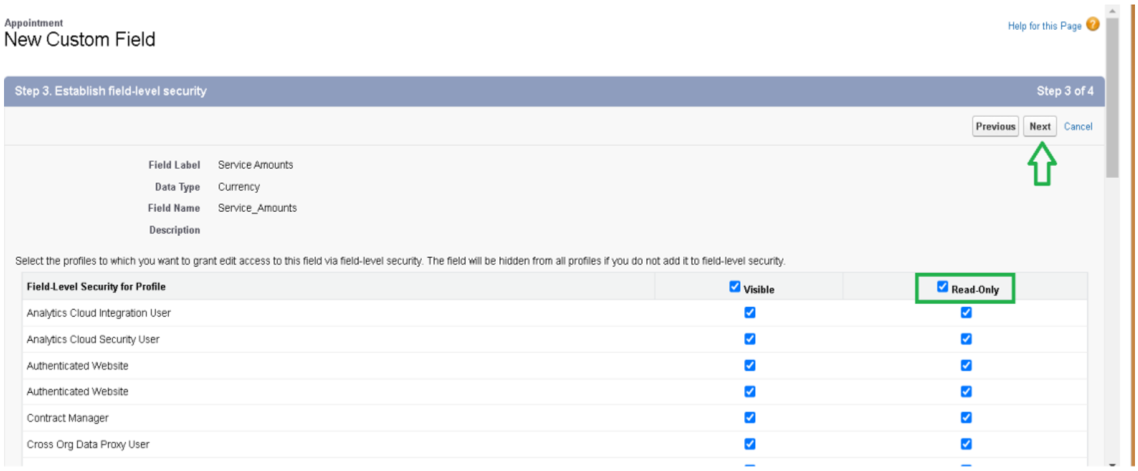
Creation of Currency fields

Creation of Currency Field on Appointment Object :

1. Go to setup >> click on Object Manager >> type object name(Appointment) in the search bar >> click on the object.
2. Now click on "Fields & Relationships" >> New.
3. Select "Currency" as data type and click Next.
4. Give the Field Label : Service Amount
5. Field Nme : is auto populated



6. Click on next
7. Give read only for all the profiles in field level security for profile.



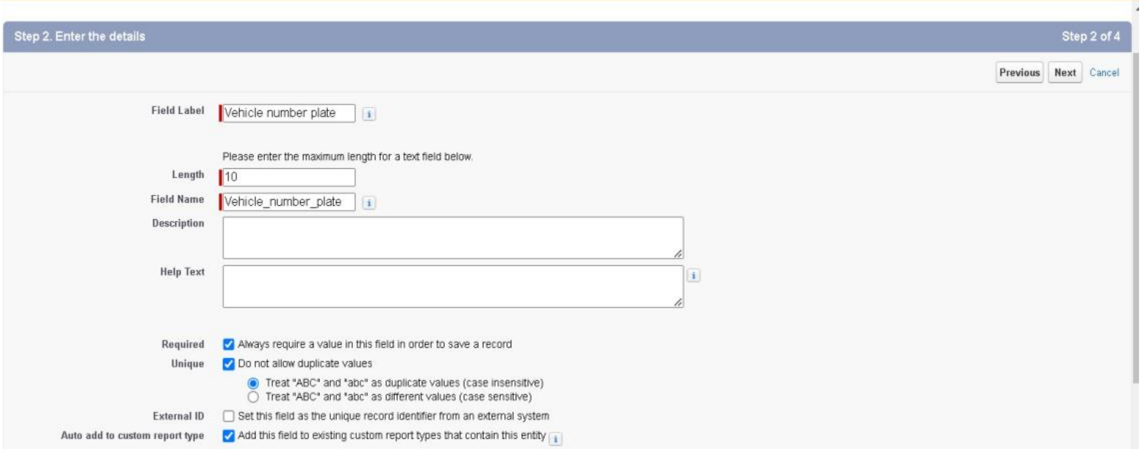
8. Click on next > > save.

Creation of Currency Field on Billing details and feedback Object :

1. Follow the same steps as mentioned above in Billing details and feedback Object.
2. Change the label name as mentioned.
3. Give the Field Label : Payment Paid
4. Field Nme : is auto populated

Creation of Text fields

1. Go to setup >> click on Object Manager >> type object name(Appointment) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select “Text” as data type and click Next.
4. Give the Field Label : Vehicle number plate
5. Field Name : is auto populated
6. Length : 10
7. Make field as Required and Unique.



8. Click on next >> next >> save.

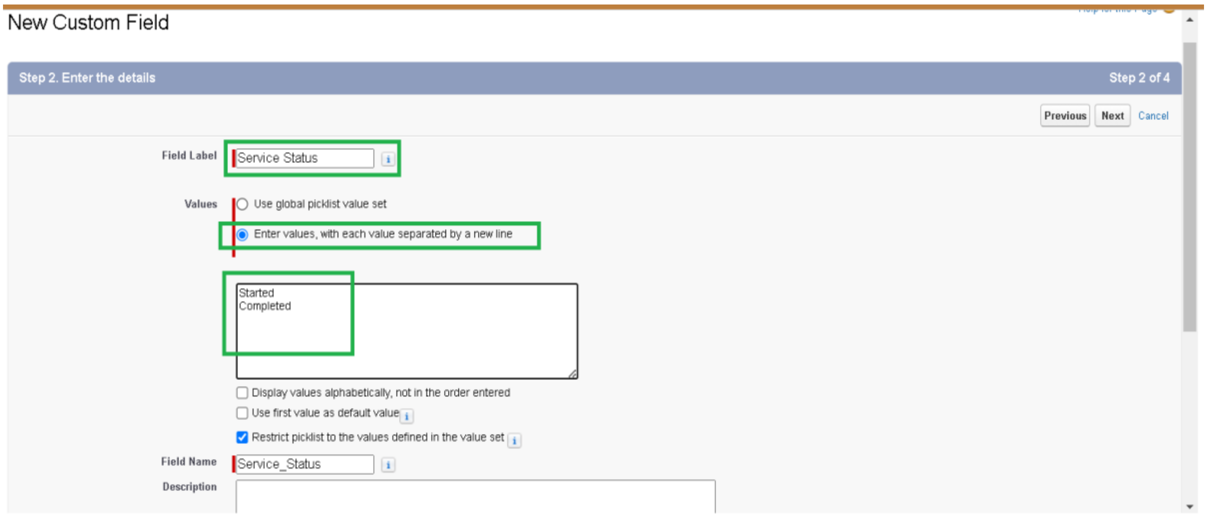
Creation of Text Fields in Billing details and feedback object :

1. Go to setup >> click on Object Manager >> type object name(Billing details and feedback) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New.
3. Select “text” as data type and click Next.
4. Give the Field Label : Rating for service
5. Field Name : is auto populated
6. Length : 1
7. Make field as Required and Unique.
8. Click on next >> next >> save

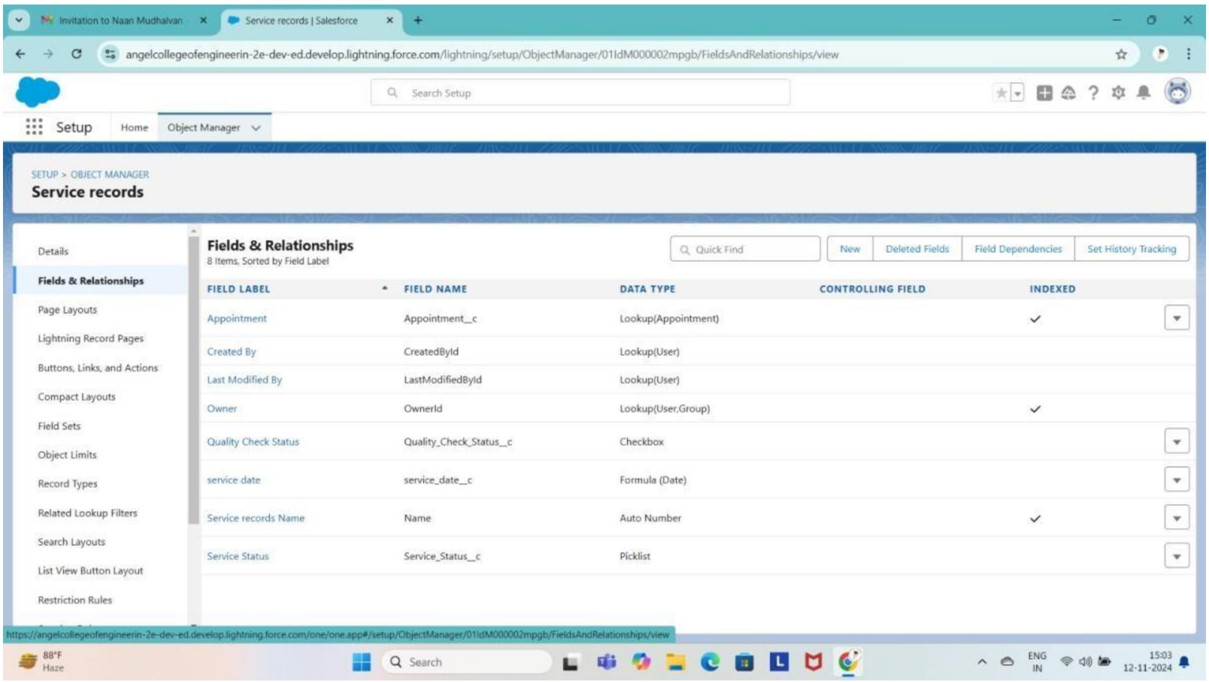
Creation of picklist fields

Creation of Picklist Fields in Service records object :

1. Go to setup >> click on Object Manager >> type object name(Service records) in search bar >> click on the object.
2. Click on fields & relationship >> click on New.
3. Select Data type as “Picklist” and click Next.
4. Enter Field Label as “Service Status”, under values select “Enter values, with each value separated by a new line" and enter values as shown below.
5. The values are: Started, Completed.



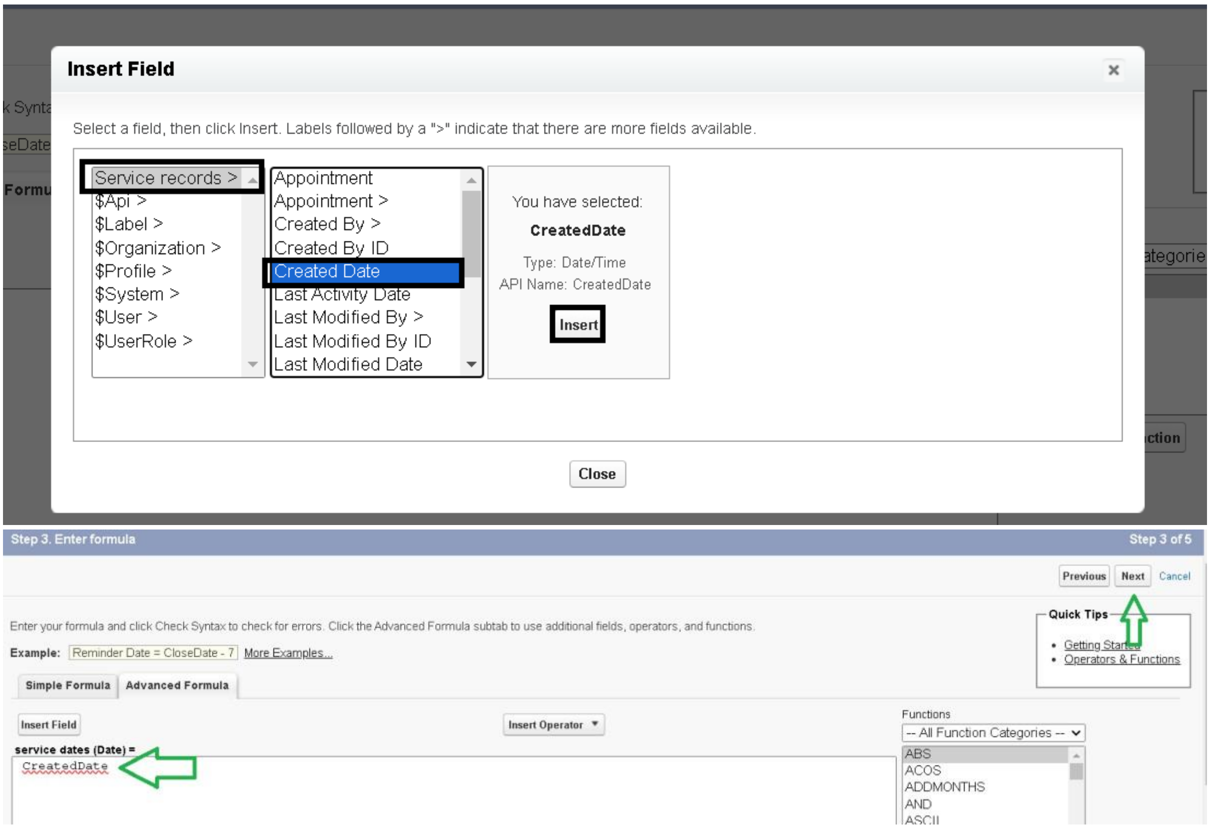
6. Click Next.
7. Next >> Next >> Save.



Creating Formula Field in Service records Object

1. Go to setup >> click on Object Manager >> type object name(Service records) in search bar >> click on the object.
2. Click on fields & relationship >> click on New.
3. Select Data type as “Formula” and click Next.
4. Give Field Label and Field Name as “service date” and select formula return type as “Date” and click next.

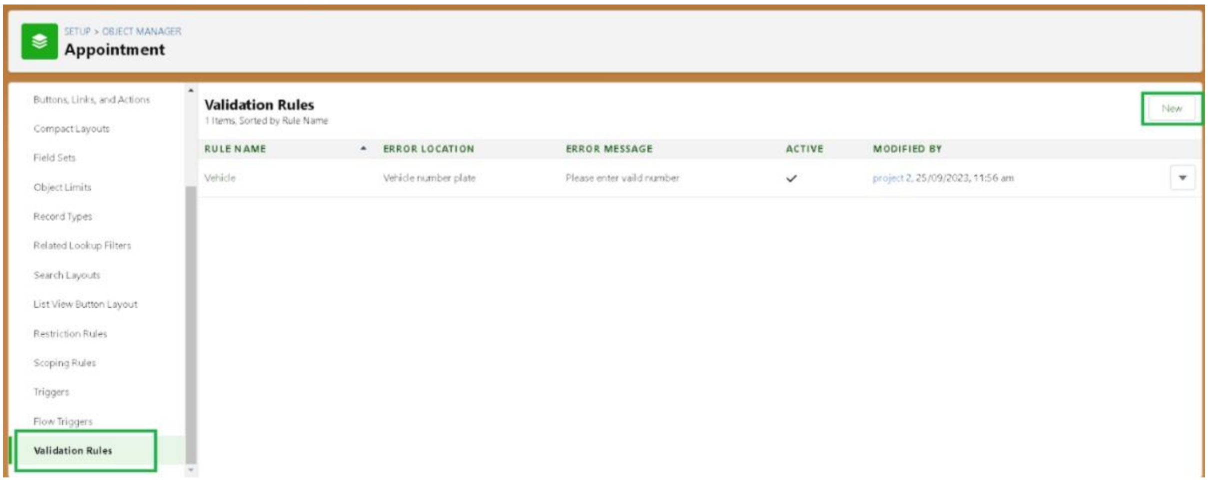
5. Insert field formula should be : CreatedDate



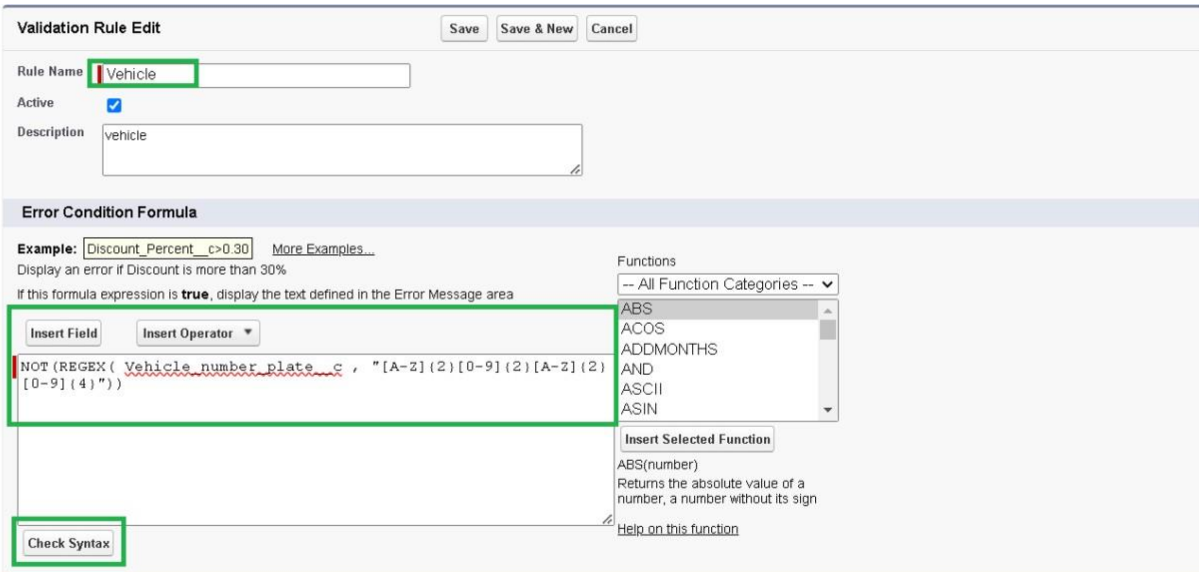
6. click “Check Syntax” .
7. Click next >> next >> Save.

To create a validation rule to an appointment Object

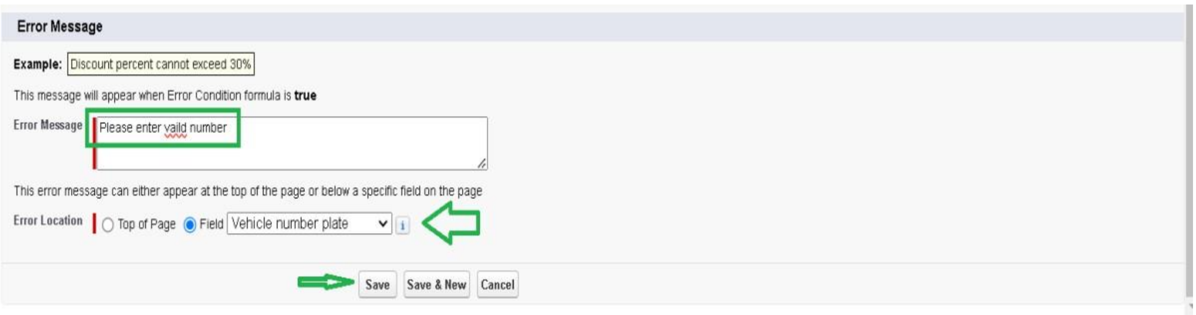
1. Go to the setup page >> click on object manager >> From drop down click edit for Appointment object.
2. Click on the validation rule >> click New.

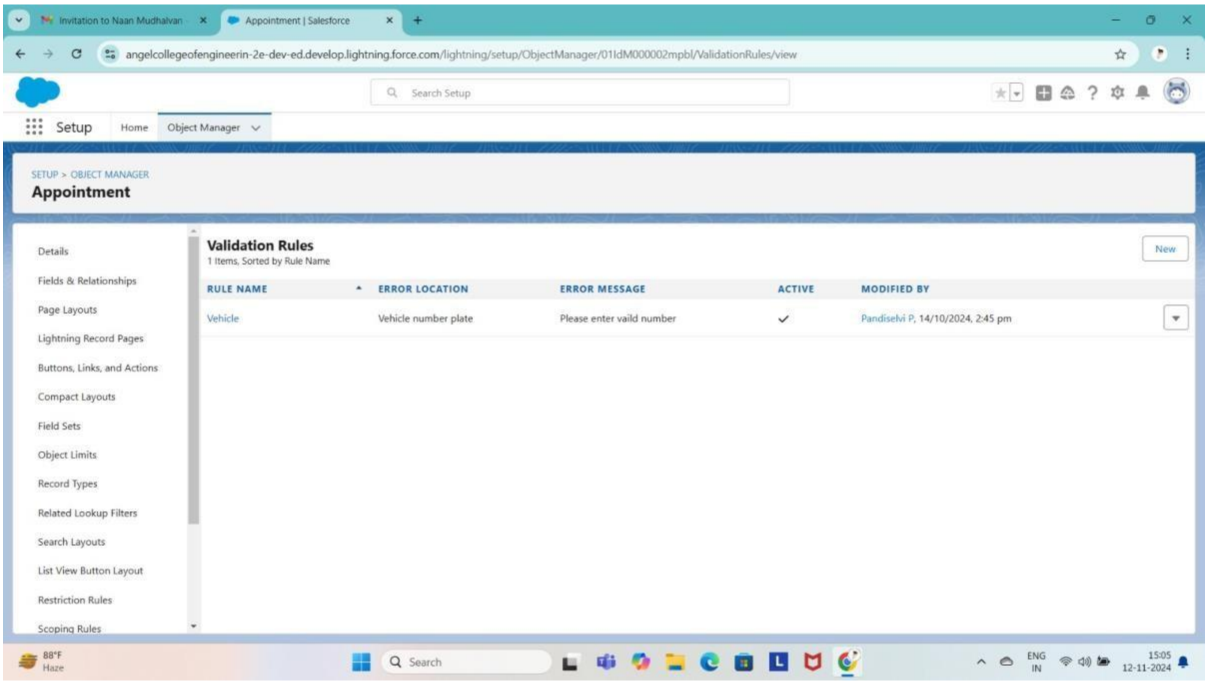


3. Enter the Rule name as “ Vehicle ”.
4. Insert the Error Condition Formula as : -
NOT(REGEX(Vehicle_number_plate__c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))



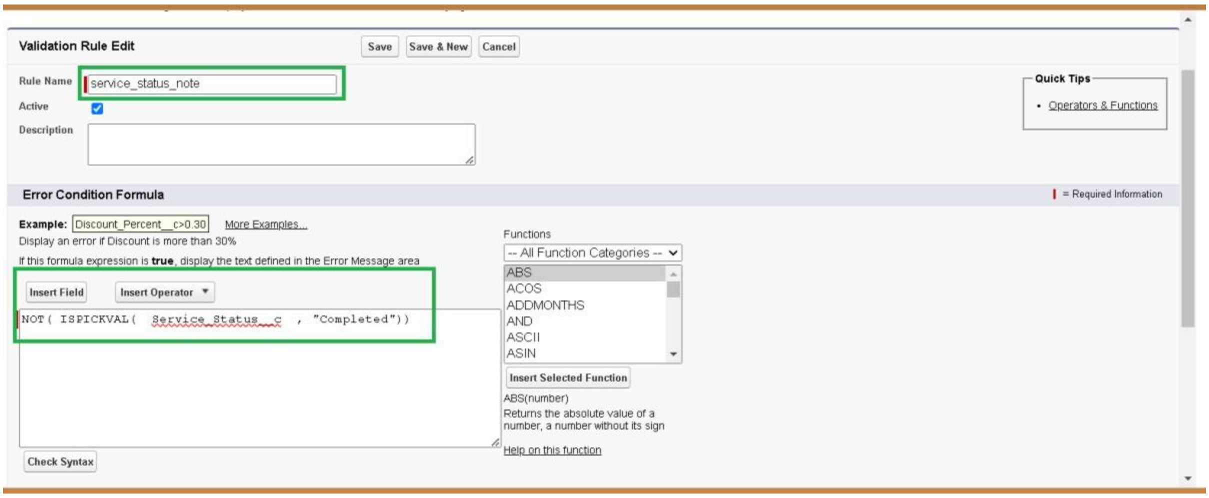
5. Enter the Error Message as “Please enter vaild number ”, select the Error location as Field and select the field as “Vehicle number plate”, and click Save.



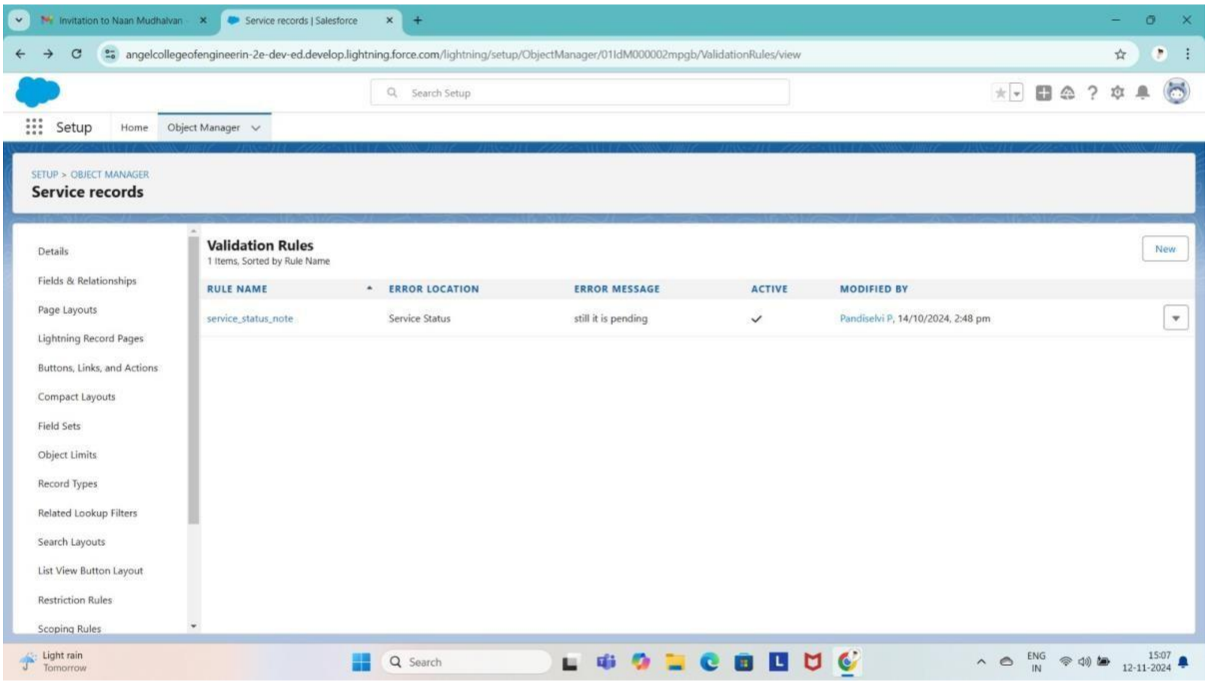


To create a validation rule to an Service records Object

1. Go to the setup page >> click on object manager >> From drop down click edit for Service records object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as “ service_status_note ”.
4. Insert the Error Condition Formula as : -
   NOT(ISPICKVAL(Service_Status_c , "Completed"))



5. Enter the Error Message as “still it is pending”, select the Error location as Field and select the field as “Service status”, and click Save.

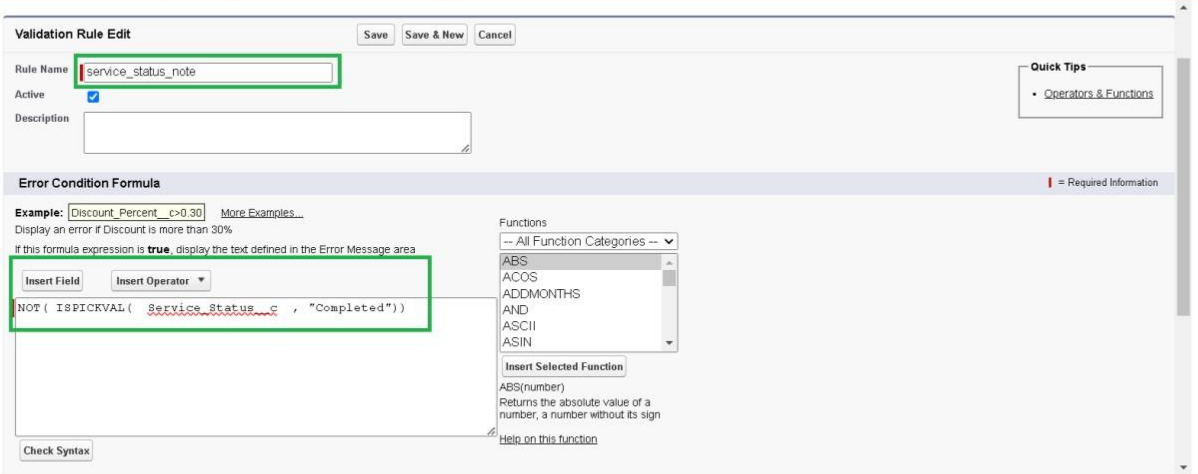


Creation of Picklist Fields in Billing details and feedback object :

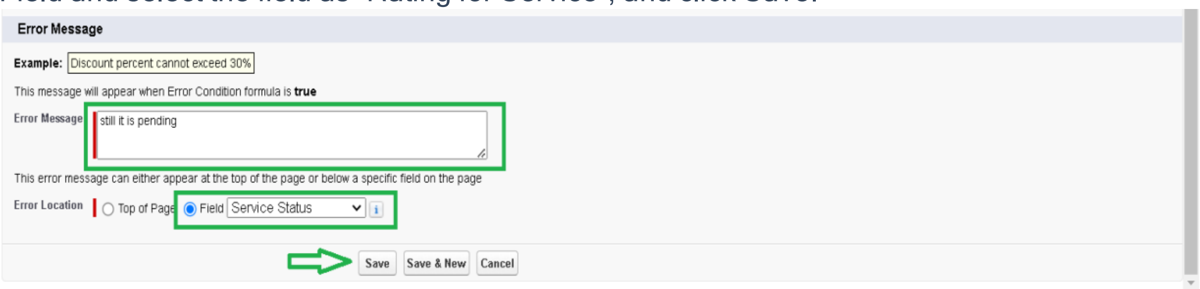
1. Go to setup >> click on Object Manager >> type object name(Billing details and feedback) in search bar >> click on the object.
2. Click on fields & relationship >> click on New.
3. Select Data type as “Picklist” and click Next.
4. Enter Field Label as “Payment Status”, under values select “Enter values, with each value separated by a new line" and enter values as shown below.
5. The values are: Pending, Completed.
6. Click Next.
7. Next >> Next >> Save.

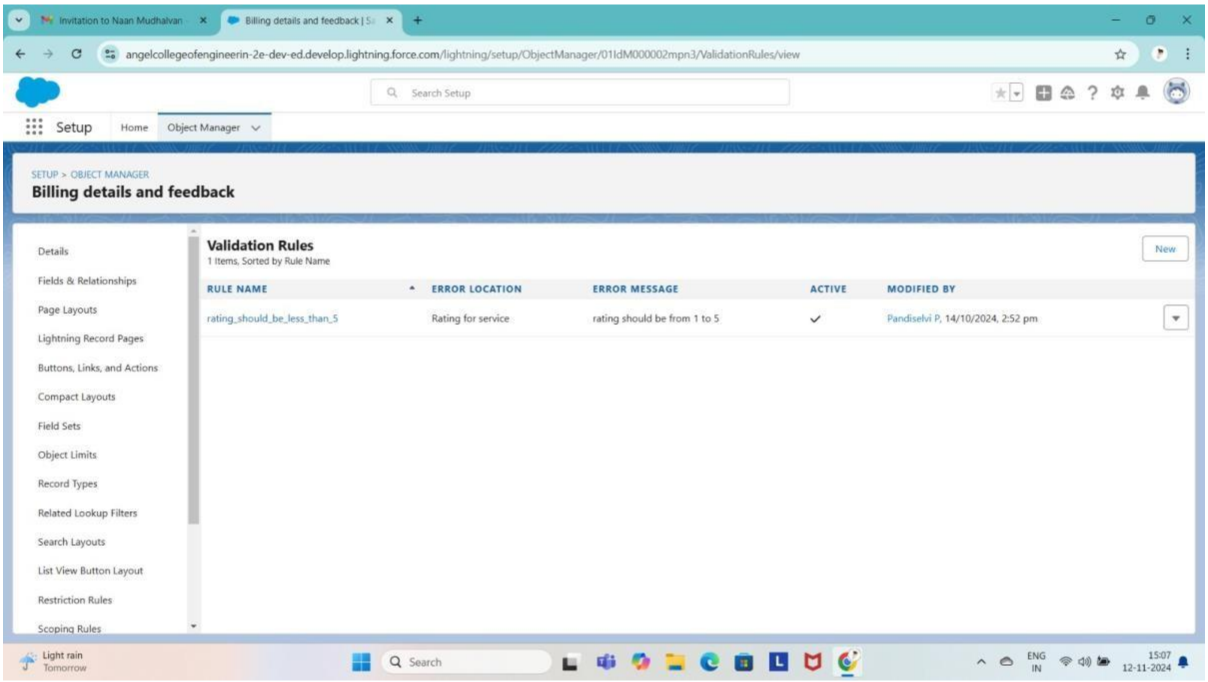
To create a validation rule to an Billing details and feedback Object

1. Go to the setup page >> click on object manager >> From drop down click edit for Billing details and feedback object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as “ rating_should_be_less_than_5”.
4. Insert the Error Condition Formula as : -
   NOT(REGEX(Rating_for_service_c , "[1-5]{1}"))



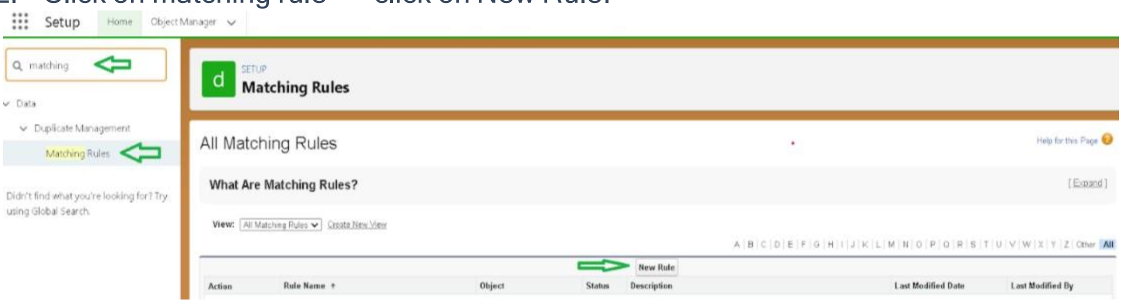
5. Enter the Error Message as “rating should be from 1 to 5”, select the Error location as Field and select the field as “Rating for Service”, and click Save.



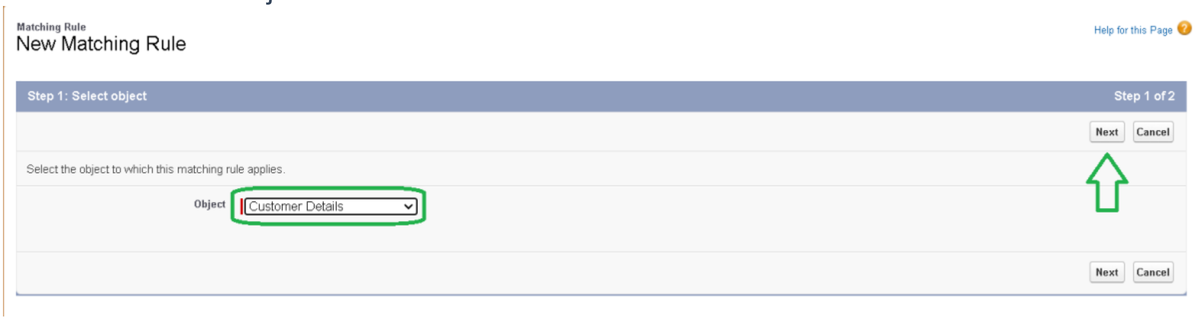


To create a matching rule to an Customer details Object

1. Go to quick find box in setup and search for matching Rule.
2. Click on matching rule >> click on New Rule.

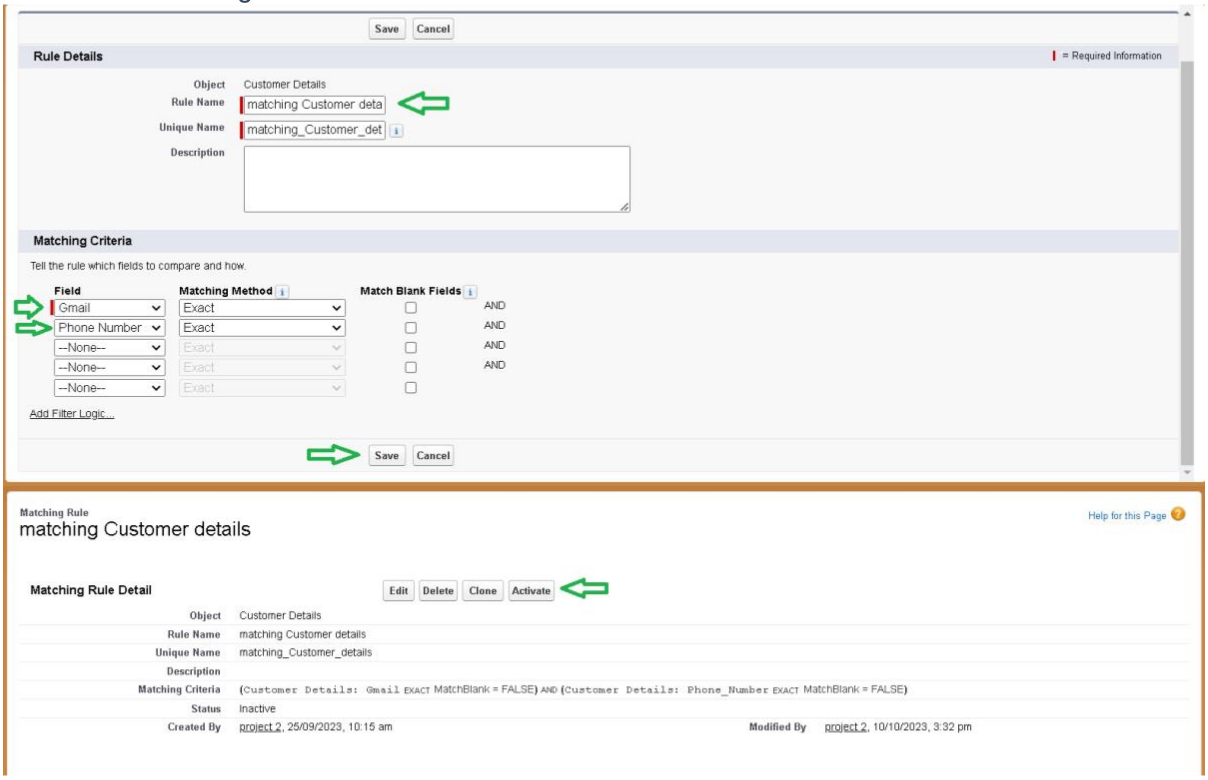


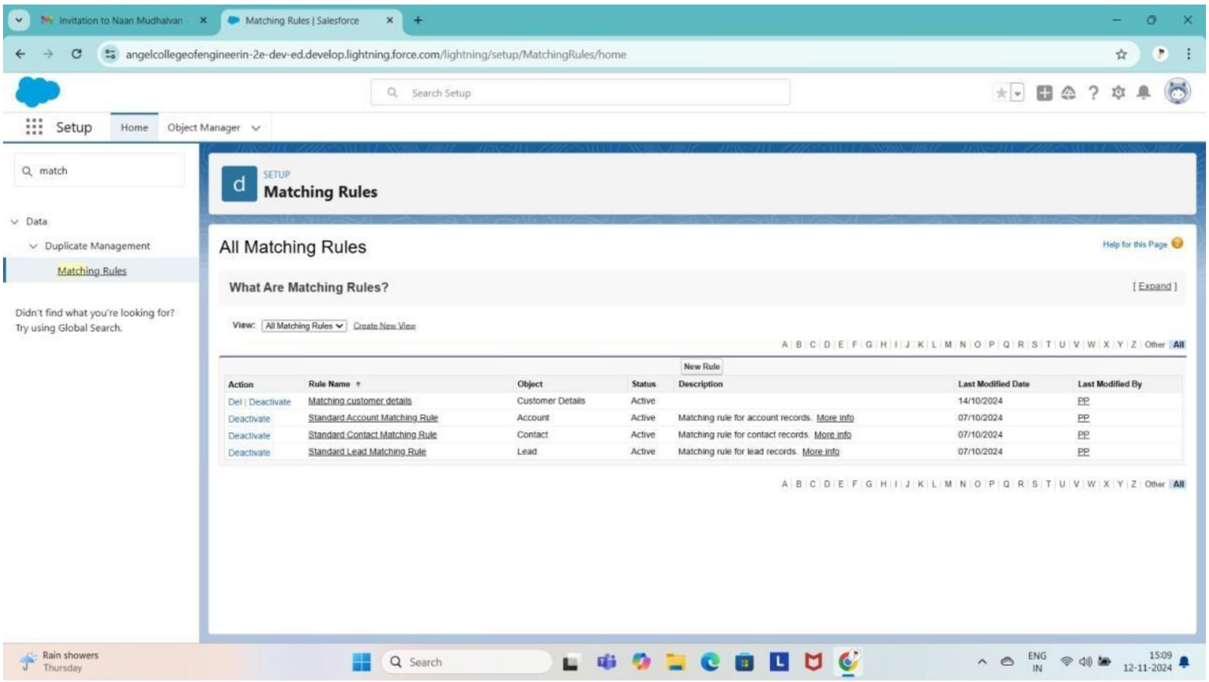
3. Select the object as Customer details and click Next.



4. Give the Rule name : Matching customer details
5. Unique name : is auto populated
6. Define the matching criteria as
7. Field Matching Method
   1. Gmail Exact
   2. Phone Number Exact
8. Click save.

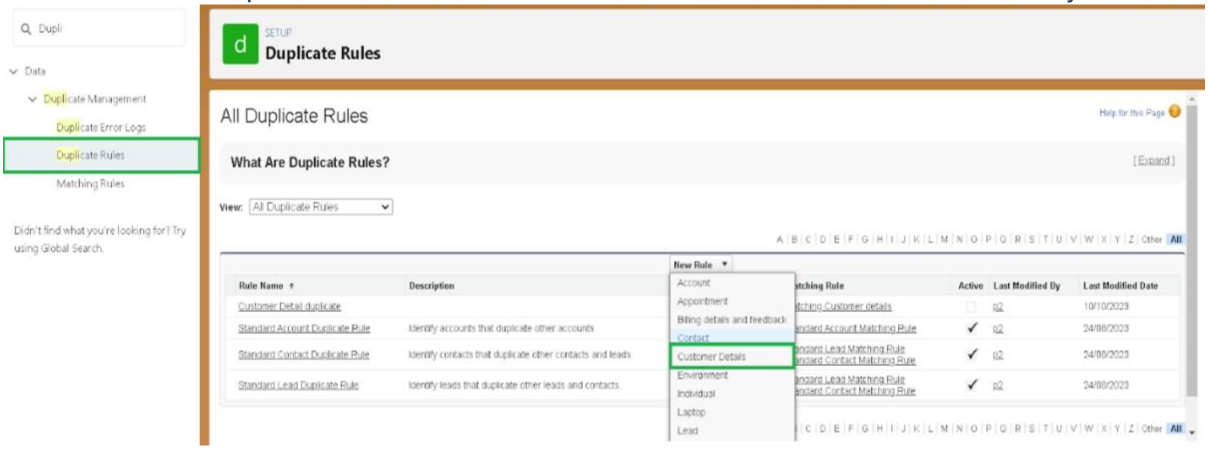
9. After Saving Click on Activate.



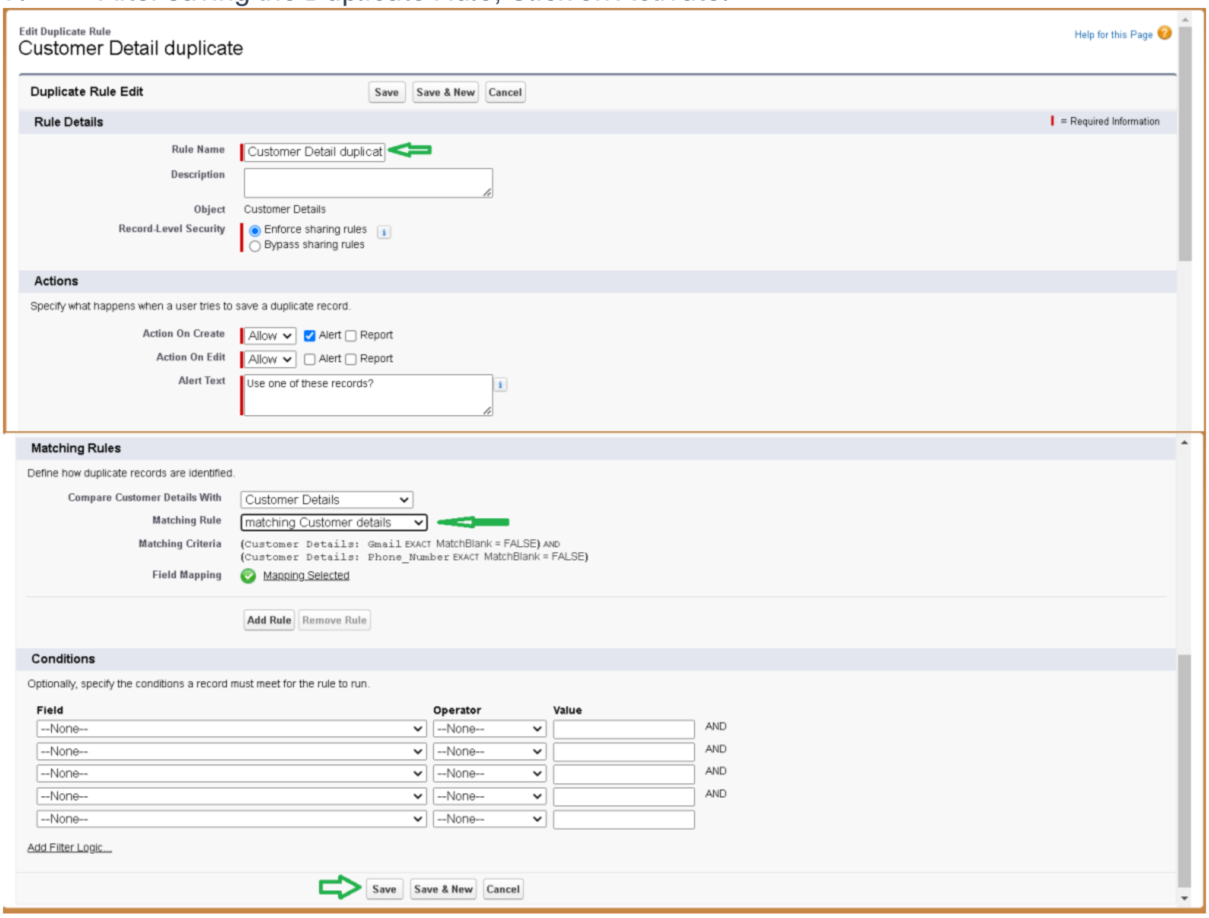


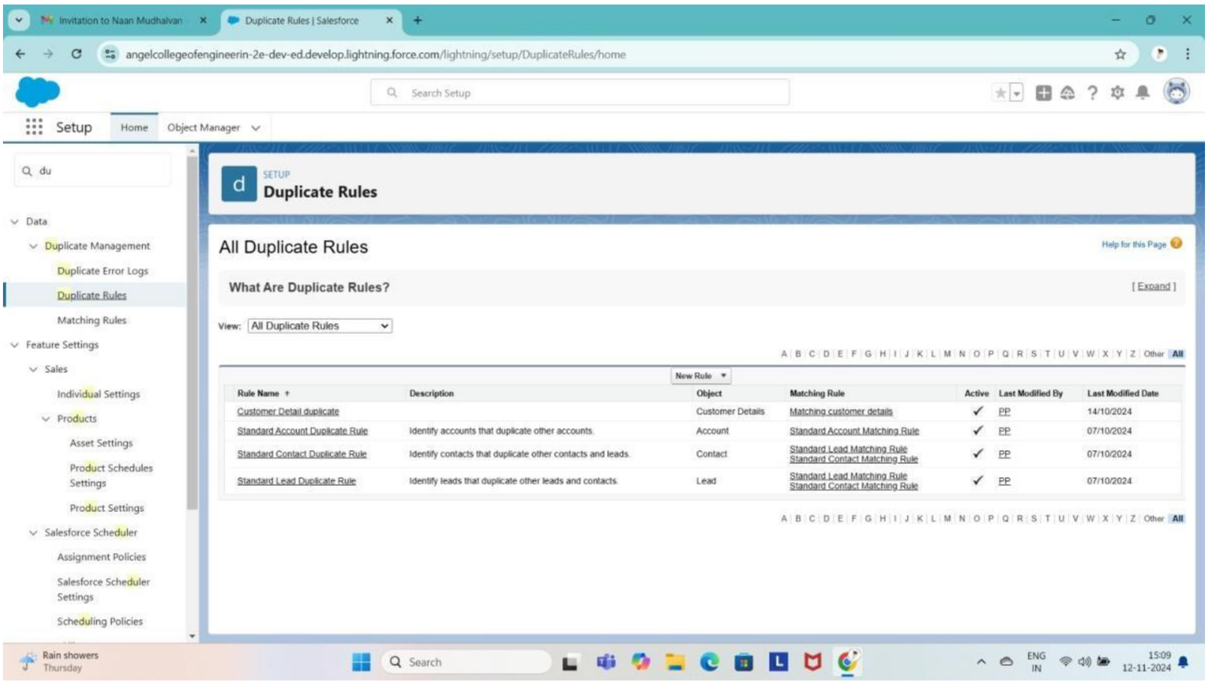
To create a Duplicate rule to an Customer details Object

1. Go to quick find box in setup and search for Duplicate rules.
2. Click on Duplicate rule >> click on New Rule >> select customer details object.



3. Give the Rule name as : Customer Detail duplicate
4. Scroll a little in Matching rule section
5. Select the matching rule : Matching customer details
6. And Click on save.
7. After saving the Duplicate Rule, Click on Activate.

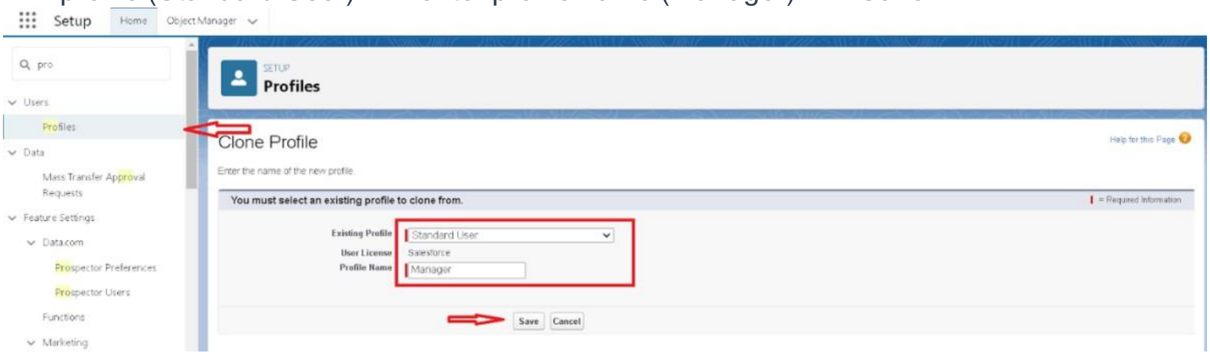




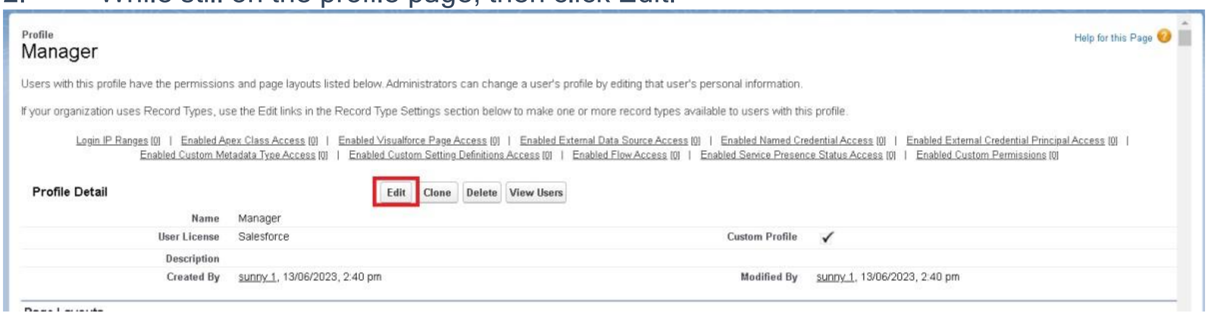
Manager Profile

To create a new profile:

1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard User) >> enter profile name (Manager) >> Save.



2. While still on the profile page, then click Edit.



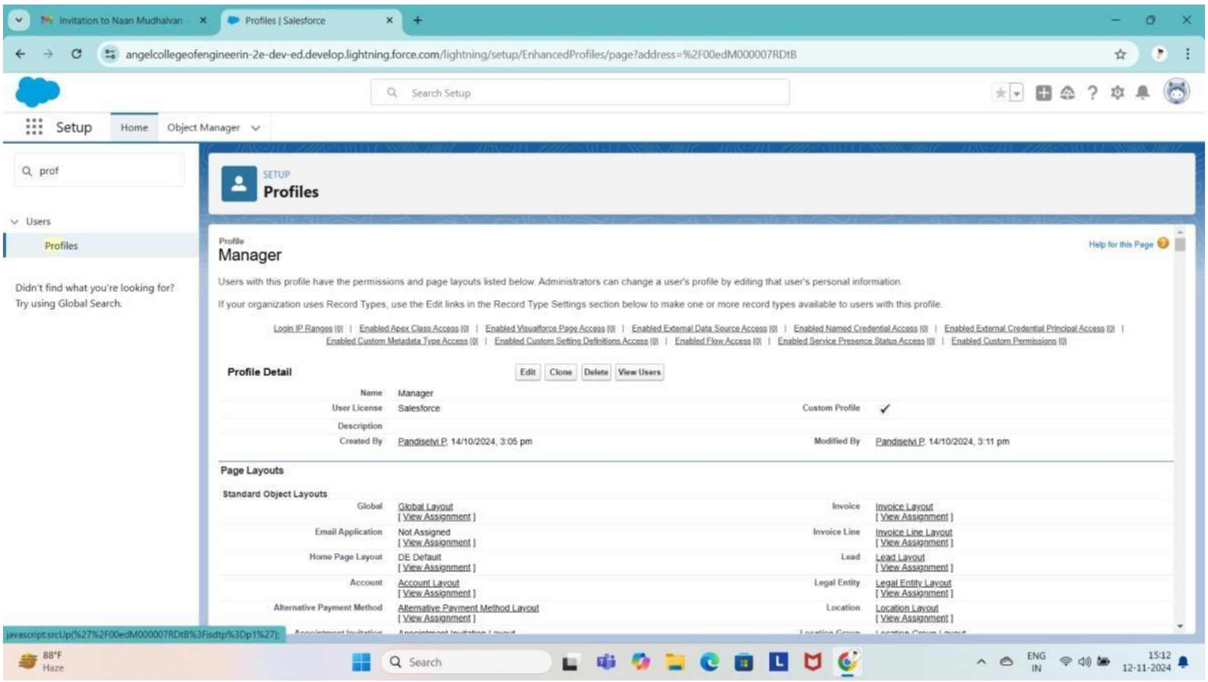
3. Select the Custom App settings as default for the Garage management.

4. Scroll down to Custom Object Permissions and Give access permissions for Appointments,Billing details and feedback , service records and customer details objects as mentioned in the below diagram.

Custom Object Permissions

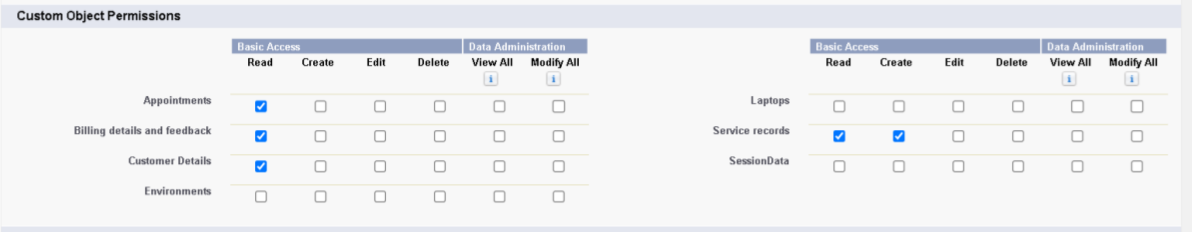
	Basic Access				Data Administration	
	Read	Create	Edit	Delete	View All	Modify All
Appointments	✓	☐	✓	✓	✓	✓
Billing details and feedback	✓	☐	✓	✓	✓	✓
Customer Details	✓	☐	✓	✓	✓	✓
Environments	☐	☐	☐	☐	☐	☐
Laptops	☐	☐	☐	☐	☐	☐
Service records	✓	☐	✓	✓	✓	✓
SessionData	☐	☐	☐	☐	☐	☐

5. Changing the session times out after should be " 8 hours of inactivity".
6. Change the password policies as mentioned :
7. User passwords expire in should be " never expires ".
8. Minimum password length should be " 8 ", and click save.

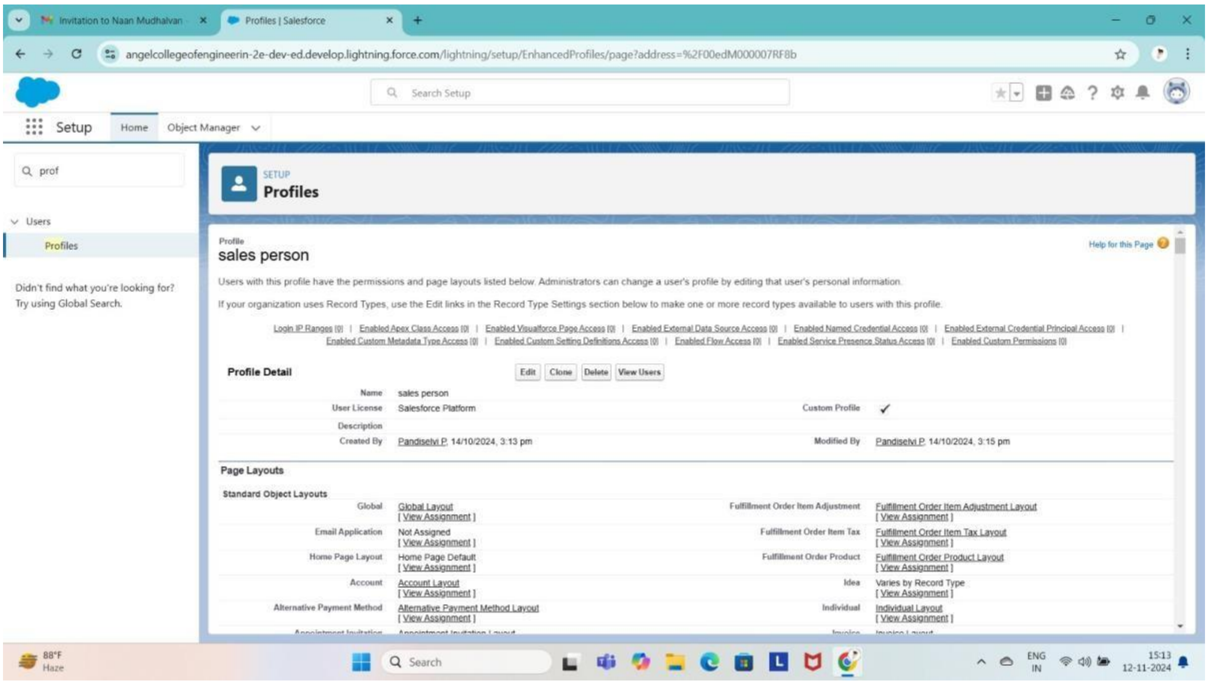


Sales person profile

1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Salesforce Platform User) >> enter profile name (sales person) >> Save.
2. While still on the profile page, then click Edit.
3. Select the Custom App settings as default for the GArage management.
4. Scroll down to Custom Object Permissions and Give access permissions for Appointments,Billing details and feedback , service records and customer details objects as mentioned in the below diagram.



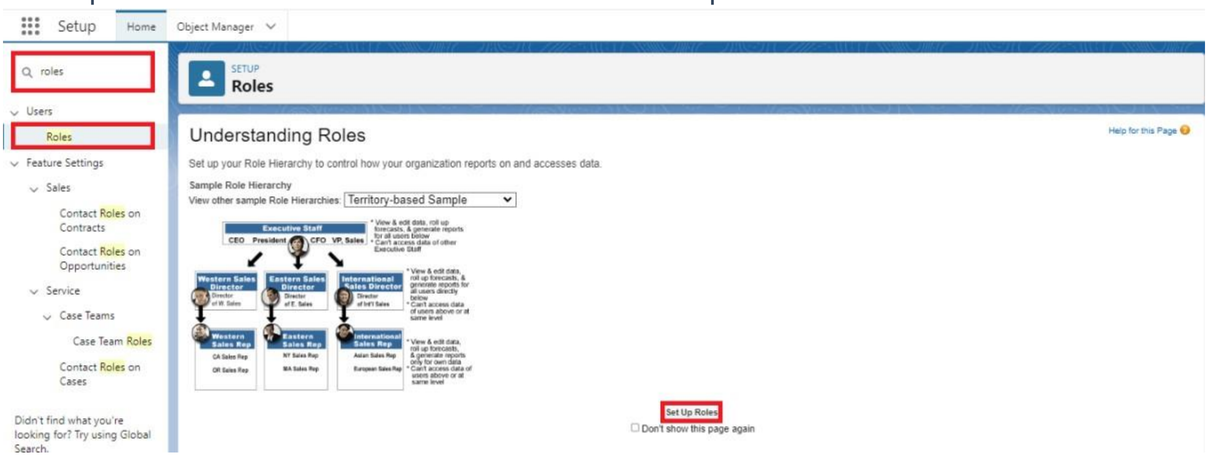
5. And click save.



Creating Manager role

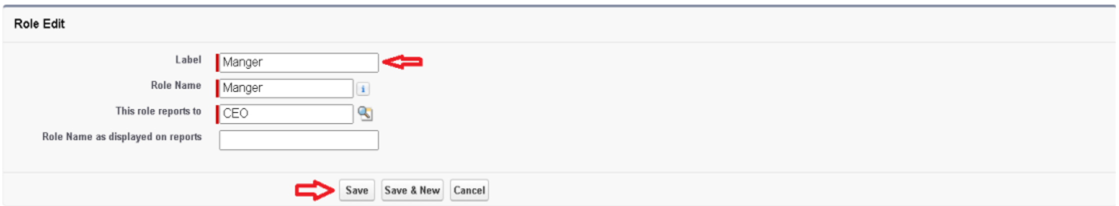
Creating Manager Role:

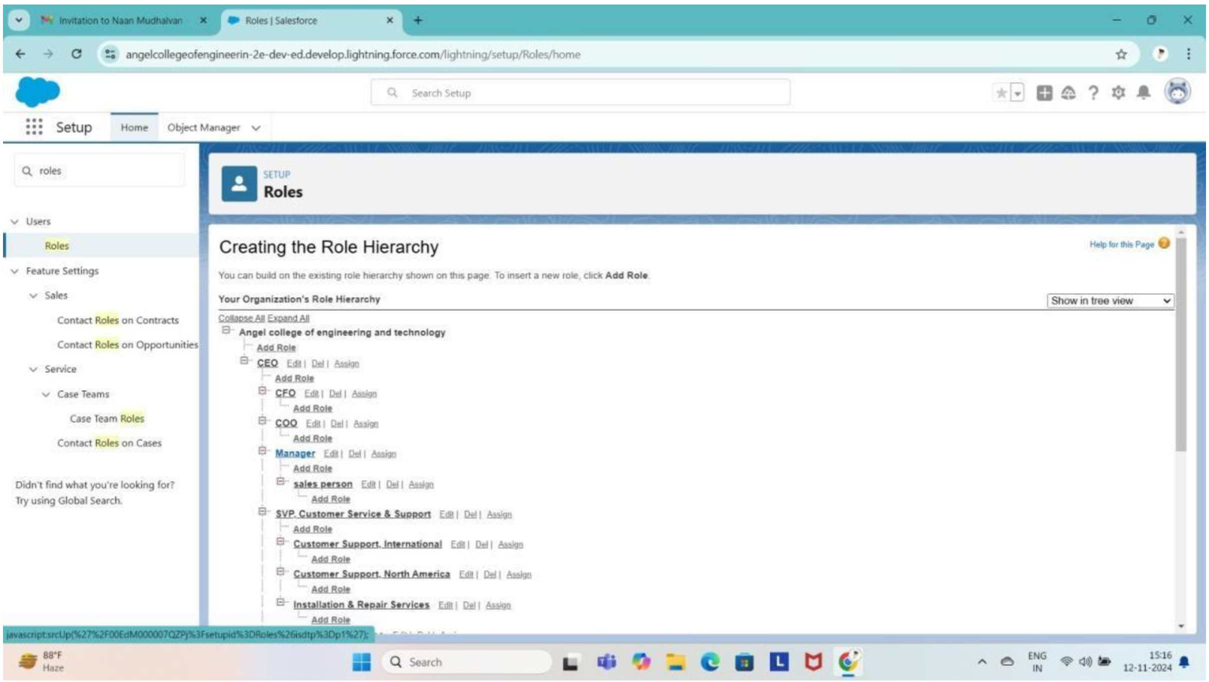
1. Go to quick find >> Search for Roles >> click on set up roles.



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

3. Give Label as “Manager” and Role name gets auto populated. Then click on Save.

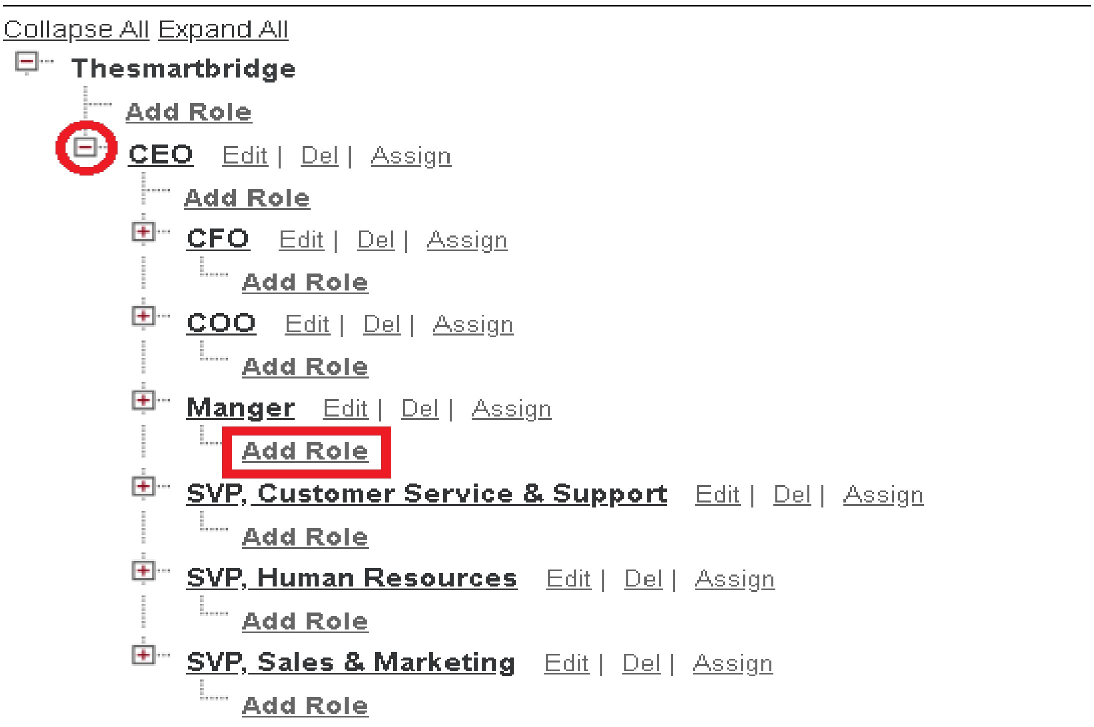




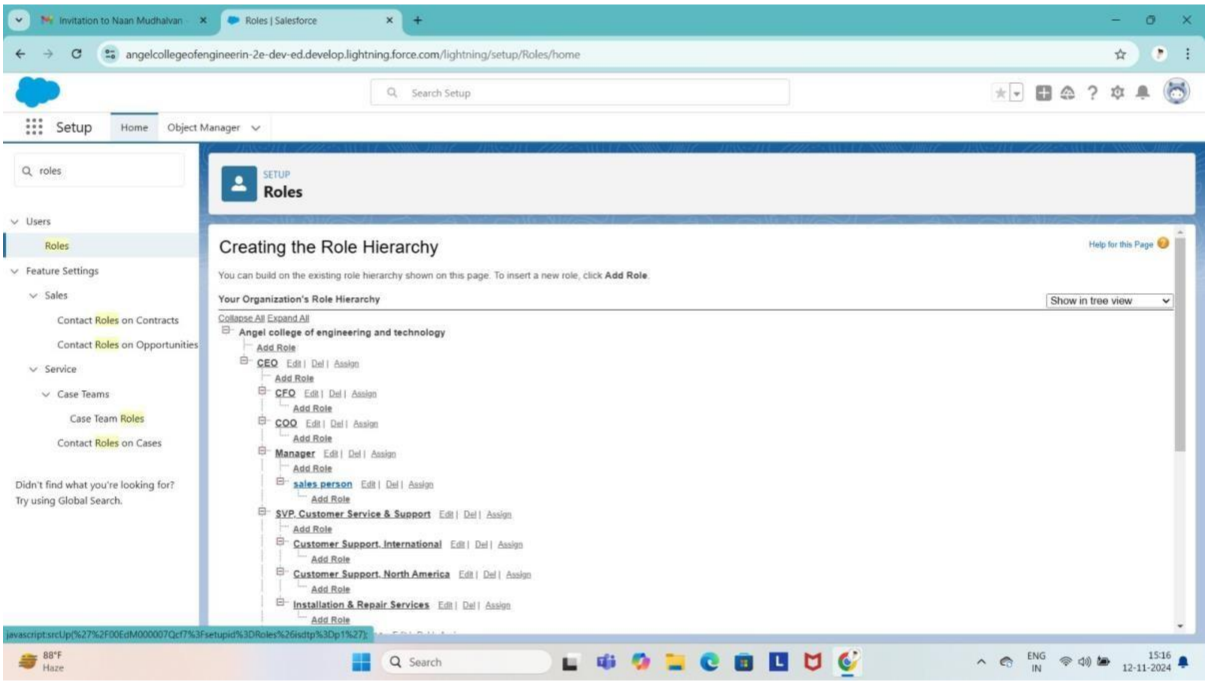
Creating another roles

Creating another two roles under manager

1. Go to quick find >> Search for Roles >> click on set up roles.
2. Click plus on CEO role, and click add role under manager.



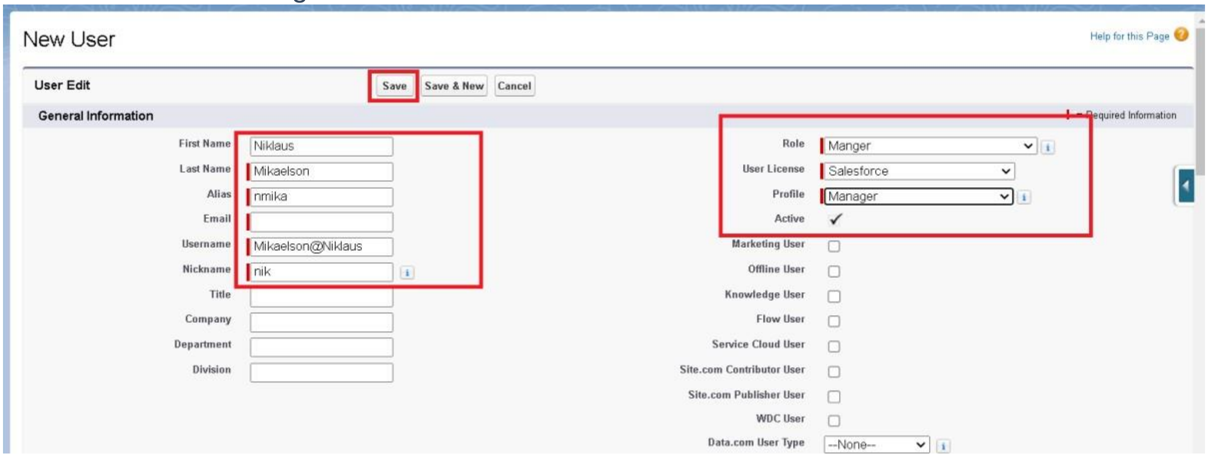
3. Give Label as “sales person” and Role name gets auto populated. Then click on Save.



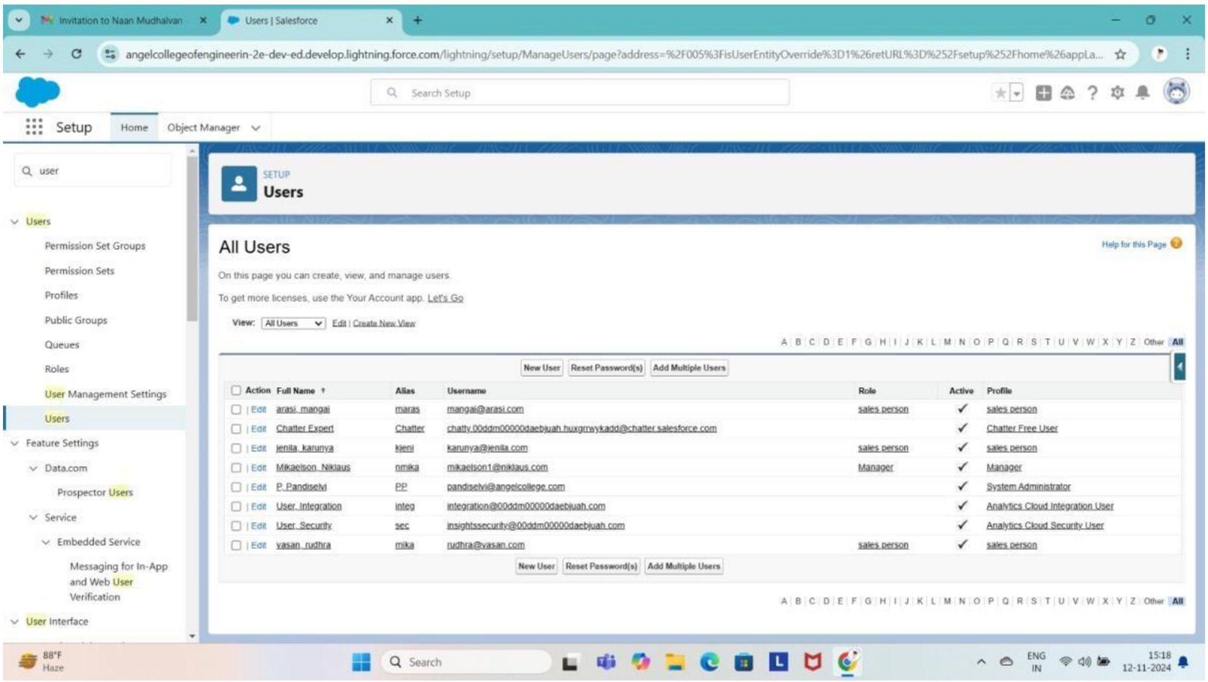
Create User

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 : Manager
8. User licence : Salesforce
9. Profiles : Manager



3. Save.



Creating another users

1. Repeat the steps and create another user using

a. Role : sales person

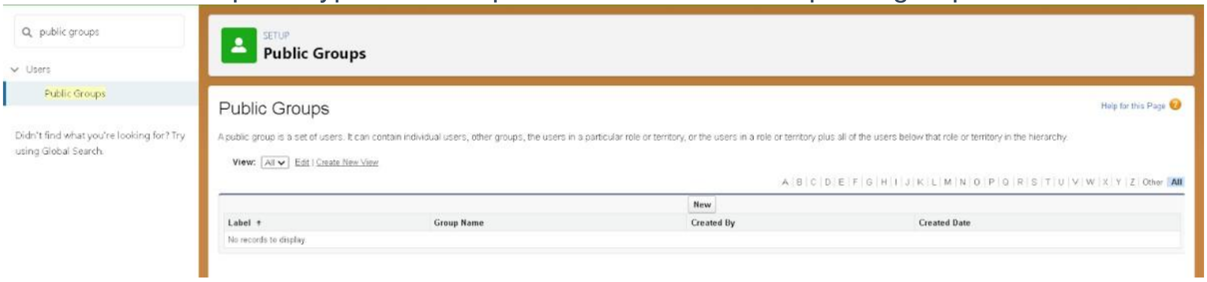
b. User licence : Salesforce Platform

c. Profile : sales person

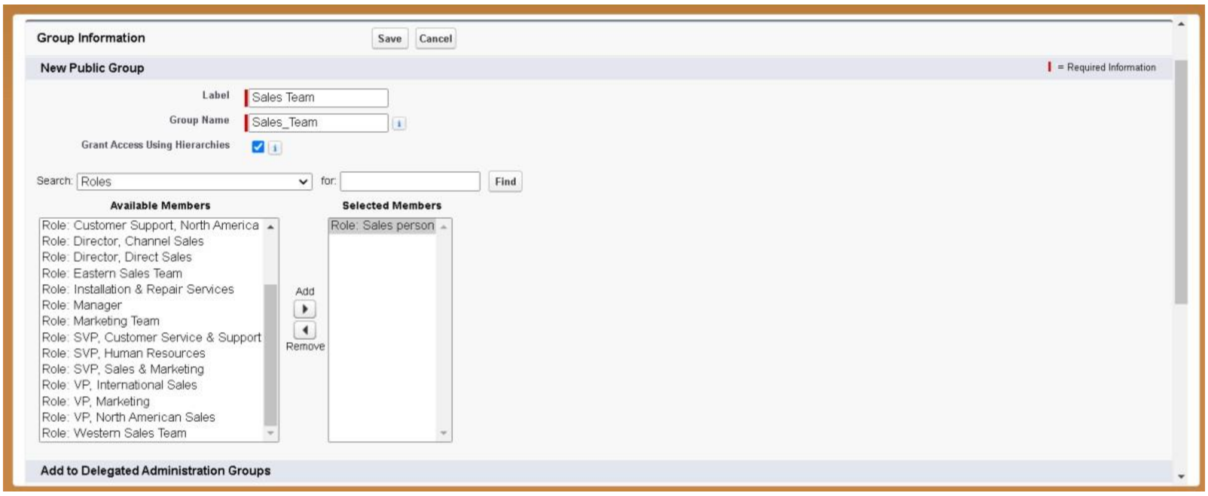
Note : create atleast 3 users with these permissions.

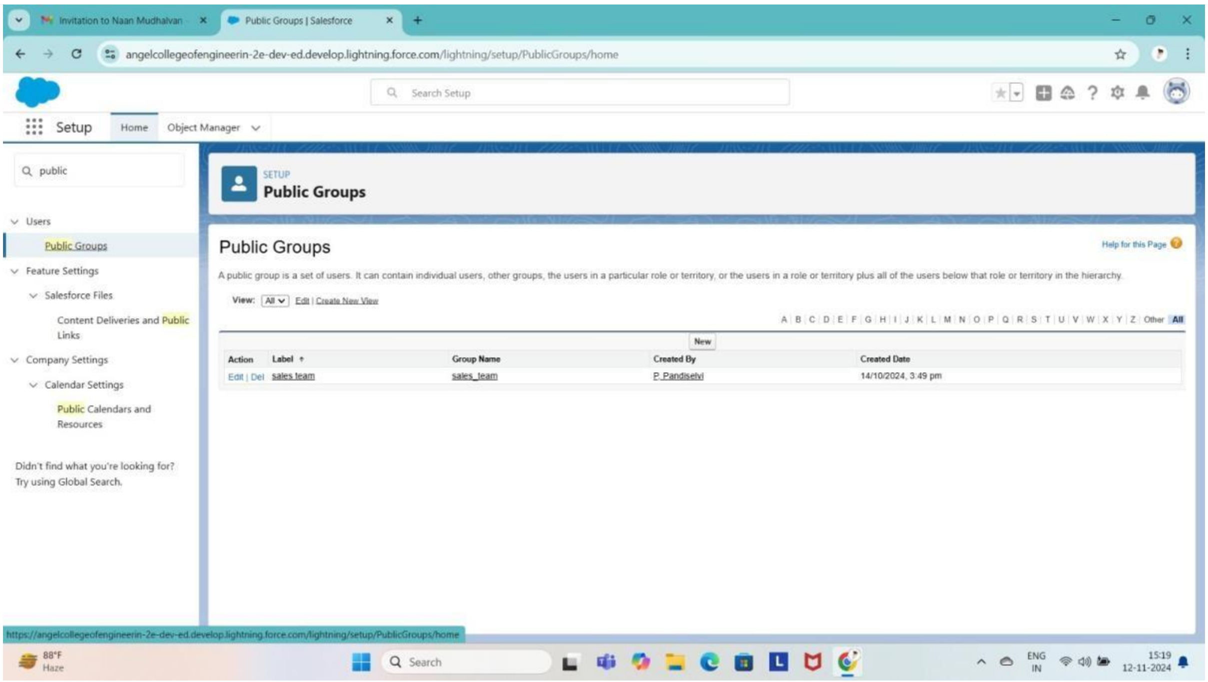
Creating new public group

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



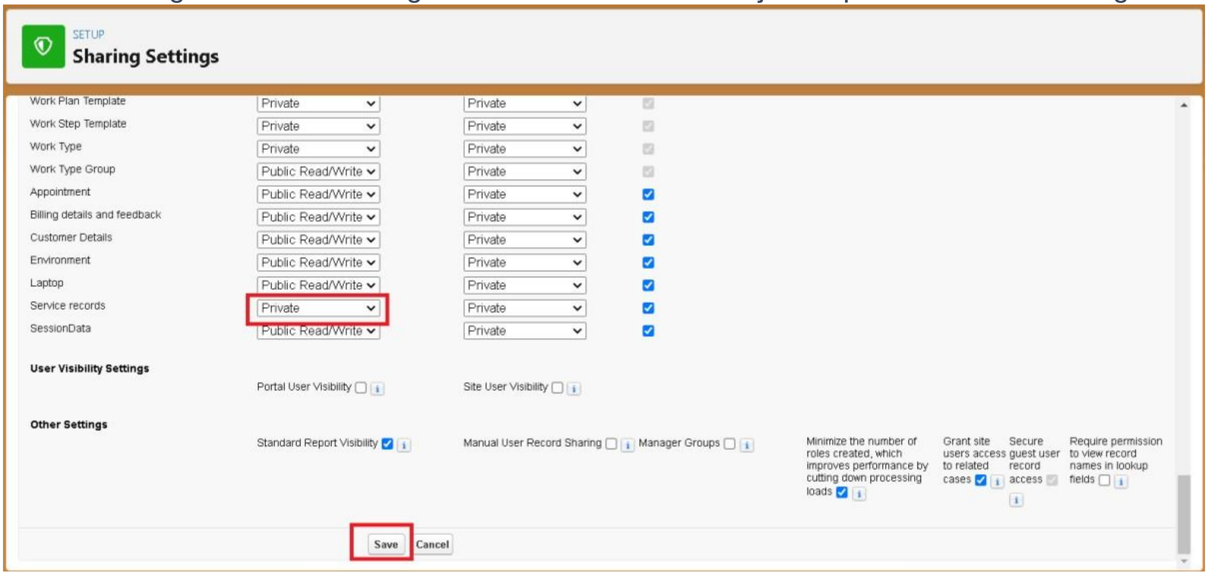
2. Give the Label as “sales team”.
3. Group name is autopopulated.
4. Search for Roles.
5. In Available Members select Sales person and click on add it will be moved to selected member.
6. Click on save.



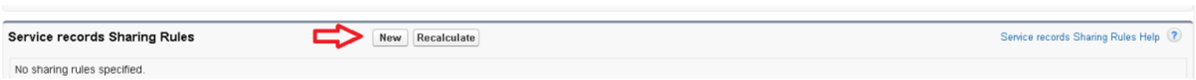


Creating sharing settings

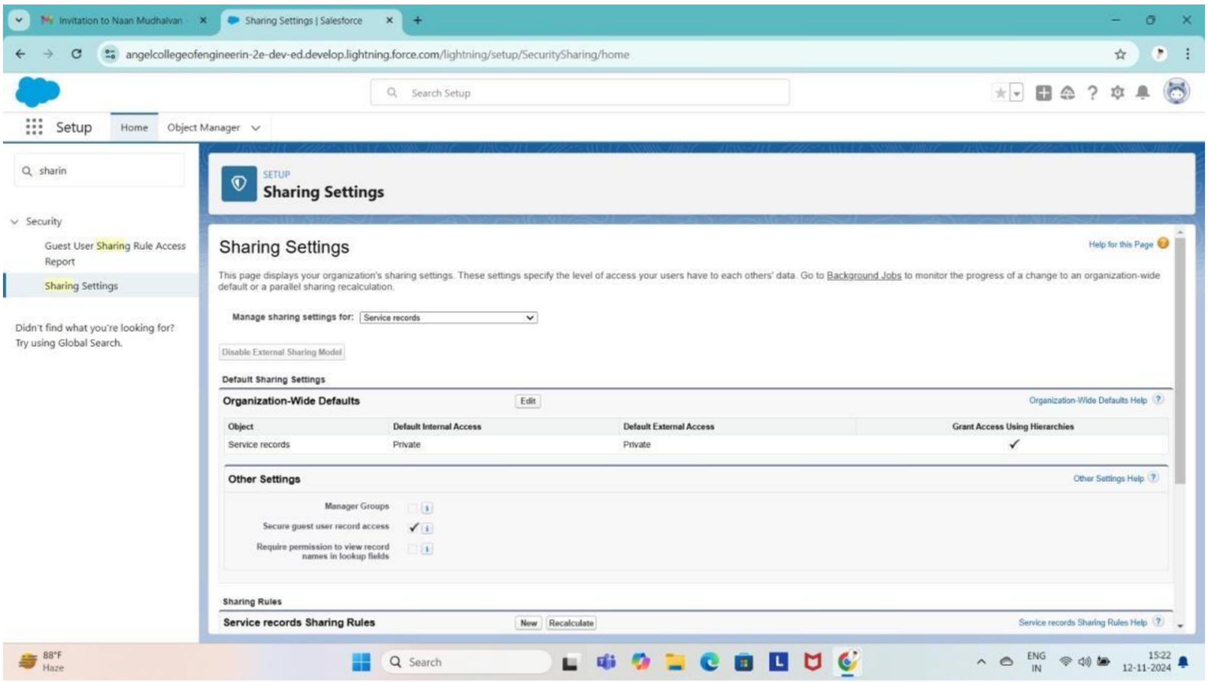
1. Go to setup >> type users in quick find box >> select Sharing Settings >> click Edit.
2. Change the OWD setting of the Service records Object to private as shown in fig.

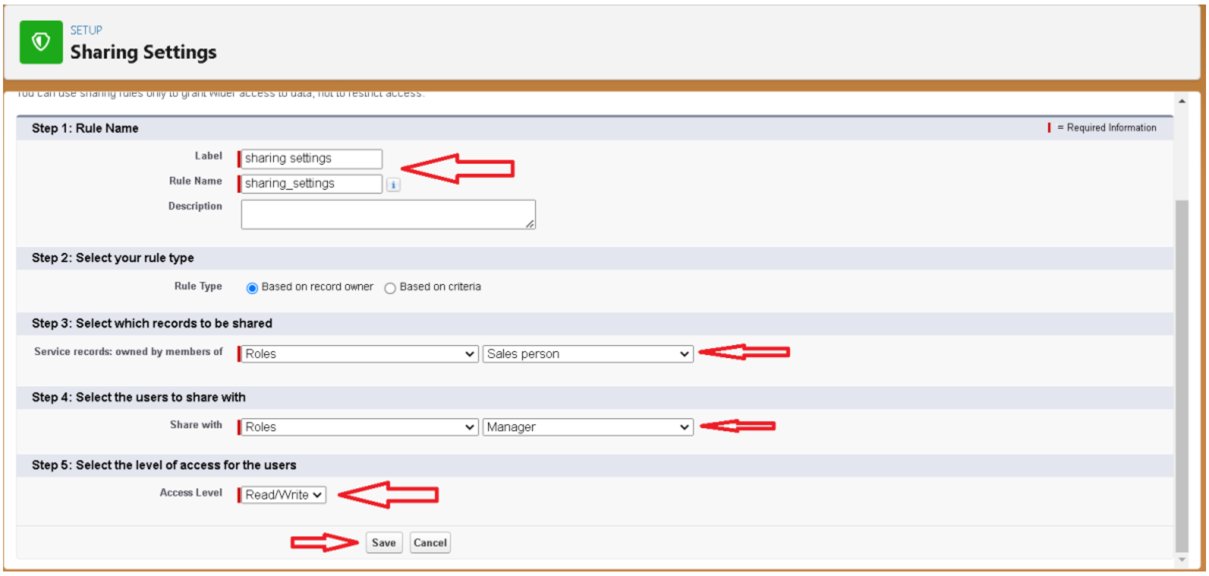


3. Click on save and refresh.
4. Scroll down a bit, Click new on Service records sharing Rules.
5.



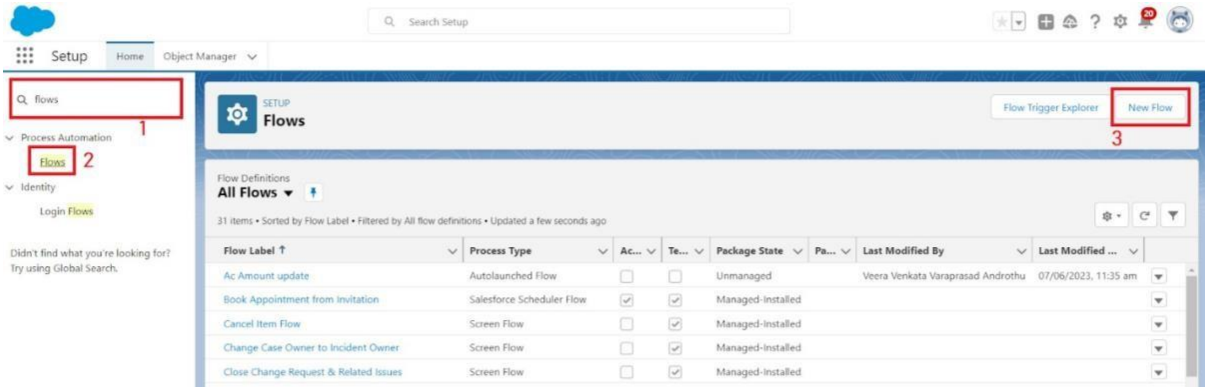
6. Give the Label name as “ Sharing setting”
7. Rule name is auto populated.
8. In step 3 : Select which records to be shared, members of “ Roles ” >> “ Sales person”
9. In step 4: share with, select “ Roles ” >> “ Manager ”
10. In step 5 : Change the access level to “ Read / write ”.
11. Click on save.



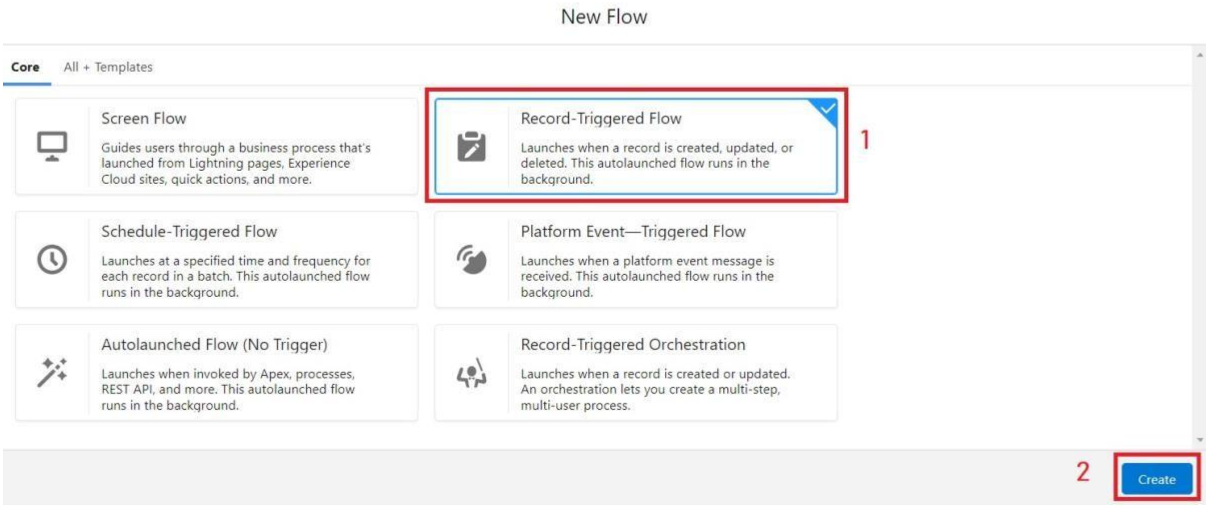


Create a flow

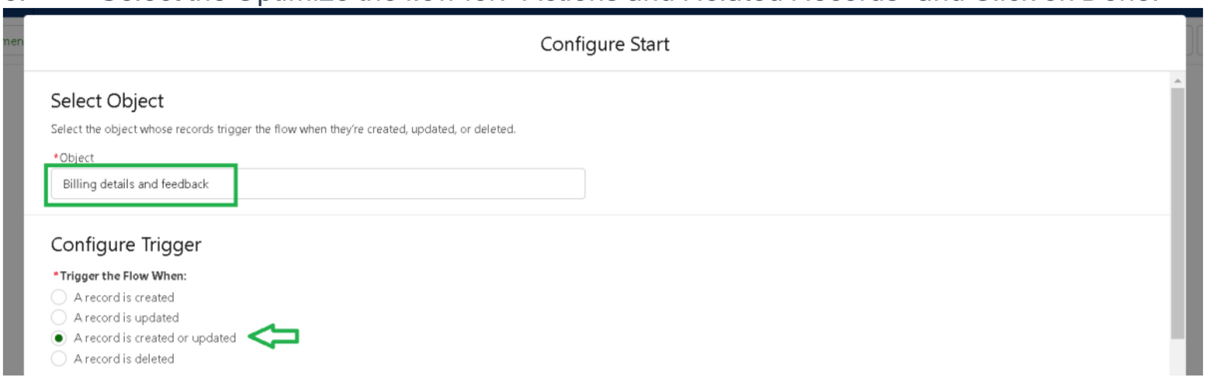
1. Go to setup >> type Flow in quick find box >> Click on the Flow and Select the New Flow.

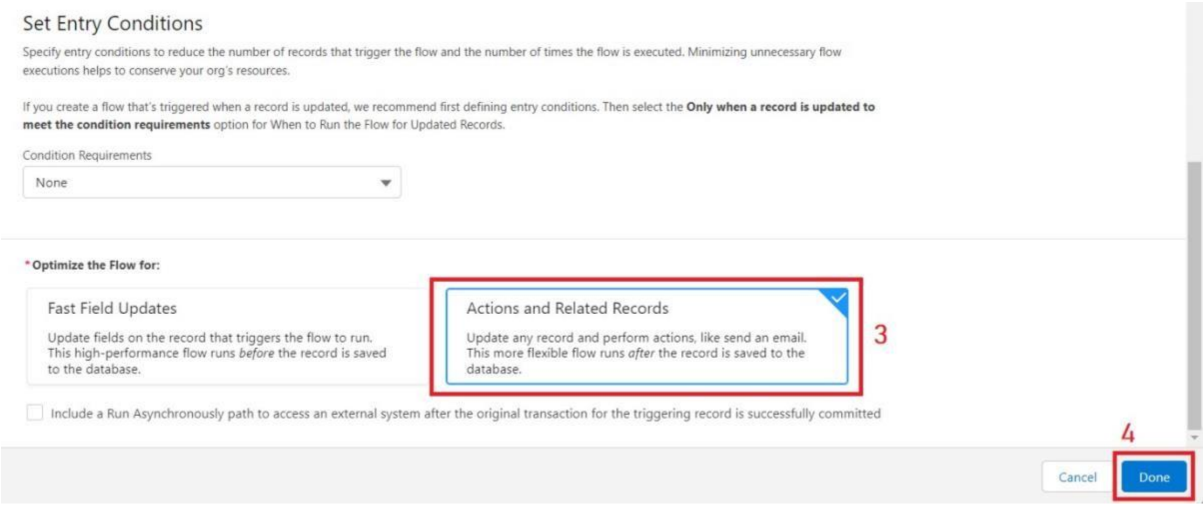


2. Select the Record-triggered flow and Click on Create.

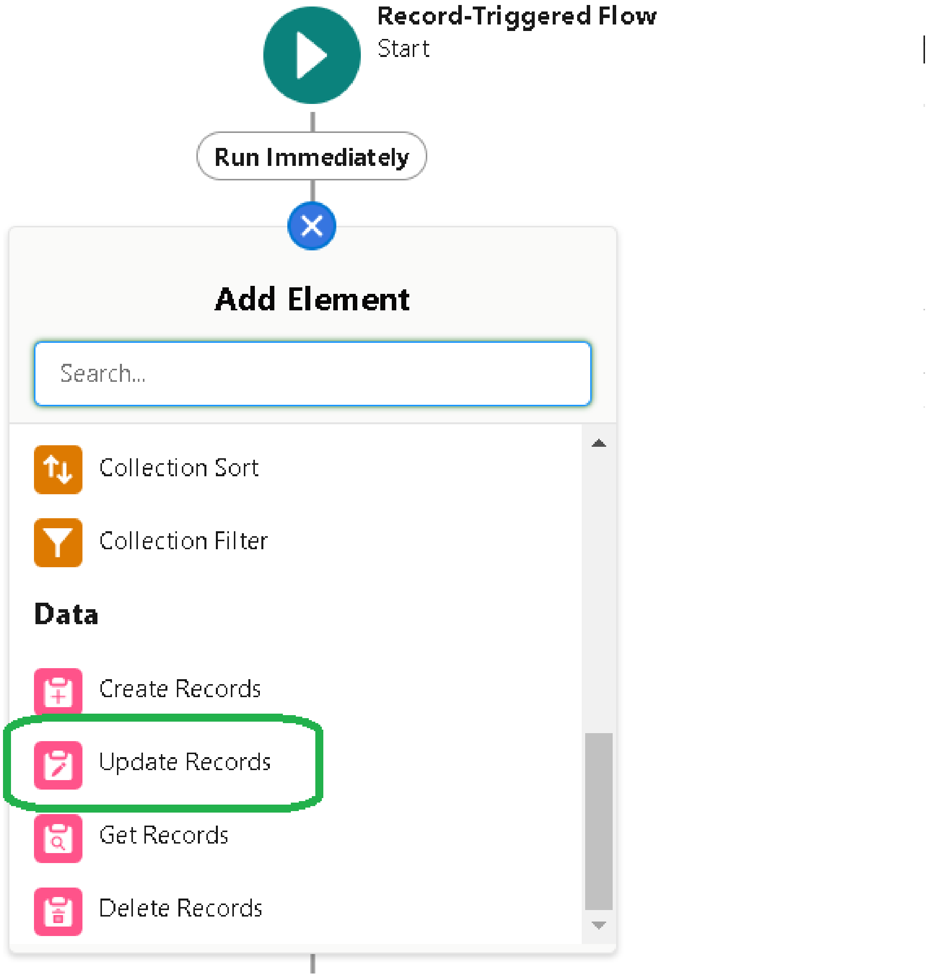


3. Select the Object as “Billing details and feedback”in the Drop down list.
4. Select the Trigger Flow when: “A record is Created or Updated”.
5. Select the Optimize the flow for: “Actions and Related Records” and Click on Done.

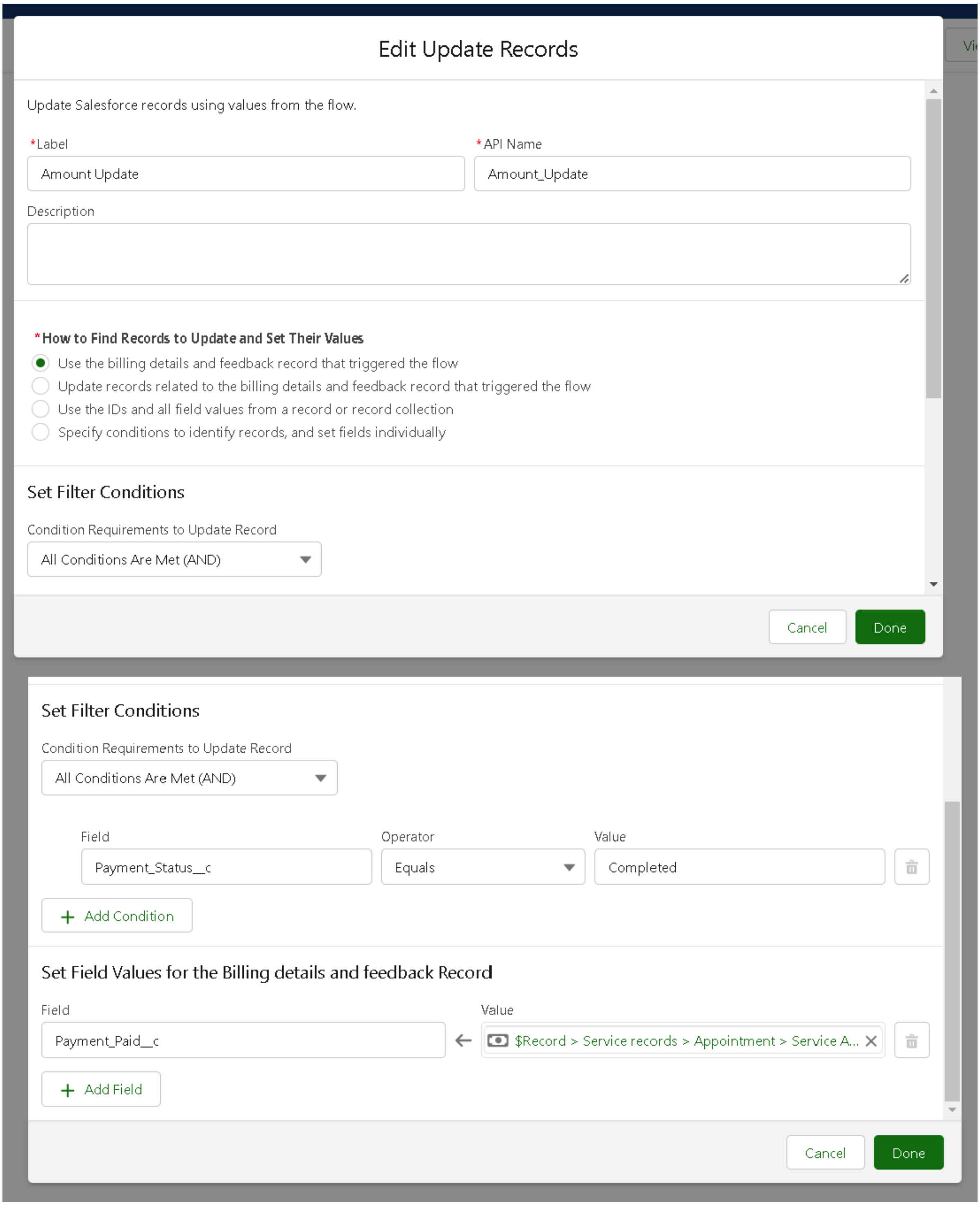




6. Under the Record-triggered Flow Click on "+" Symbol and In the Drop down List select the "Update records Element".

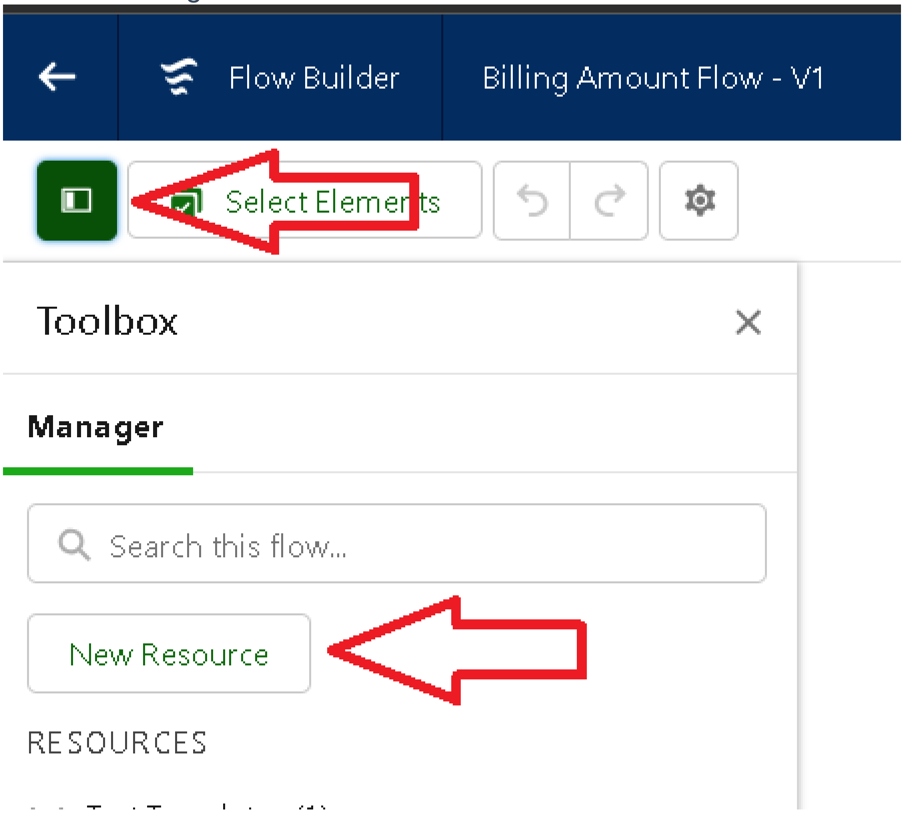


7. Give the Label Name : Amount Update
8. Api name : is auto populated



9. Set a filter condition : All Conditions are met(AND)
10. Field : Payment_Status_c
11. Operator : Equals
12. Value : Completed
13. And Set Field Values for the Billing details and feedback Record
14. Field : Payment_Paid_c
15. Value : {!$Record.Service_records_r.Appointment_r.Service_Amount_c}
16. Click On Done.

17.	Before creating another Element. Create a New Resource form Toolbox form top left.



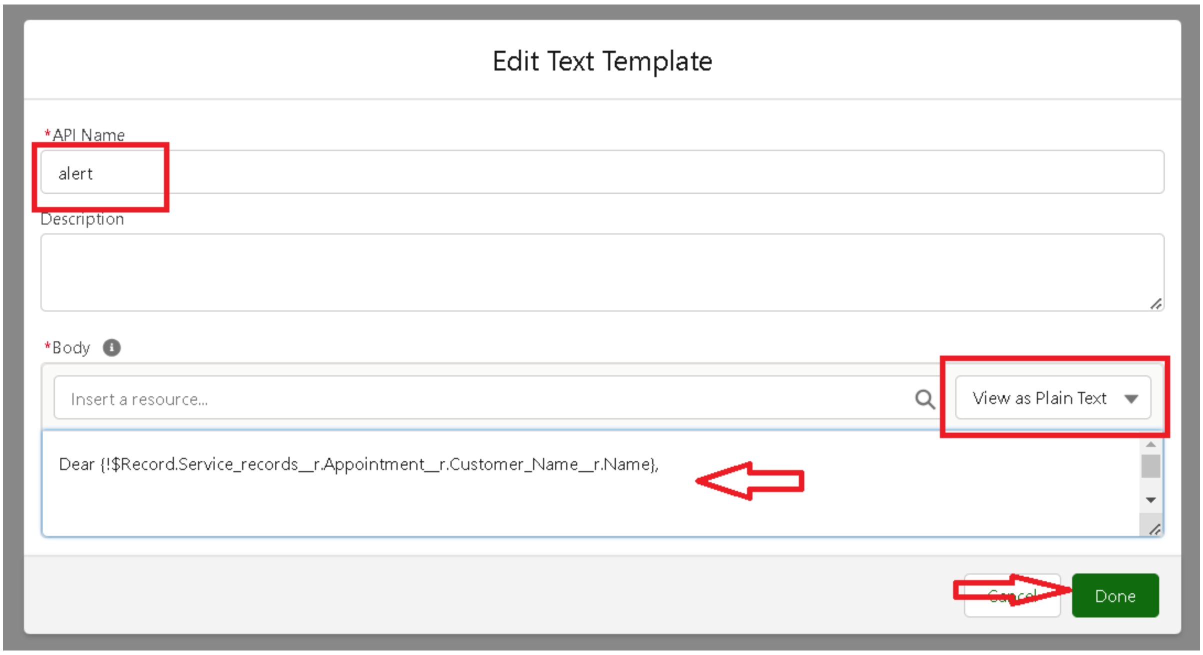
18.	Click on the New Resource, And select Variable.
19.	Select the resource type as text template.
20.	Enter the API name as “ alert”.
21.	Change the view as Rich Text ? View to Plain Text.
22.	In body field paste the syntax that given below.

Dear {!$Record.Service_records_r.Appointment__r.Customer_Name__r.Name},

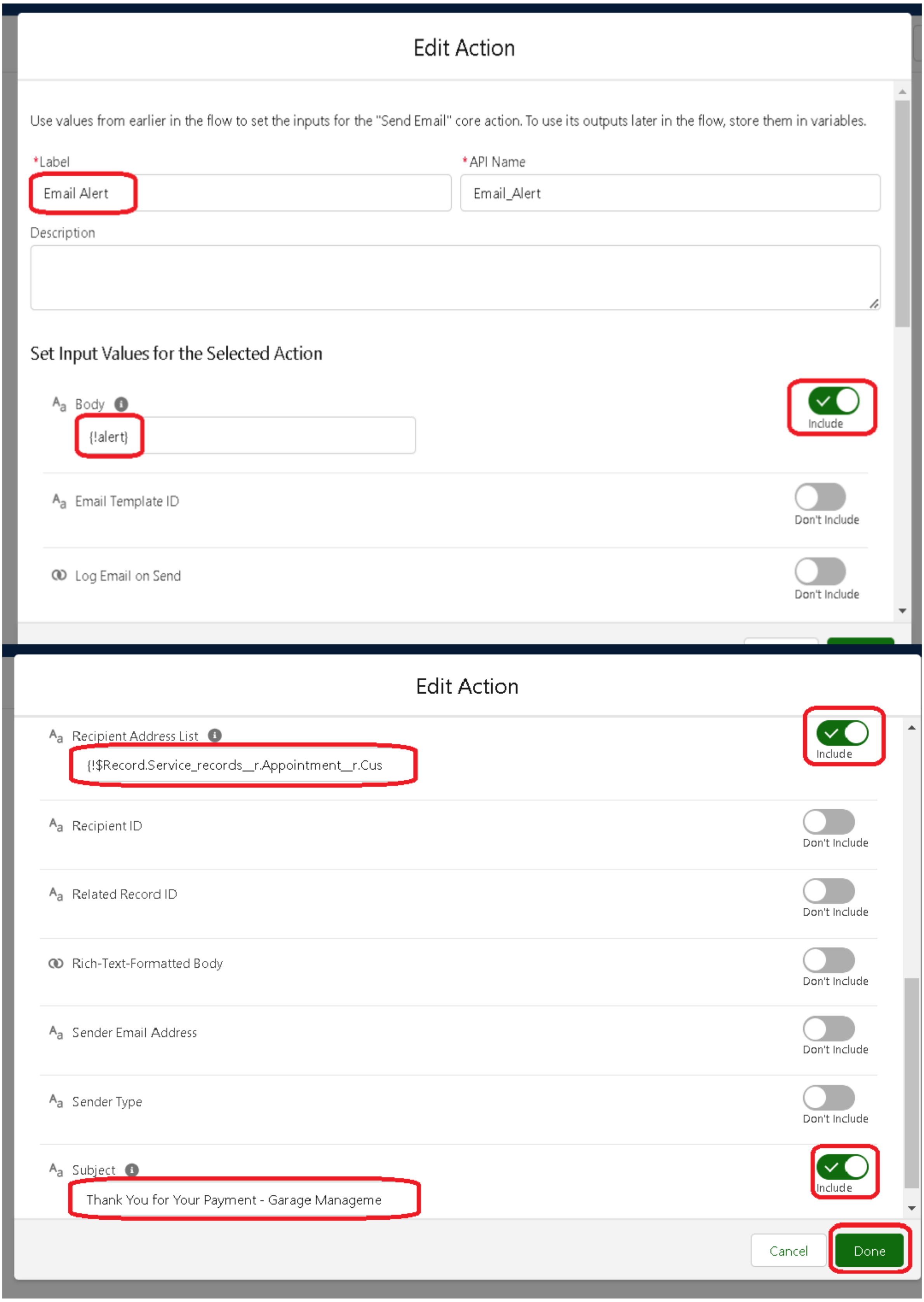
I hope this message finds you well. I wanted to take a moment to express my sincere gratitude for your recent payment for the services provided by our garage management team. Your prompt payment is greatly appreciated, and it helps us continue to provide top-notch services to you and all our valued customers.

Amount paid : {!$Record.Payment_Paid_c}
Thank you for Coming .

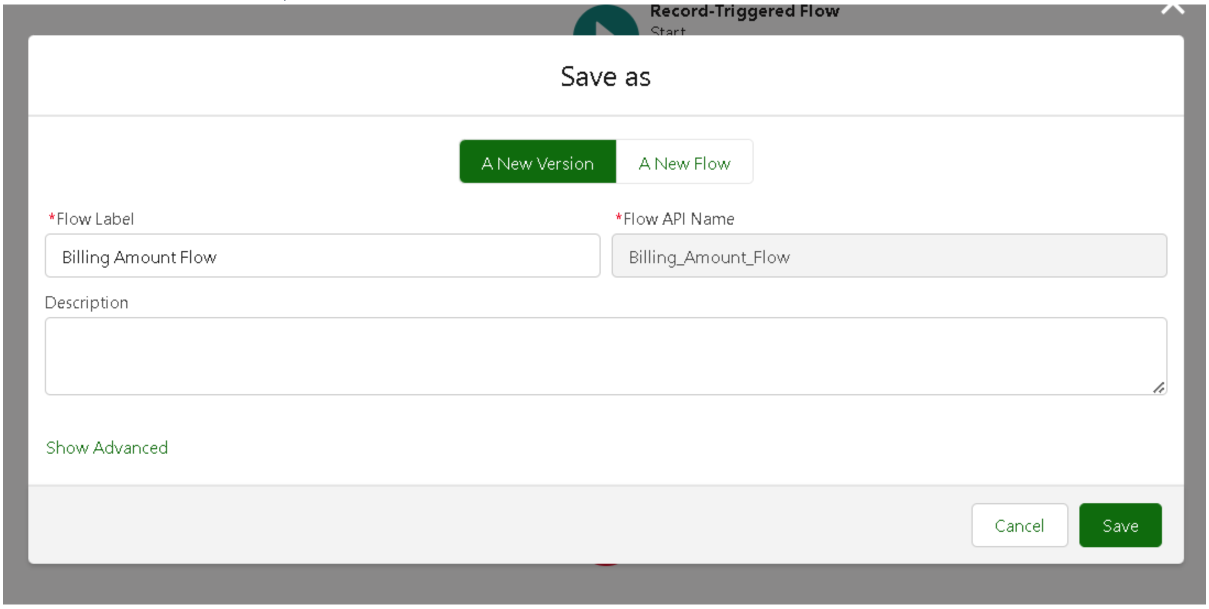
23.	Click done.

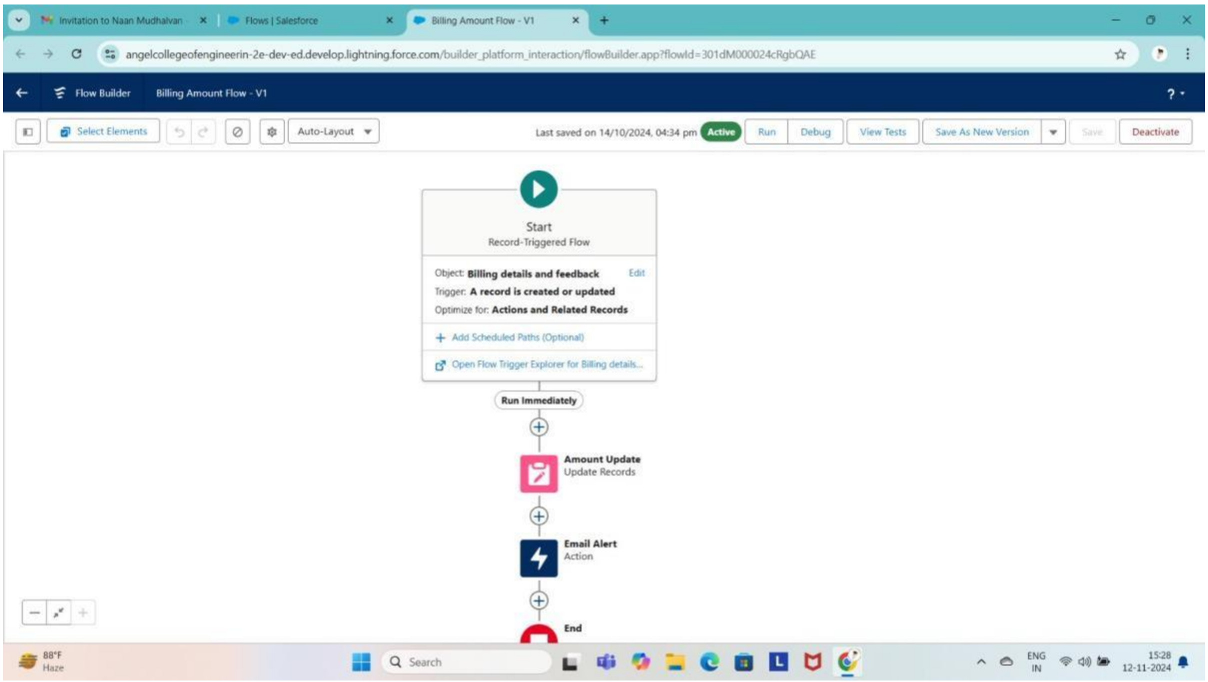


24. Now Click on Add Element , select Action.
25. Their action bar will be opened in that search for “ send email ” and click on it.
26. Give the label name as “ Email Alert”
27. API name will be auto populated.
28. Enable the body in set input values for the selected action.
29. Select the text template that created , Body : {!alert}
30. Include recipient address list select the email form the record.
31. RecipientAddressList:
{!$Record.Service_records_r.Appointment_r.Customer_Name_r.Gmail_c}
32. Include subject as “ Thank You for Your Payment - Garage Management”.
33. Click done.


Edit Action
Use values from earlier in the flow to set the inputs for the "Send Email" core action. To use its outputs later in the flow, store them in variables.
*Label
Email Alert
*API Name
Email_Alert
Description
Set Input Values for the Selected Action
Body
{!alert}
Include
Email Template ID
Don't Include
Log Email on Send
Don't Include
Edit Action
Recipient Address List
{!$Record.Service_records__r.Appointment__r.Cus
Include
Recipient ID
Don't Include
Related Record ID
Don't Include
Rich-Text-Formatted Body
Don't Include
Sender Email Address
Don't Include
Sender Type
Don't Include
Subject
Thank You for Your Payment - Garage Manageme
Include
Cancel
Done

34. Click on save. Give the Flow label , Flow Api name will be autopopulated.
35. And click save, and click on activate.

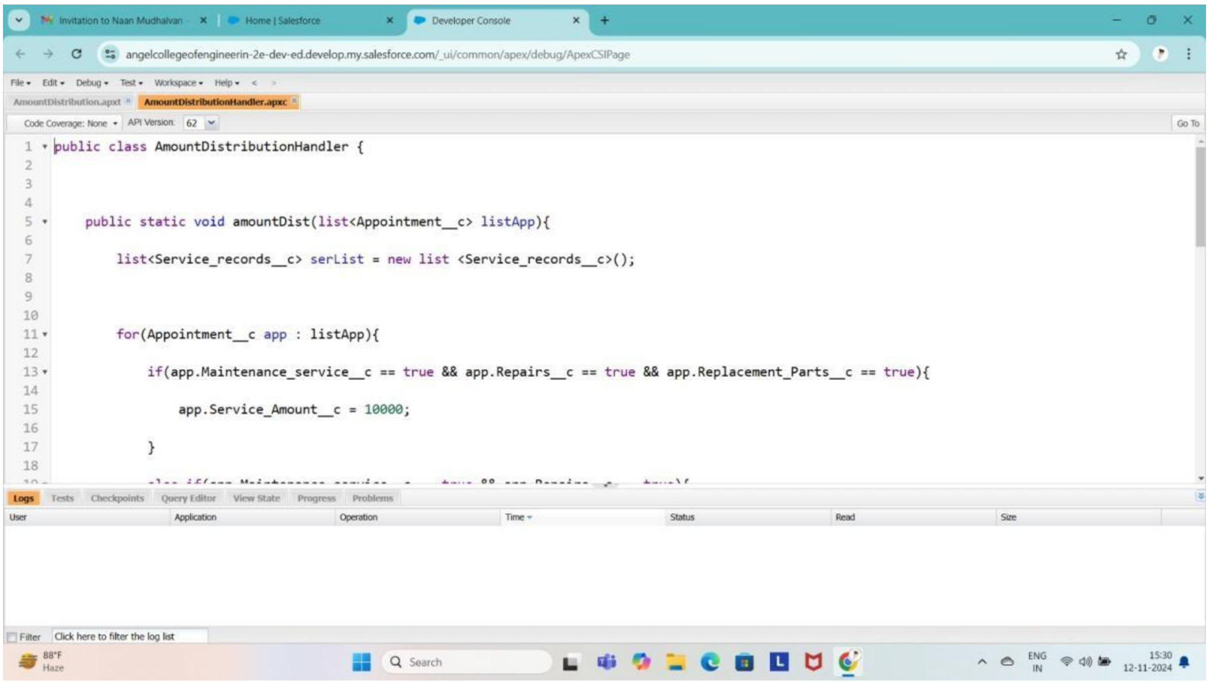


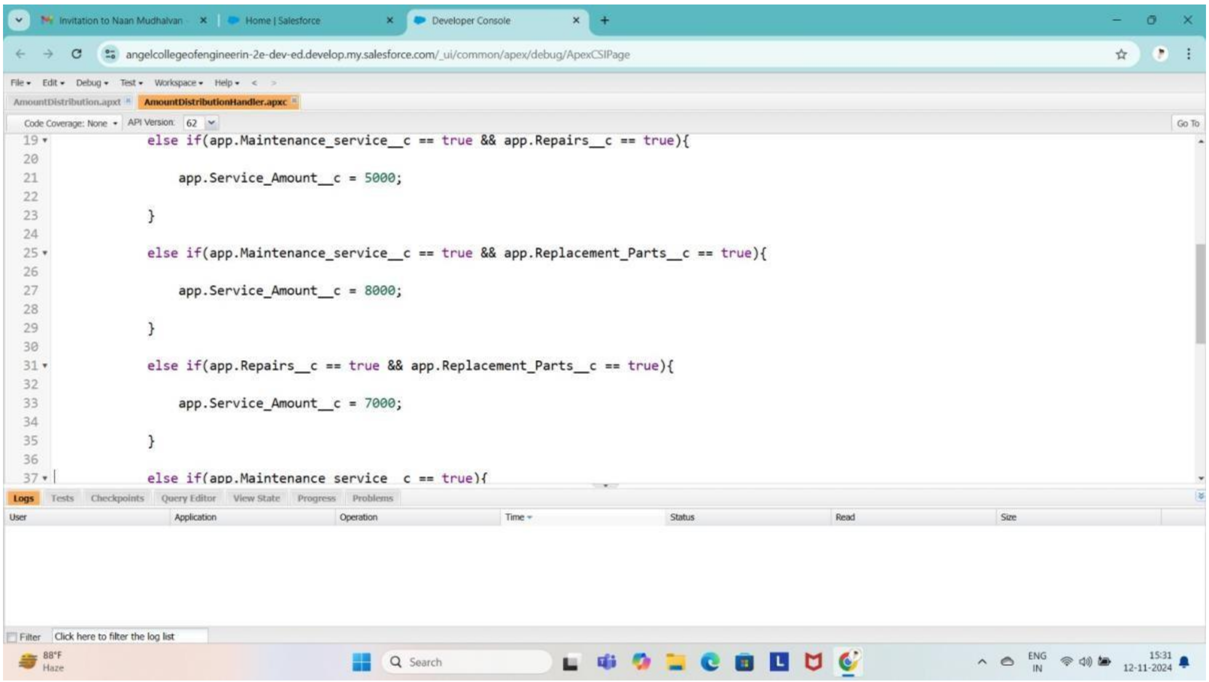


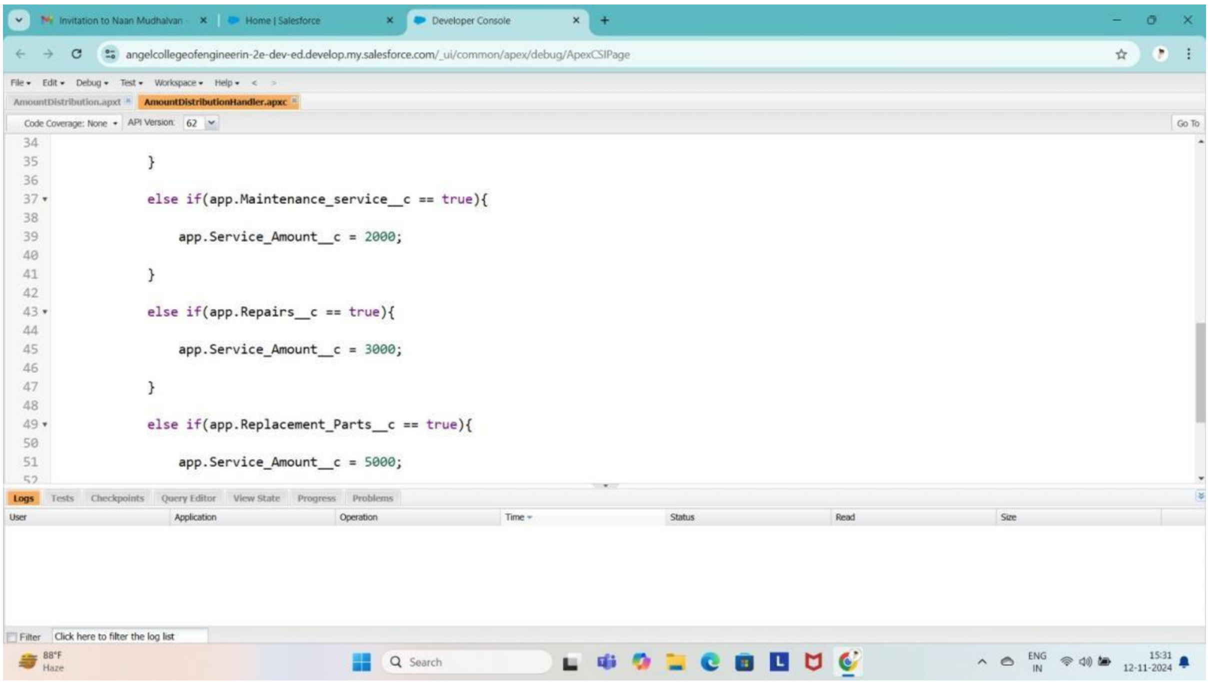
Apex Handler

UseCase : This use case works for Amount Distribution for each Service the customer selected for there Vehicle.

1. Login to the respective trailhead account and navigate to the gear icon in the top right corner.
2. Click on the Developer console. Now you will see a new console window.
3. In the toolbar, you can see FILE. Click on it and navigate to new and create New apex class.
4. Name the class as “AmountDistributionHandler ”.







Code:

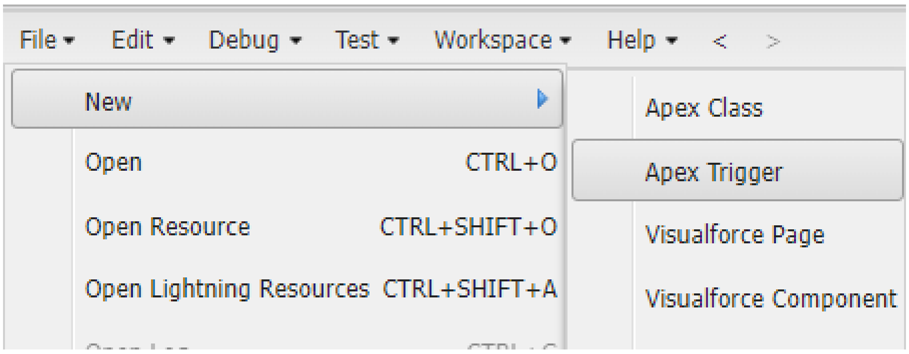
```
public class AmountDistributionHandler {

    public static void amountDist(list<Appointment_c> listApp){
        list<Service_records_c> serList = new list <Service_records_c>();

        for(Appointment__c app : listApp){
            if(app.Maintenance_service__c == true && app.Repairs__c == true && 
app.Replacement_Parts_c == true){
```

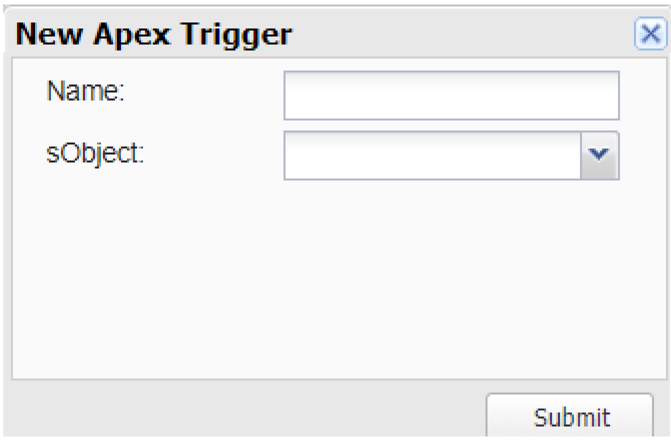
```
            app.Service_Amount__c = 10000;
        }
        else if(app.Maintenance_service_c == true && app.Repairs_c == true){
            app.Service_Amount_c = 5000;
        }
        else if(app.Maintenance_service_c == true && app.Replacement_Parts_c == true){
            app.Service_Amount_c = 8000;
        }
        else if(app.Repairs_c == true && app.Replacement_Parts_c == true){
            app.Service_Amount_c = 7000;
        }
        else if(app.Maintenance_service_c == true){
            app.Service_Amount_c = 2000;
        }
        else if(app.Repairs_c == true){
            app.Service_Amount__c = 3000;
        }
        else if(app.Replacement_Parts_c == true){
            app.Service_Amount_c = 5000;
        }

    }
    }
}
```

Trigger Handler :

How to create a new trigger :

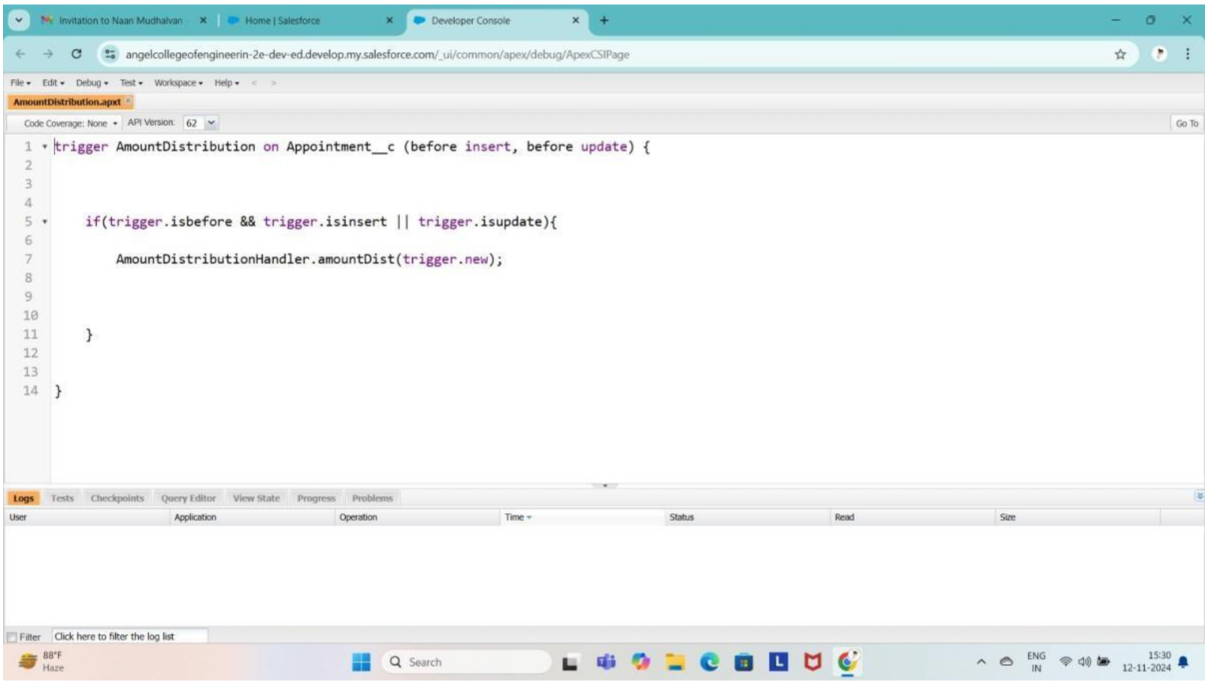
1. While still in the trailhead account, navigate to the gear icon in the top right corner.
2. Click on developer console and you will be navigated to a new console window.
3. Click on File menu in the tool bar, and click on new? Trigger.
4. Enter the trigger name and the object to be triggered.
5. Name : AmountDistribution
6. sObject : Appointment_c





Syntax For creating trigger :
The syntax for creating trigger is :
Trigger [trigger name] on [object name](Before/After event)
{
}
In this project , trigger is called whenever the particular records sum exceed the threshold i.e minimum business requirement value. Then the code in the trigger will get executed.

1. Handler for the Appointment Object



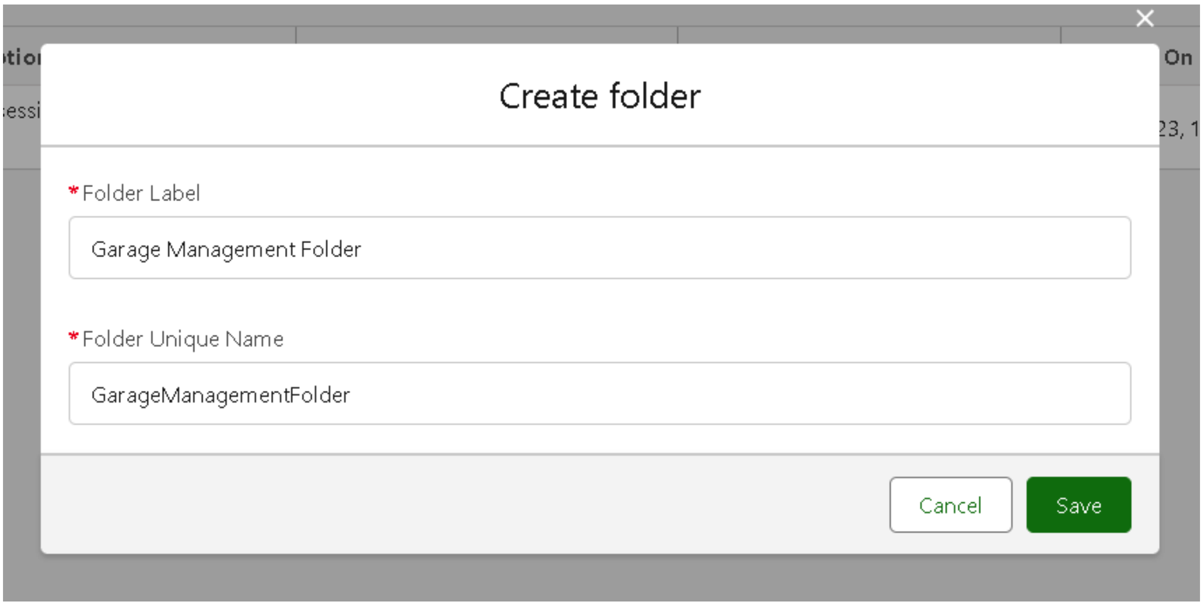
Code:

```
trigger AmountDistribution on Appointment_c (before insert, before update) {

    if(trigger.isbefore && trigger.isinsert || trigger.isupdate){
        AmountDistributionHandler.amountDist(trigger.new);

    }


}
```

create a report folder

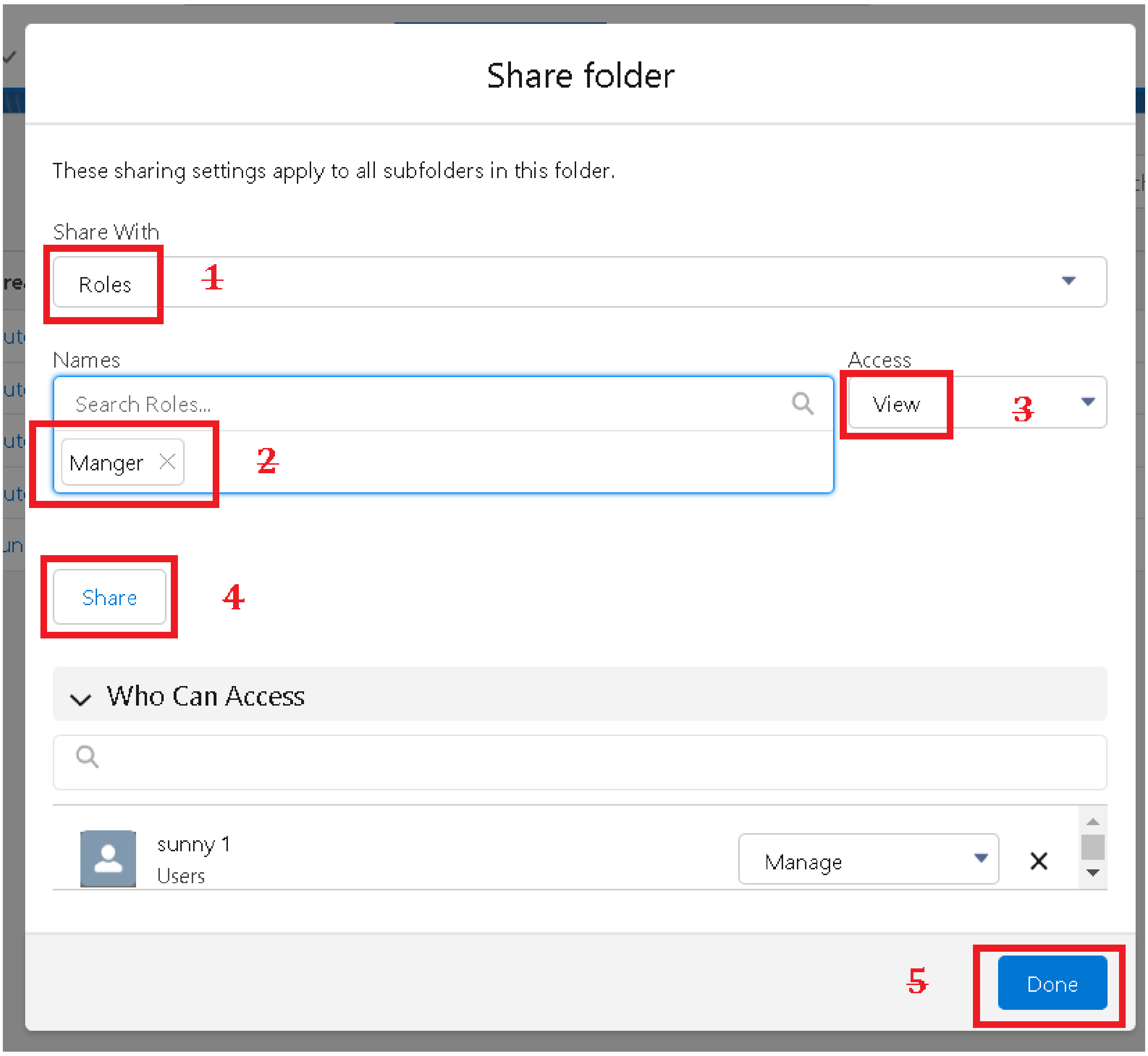
1. Click on the app launcher and search for reports.
2. Click on the report tab, click on new folder.

3. Give the Folder label as “Garage Management Folder”, Folder unique name will be auto populated.
4. Click save.



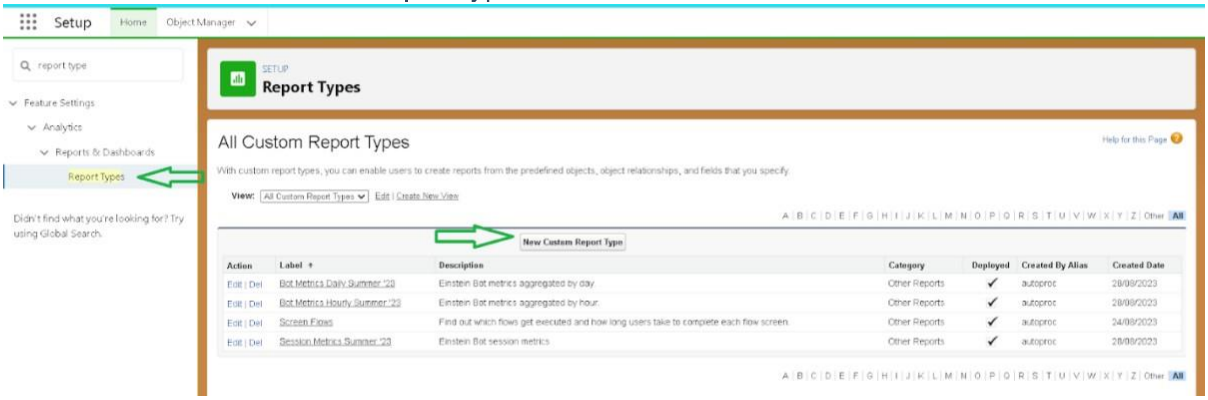
Sharing a report folder

1. Go to the app >> click on the reports tab.
2. Click on the All folder , click on the Drop down arrow for Garage Management folder, and Click on share.
3. Select the share with as “roles”, in name field search for “manager”, give “view” as access for that role.
4. Then click share, and click on Done.

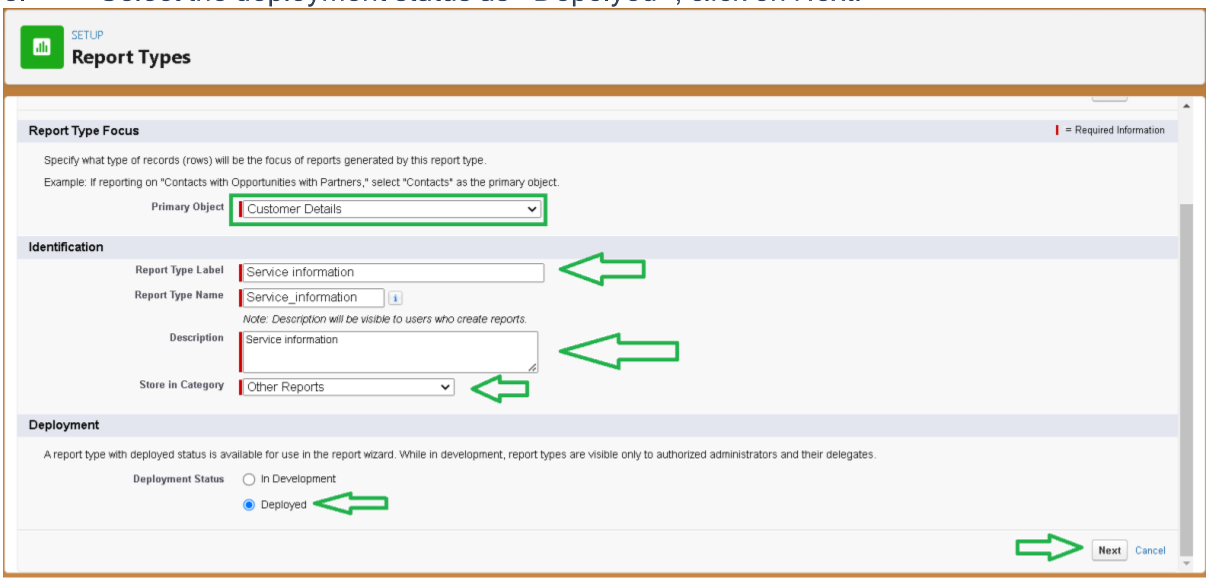


Create a report type

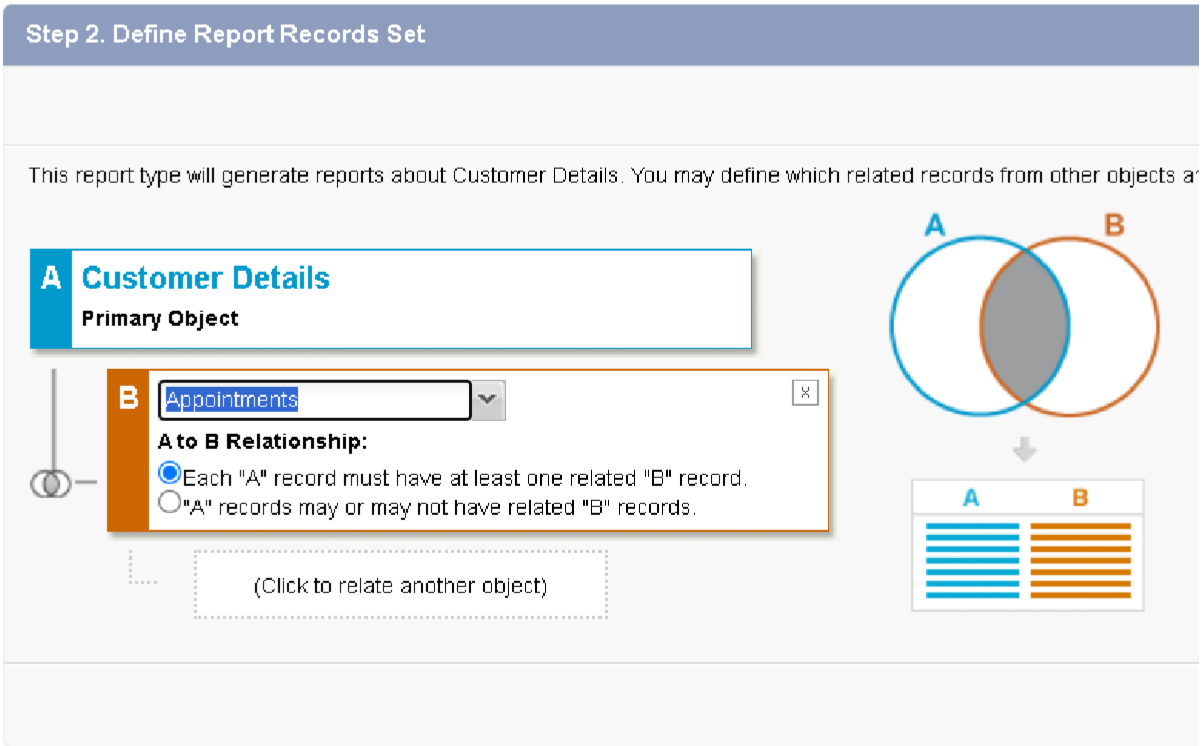
1. Go to setup >> type users in quick find box >> select Report Type >> click on Continue.
2. Click on new custom report type.



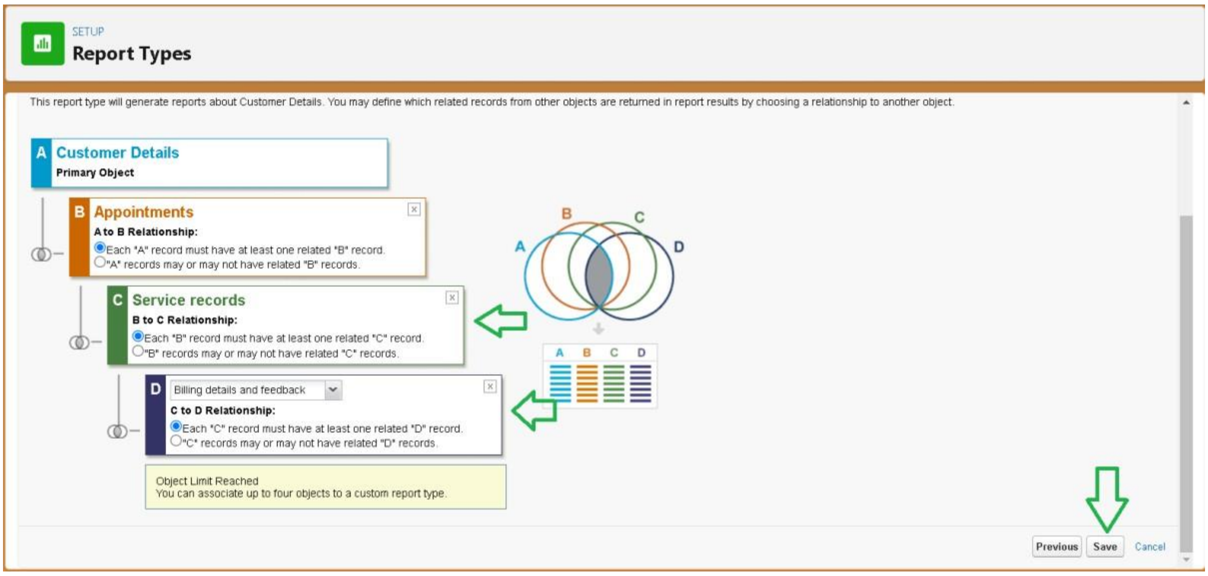
3. Select the Primary object as " Customer details" .
4. Give the Report type Label as " Service information "
5. Report type Name is autopopulated.
6. Keep the Description as same.
7. Select Store in Category as " other Reports "
8. Select the deployment status as " Depolyed ", click on Next.



9. now , Click on Related object box.
10. Click on Select Object, choose Appointment Object as shown in fig.



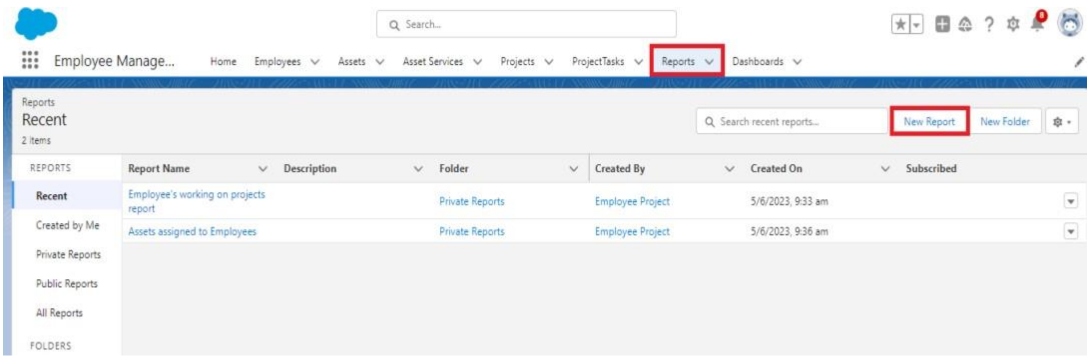
11. Again Click to relate another object.
12. And select the related object as “ service records”.
13. Repeat the process and select the related object as “ Billing details and feedback”.
14. And click on save.



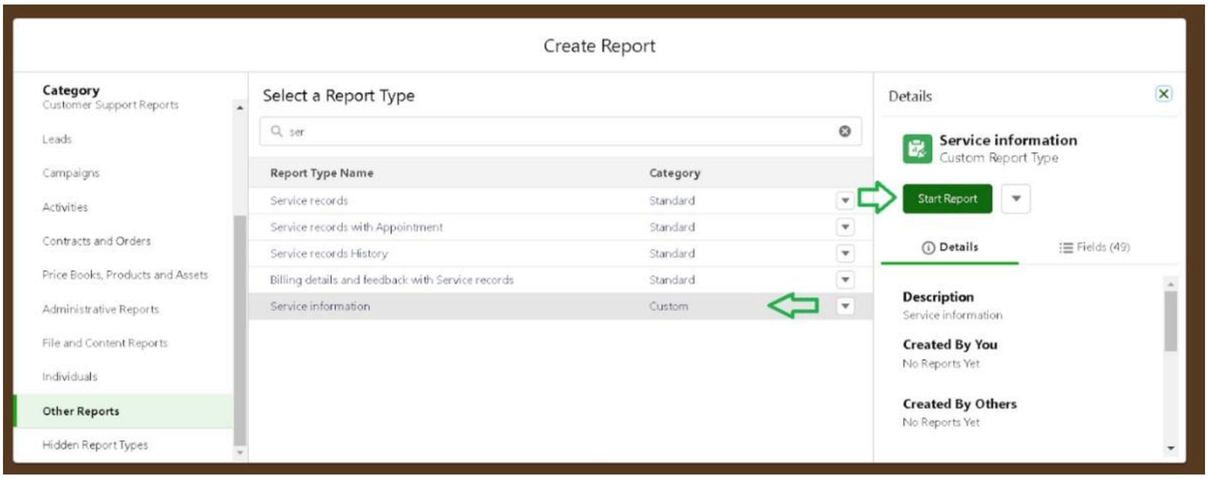
Create report

Note : Before creating report, create latest "10" records in every object.
Try to fill every field in each record for better experience.

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



3. Select the Category as other reports, search for Service Information, select that report, click on it. And click on start report.



4. Their outline pane is opened alredy, select the fields that mentioned below in column section.

a. Customer name
b. Appointment Date
c. Service Status
d. Payment paid

5. Remove the unnecessary fields.
6. Select the fields that mentioned below in GROUP ROWS section.

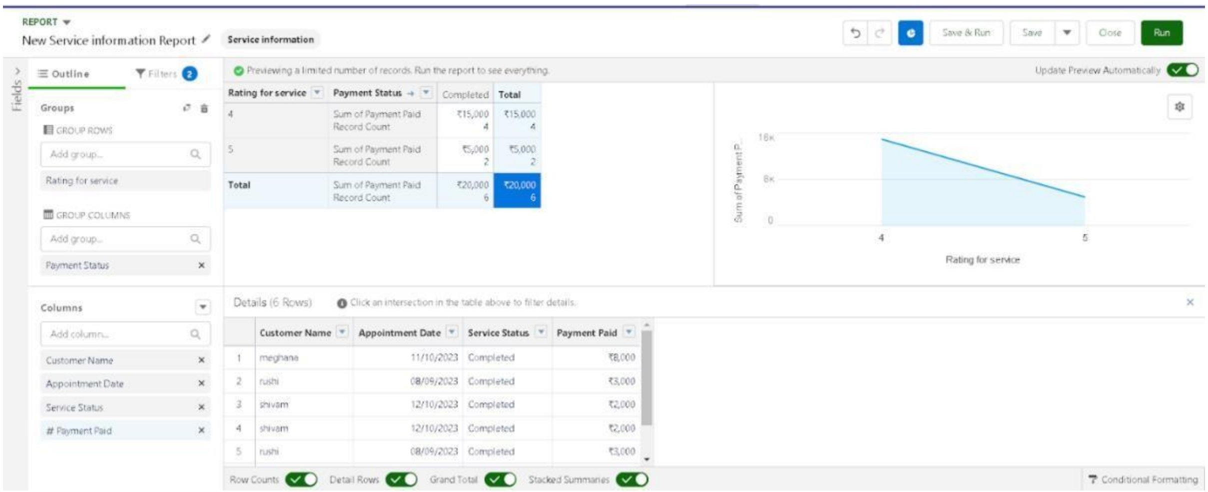
a. Rating for Service

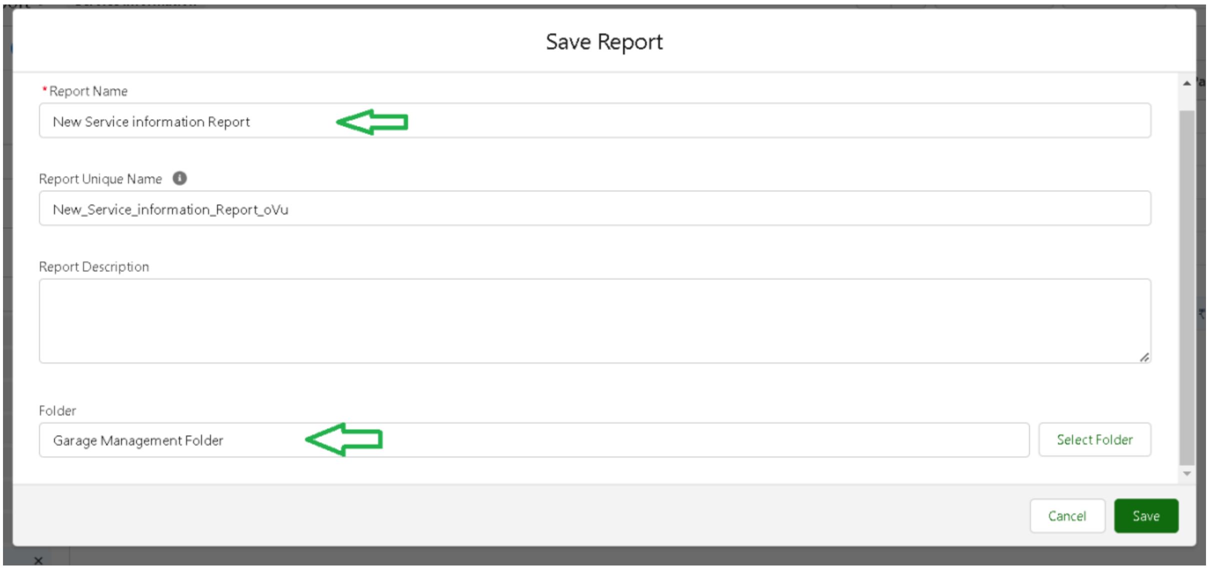
7. Select the fields that mentioned below in GROUP ROWS section.

a. Payment Status

8. Click on Add Chart , Select the Line Chart.

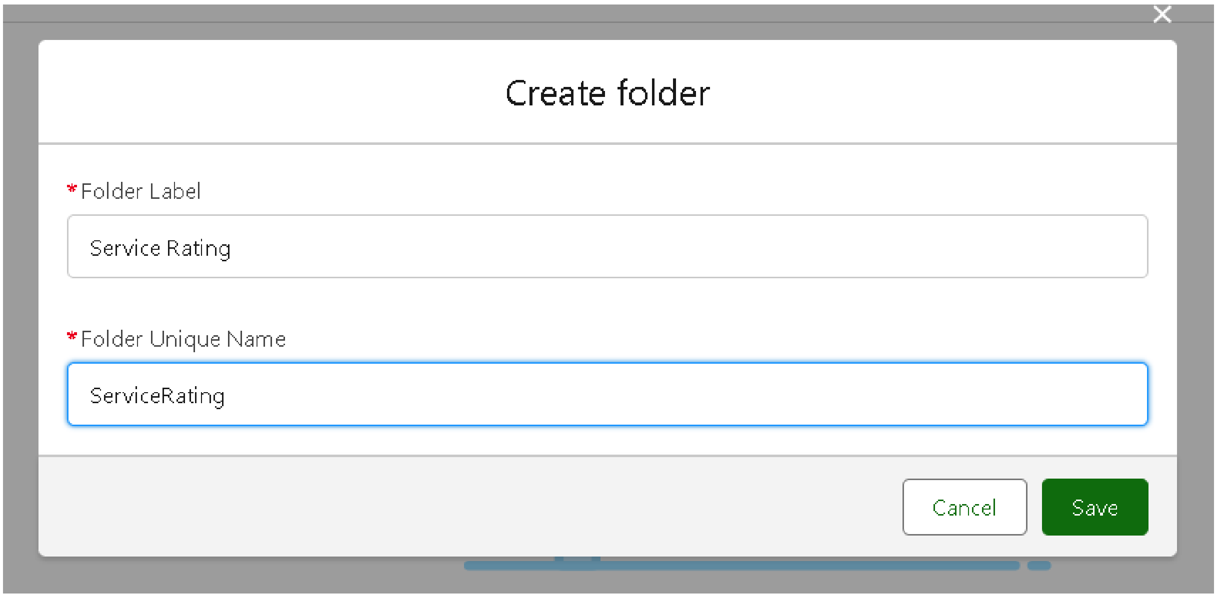
9. Click on save, Give the report Name : New Service information Report
10. Report unique Name is auto populated.
11. Select the folder the created and Click on save.





Create a dashboard folder

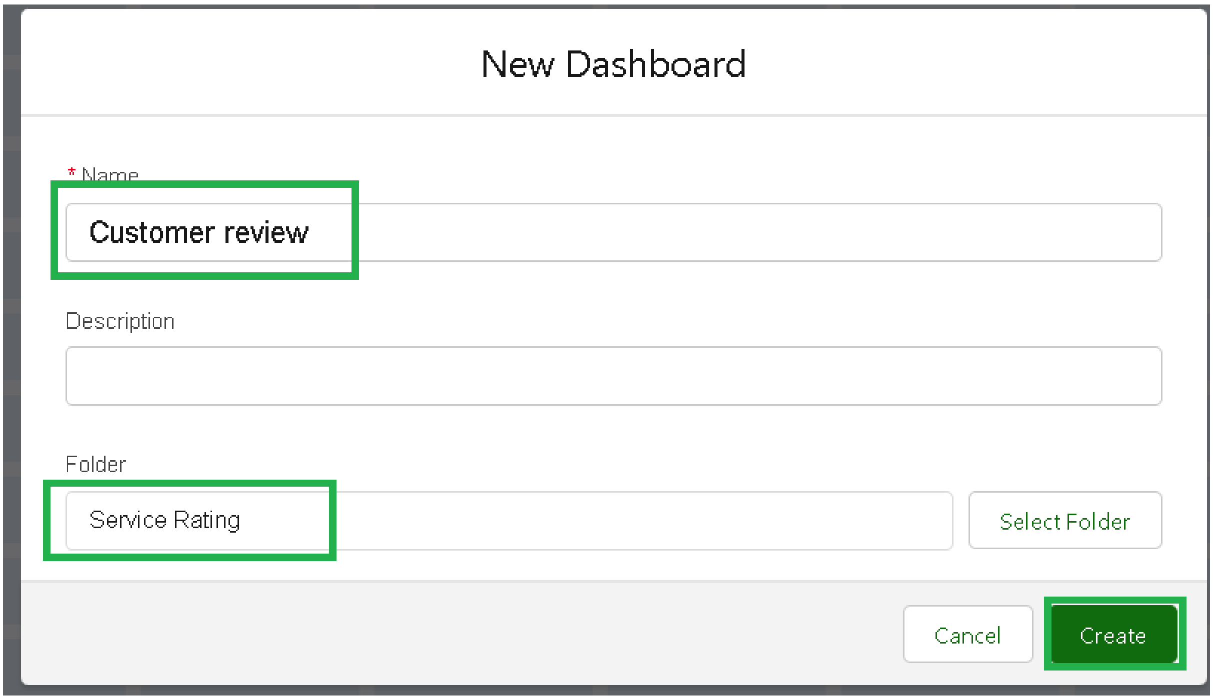
1. Click on the app launcher and search for dashboard.
2. Click on dashboard tab.
3. Click new folder, give the folder label as " Service Rating dashboard".
4. Folder unique name will be auto populated.
5. Click save.



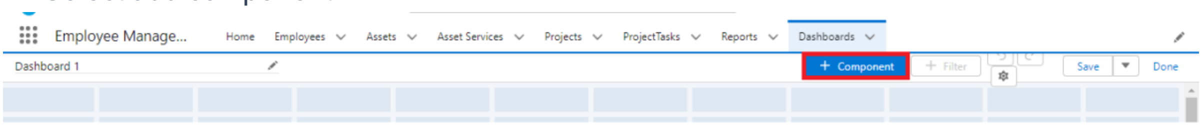
6. Follow the same steps, form milestone 15, and activity 2, and provide the sharing settings for the folder that just created.

Creation Dashboard

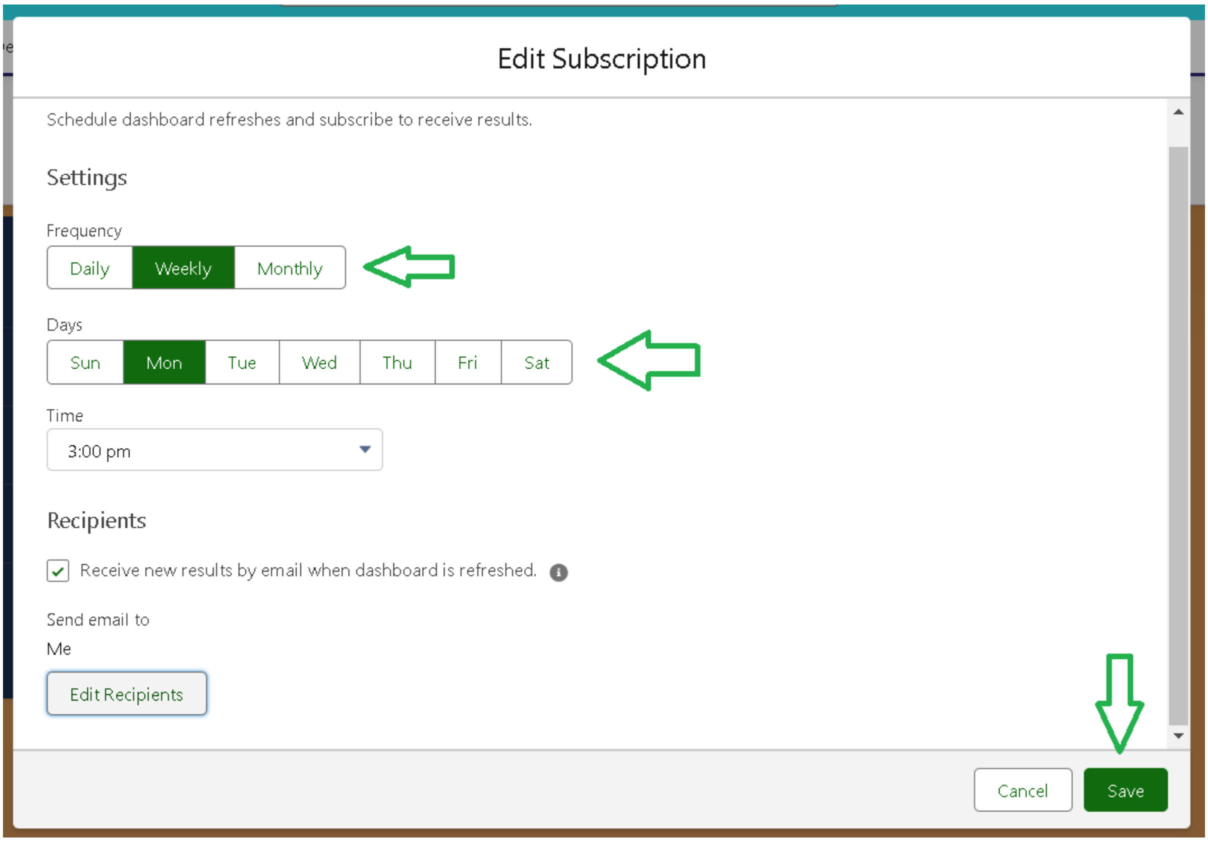
1. Go to the app >> click on the Dashboards tabs.
2. Give a Name and select the folder that created, and click on create.



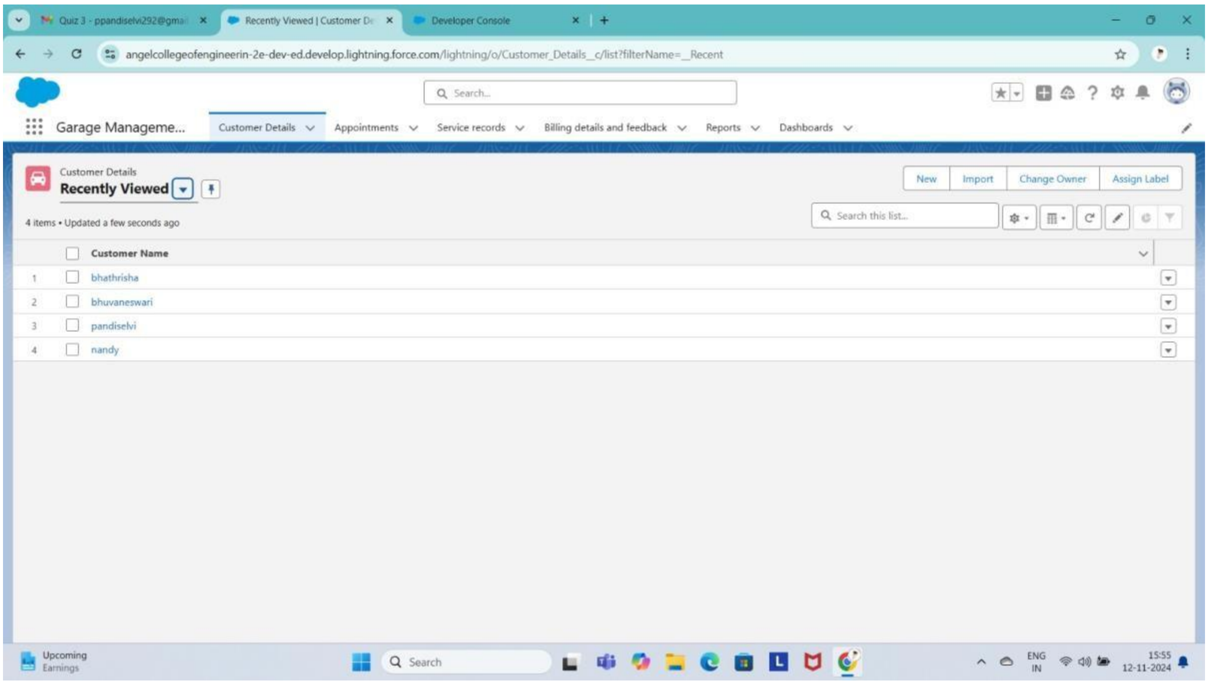
3. Select add component.



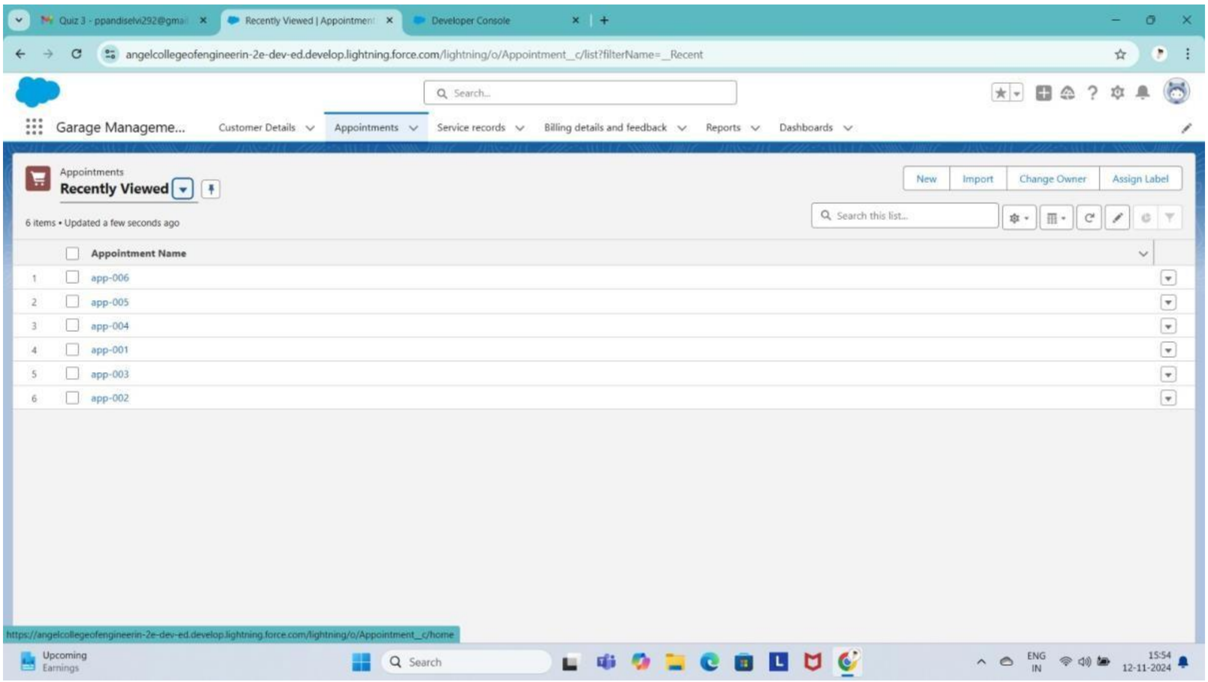
4. Select a Report and click on select.
5. Select the Line Chart. Change the theme.
6. Click Add then click on Save and then click on Done.
7. Preview is shown below.
8. After that Click on Subcribe on top right.
9. Set the Frequency as “ weekly ”.
10. Set a day as monday.
11. And Click on save.



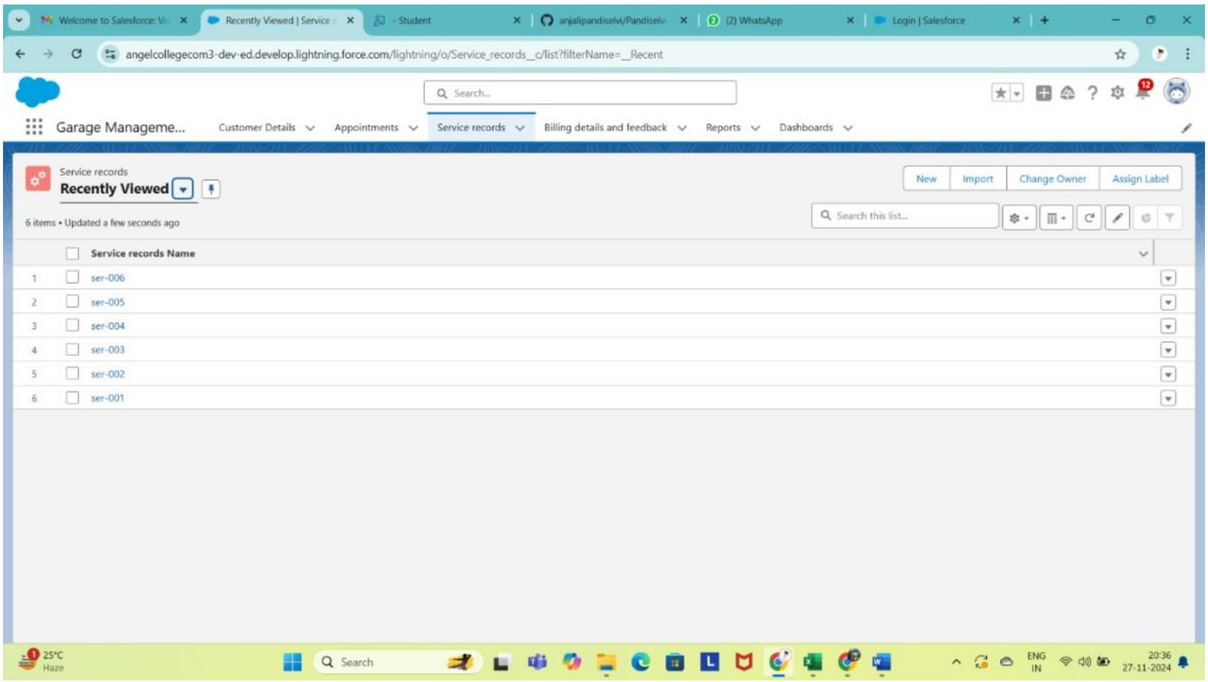
Customer Details view page :



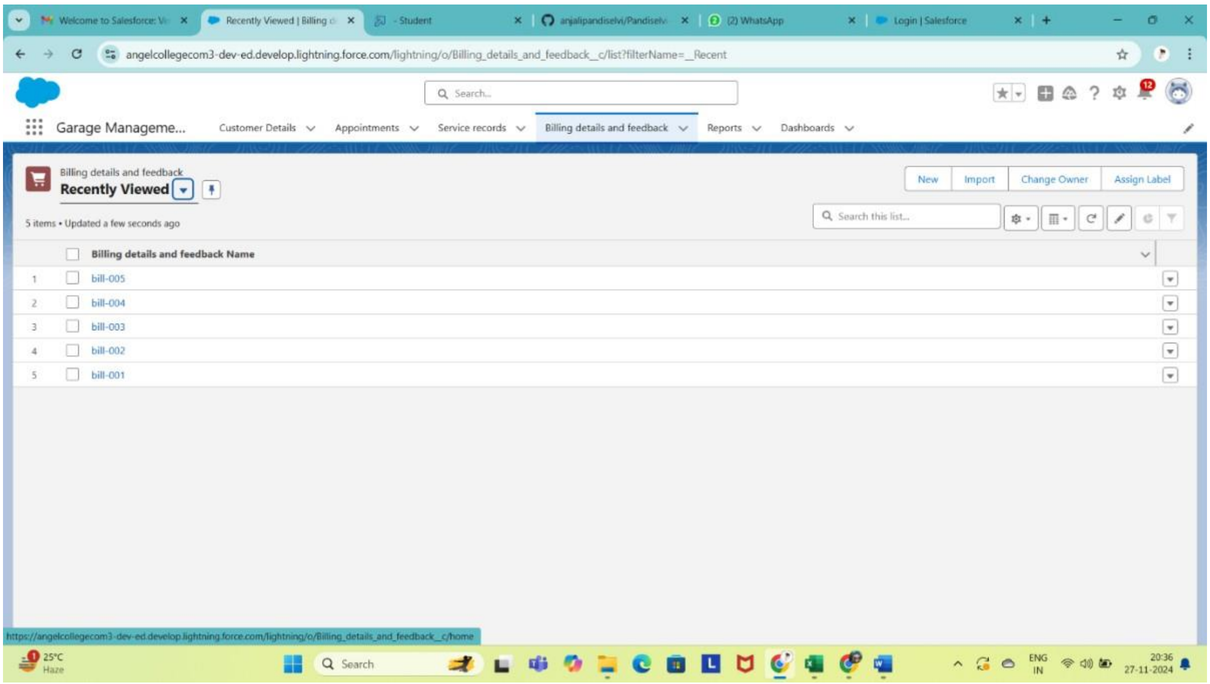
Appointments view page:

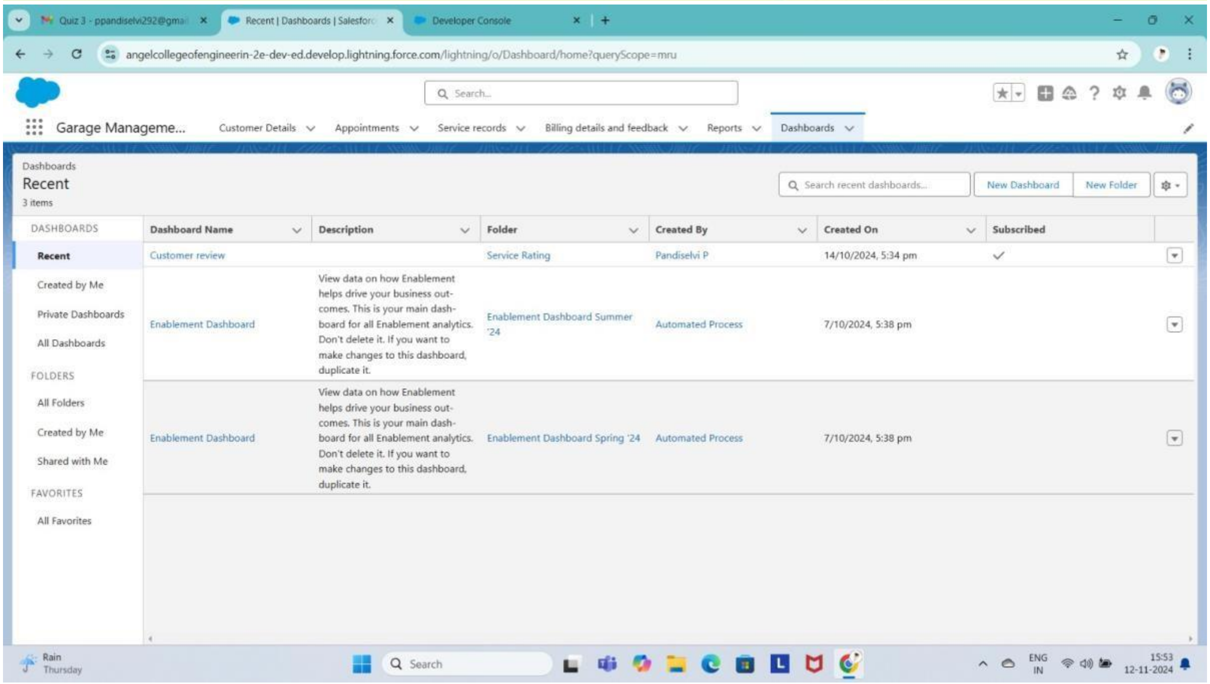


Service records view:

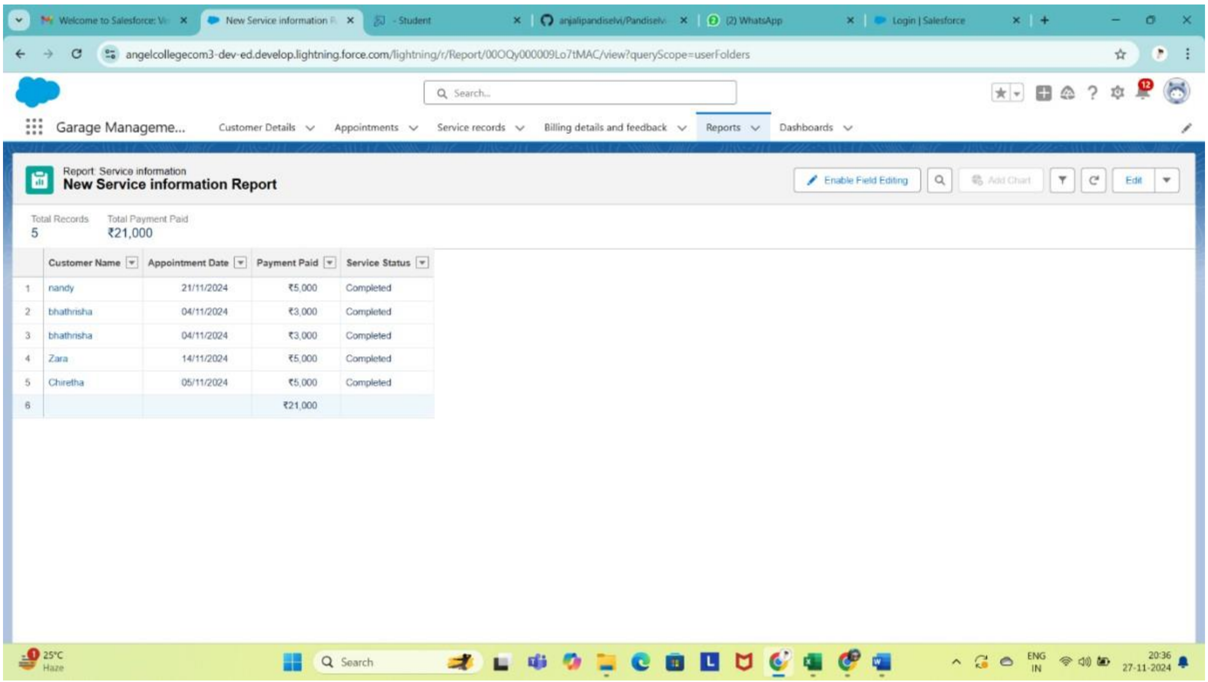


Billing details and feedback :

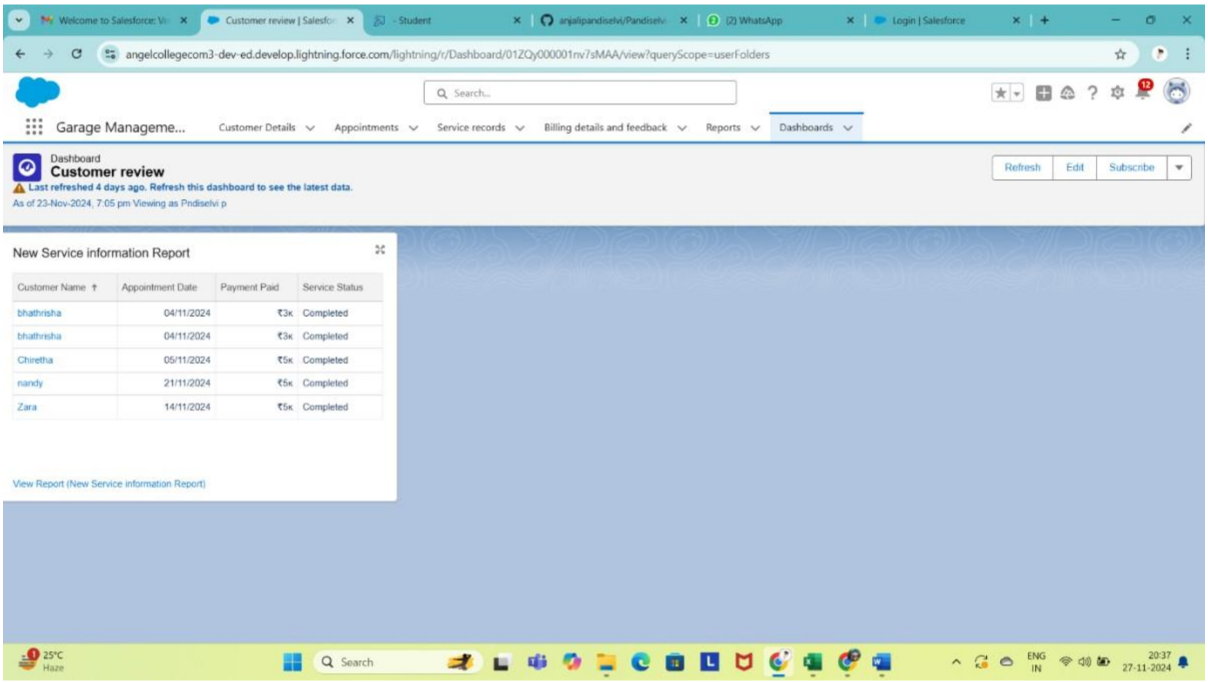




Reports view:



Dashboard view:



Performance	**20**	
Program	**40**	
Result	**20**	
Record	**20**	
Total	**100**	

Result:

A CRM application to engineering works in salesforce can streamline operations for a engineering business by An application efficiently manage client information for engineering projects, encompassing details such as company information, owner details, contact information, worker details, and their respective requirements for materials, including measurements. Salesforce's CRM capabilities,combined with custom development on the salesforceplatform .