Garage Management system

By

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Abstract

The Garage Management System (GMS) is a software tool designed for automotive repair facilities. It aims to enhance the operations of garages by providing features that improve service delivery, increase operational efficiency, and foster strong customer relationships. The system is user-friendly, meaning it's easy to use and navigate, and it comes with powerful features that help garages manage their day-to-day tasks effectively. By using GMS, garages can remain competitive in the market and provide a smooth and satisfying experience for both their customers and staff.

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Task 1: 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.

Create Customer DetailsObject

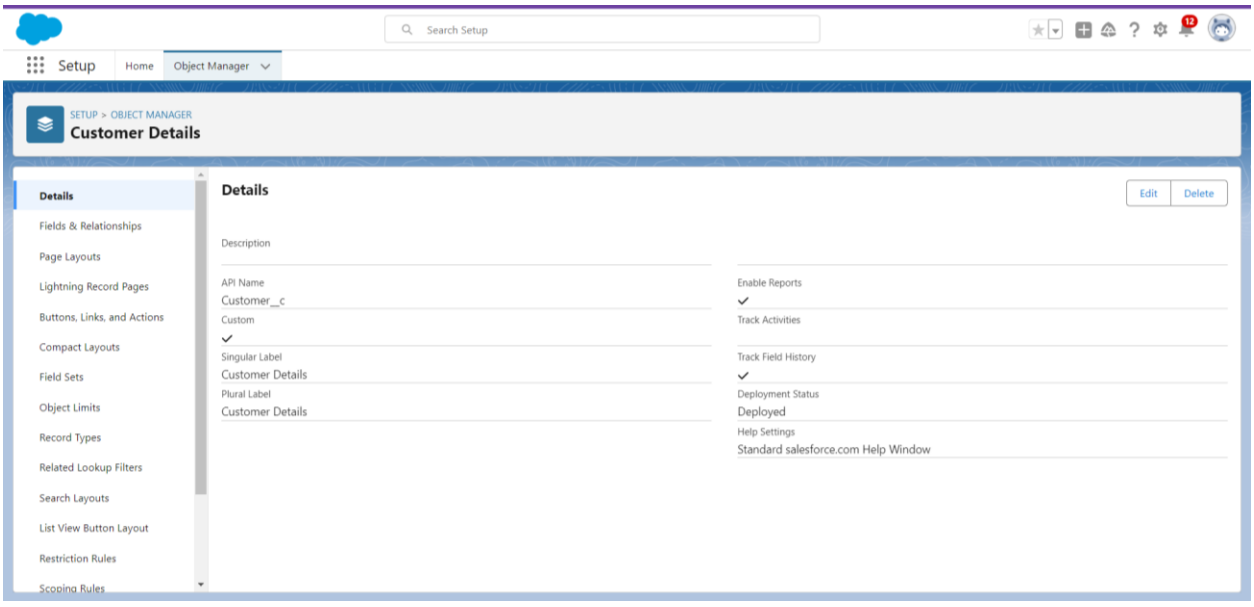
To create an object:

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

    1. Enter the label name >> Customer Details
    2. Plural label name >> Customer Details.
    3. Enter Record Name Label and Format
        - Record Name >> Customer Name
        - Data Type >> Text

2. Click on Allow reports and Track Field History,

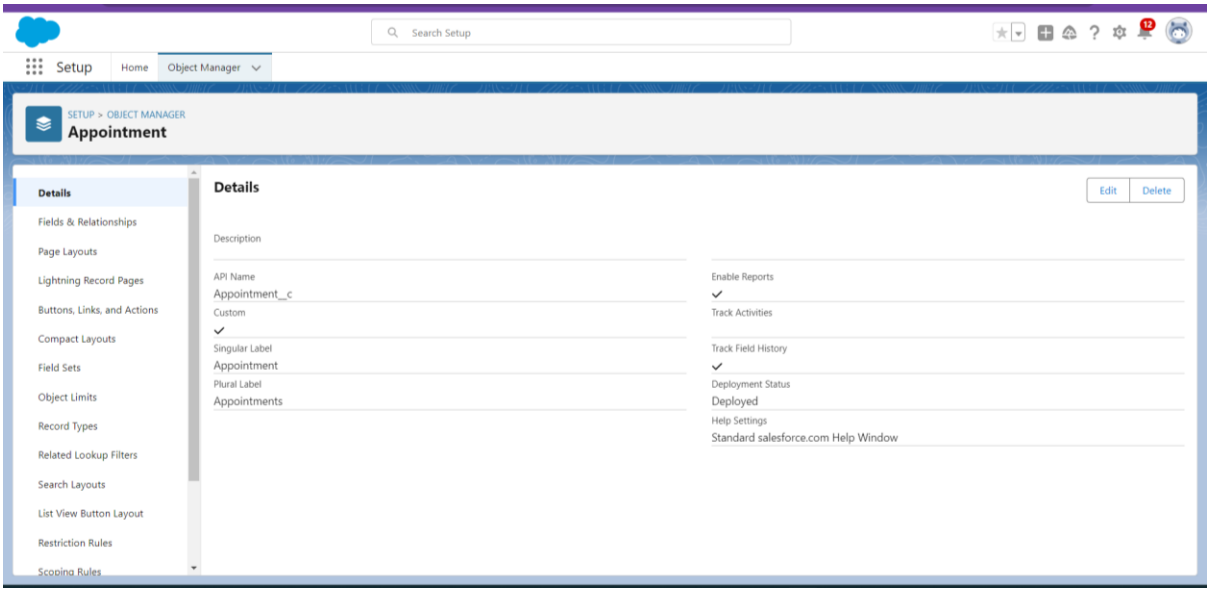
3. Allow search >> Save



Create Appointment Object

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
    1. Enter the label name >> Appointment
    2. Plural label name >> Appointments
    3. Enter Record Name Label and Format
        - Record Name >> Appointment Name
        - Data Type >> Auto Number
        - Display Format >> app-{000}
        - Starting number >> 1

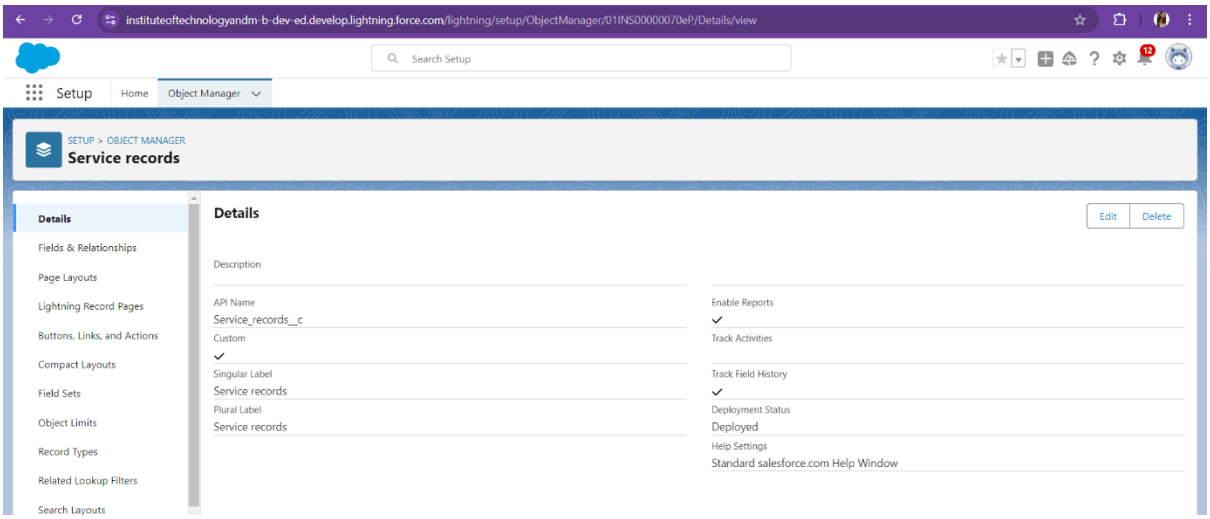
2. Click on Allow reports and Track Field History,
3. Allow search >> Save.



Create Service records Object

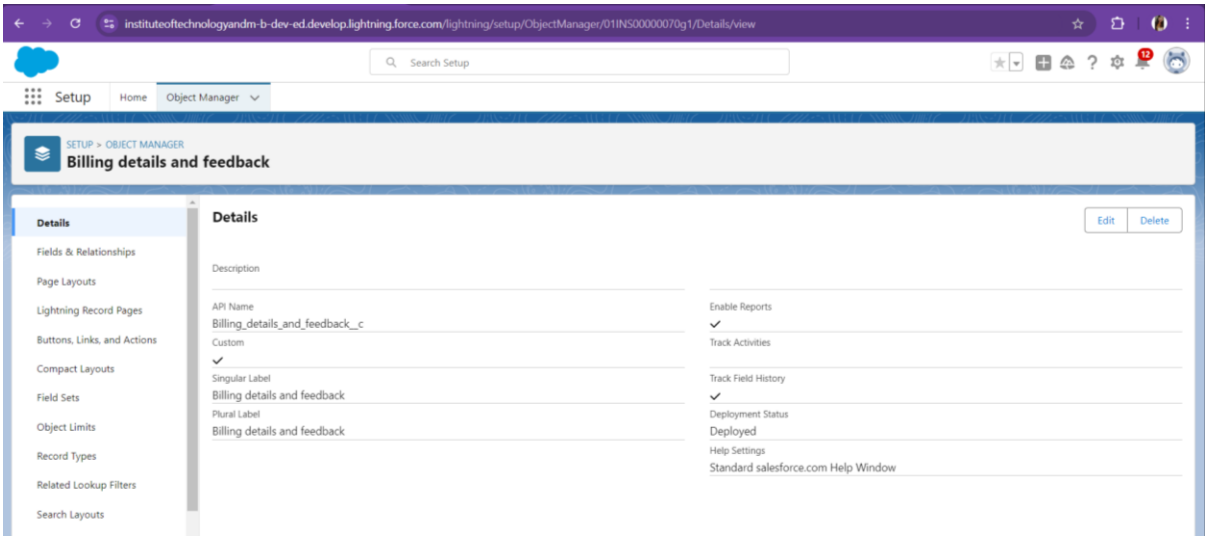
1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
    1. Enter the label name >> Service records
    2. Plural label name >> Service records
    3. Enter Record Name Label and Format
        - Record Name >>Service records Name
        - Data Type >> Auto Number
        - Display Format >> ser-{000}
        - Starting number >> 1

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



Create Billing details and feedback Object

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
    1. Enter the label name >> Billing details and feedback
    2. Plural label name >> Billing details and feedback
    3. Enter Record Name Label and Format
        - Record Name >> Billing details and feedback Name
        - Data Type >> Auto Number
        - Display Format >> bill-{000}
        - Starting number >> 1
2. Click on Allow reports and Track Field History,
3. Allow search >> Save

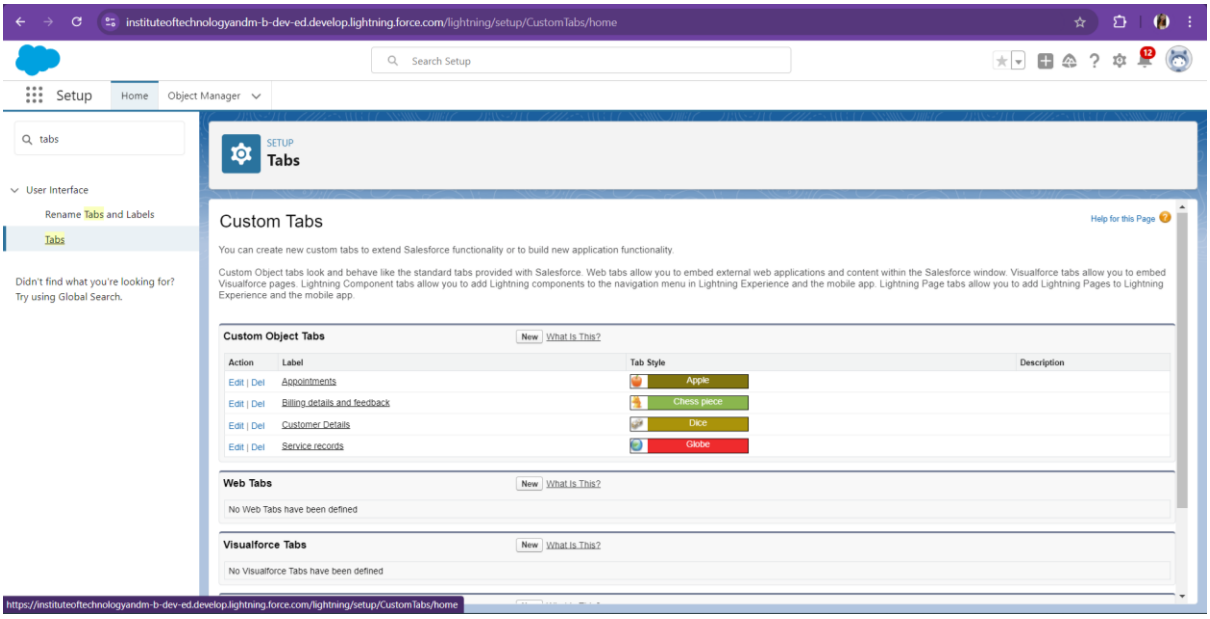


Task 2: TABS

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

Creating a Custom Tabs

1. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)
2. Select Object(Customer Details) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
3. Make sure that the Append tab to users' existing personal customizations is checked.
4. Click save.
5. Repeat the step from 1 to 4 to make other tabs also.

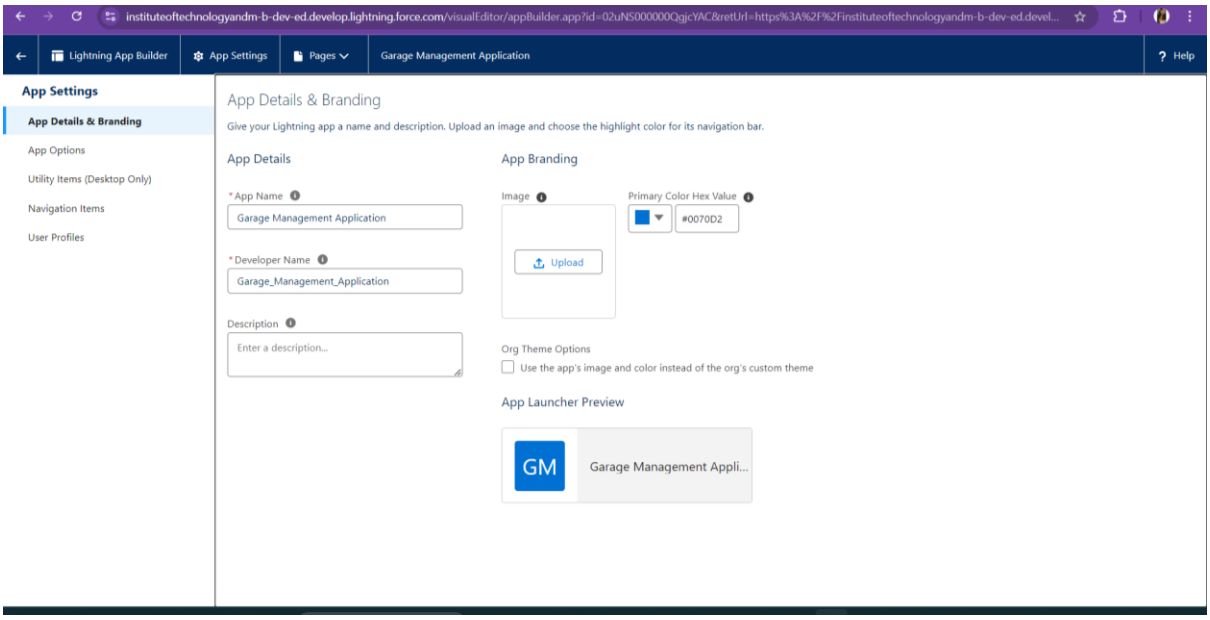


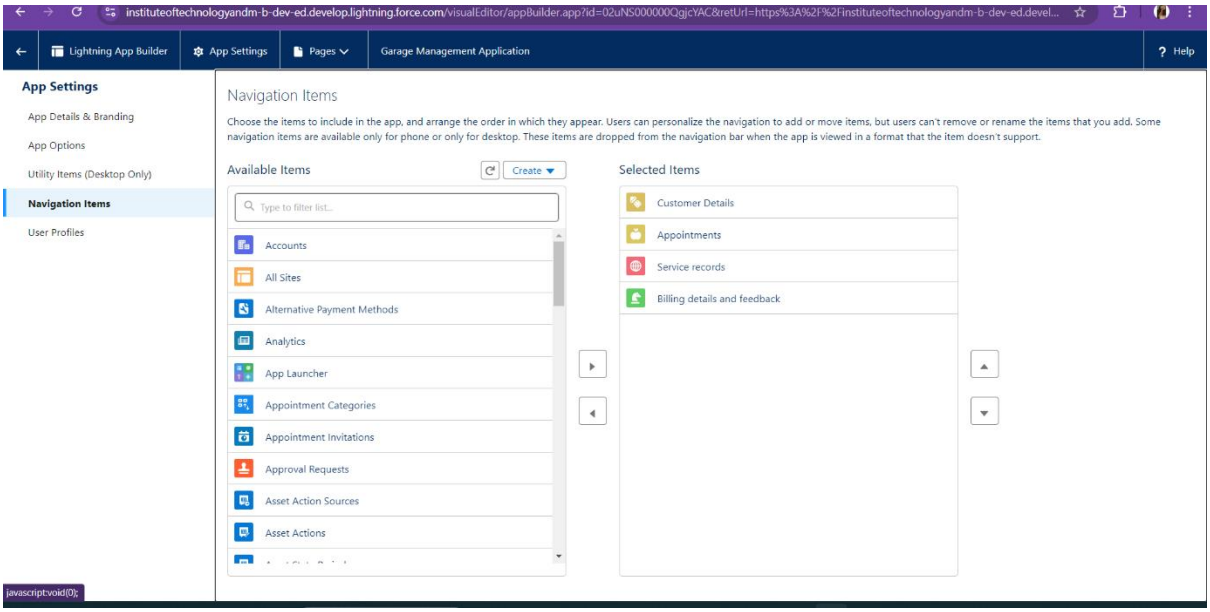
Task 3: The Lightning App

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

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 as Garage Management Application >> Next >> (App option page) keep it as default >> Next >> (Utility Items) keep it as default >> Next.
3. To Add Navigation Items:
4. Select the items (Customer Details,Appointments, Service records, Billing details and feedback, Reports and Dashboards) from the search bar and move it using the arrow button >> Next.
5. To Add User Profiles:
Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.

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Lightning App Builder
App Settings
Pages
Garage Management Application
Help
App Settings
App Details & Branding
App Options
Utility Items (Desktop Only)
Navigation Items
User Profiles
Navigation Items
Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.
Available Items
Create
Type to filter list...
Accounts
All Sites
Alternative Payment Methods
Analytics
App Launcher
Appointment Categories
Appointment Invitations
Approval Requests
Asset Action Sources
Asset Actions
Selected Items
Customer Details
Appointments
Service records
Billing details and feedback
javascript:void(0);

Task 4: FIELDS

When we talk about Salesforce, Fields represent the data stored in the columns of a relational database. It can also 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.

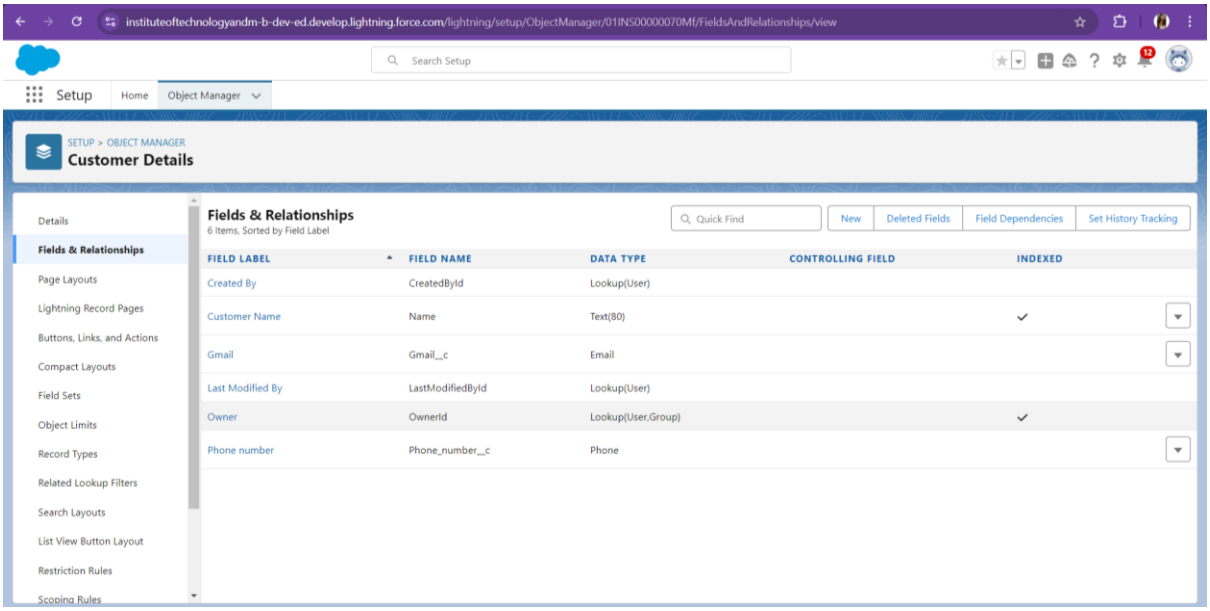
Types of Fields

Standard Fields

Custom Fields

Creation of fields for the Customer Details object

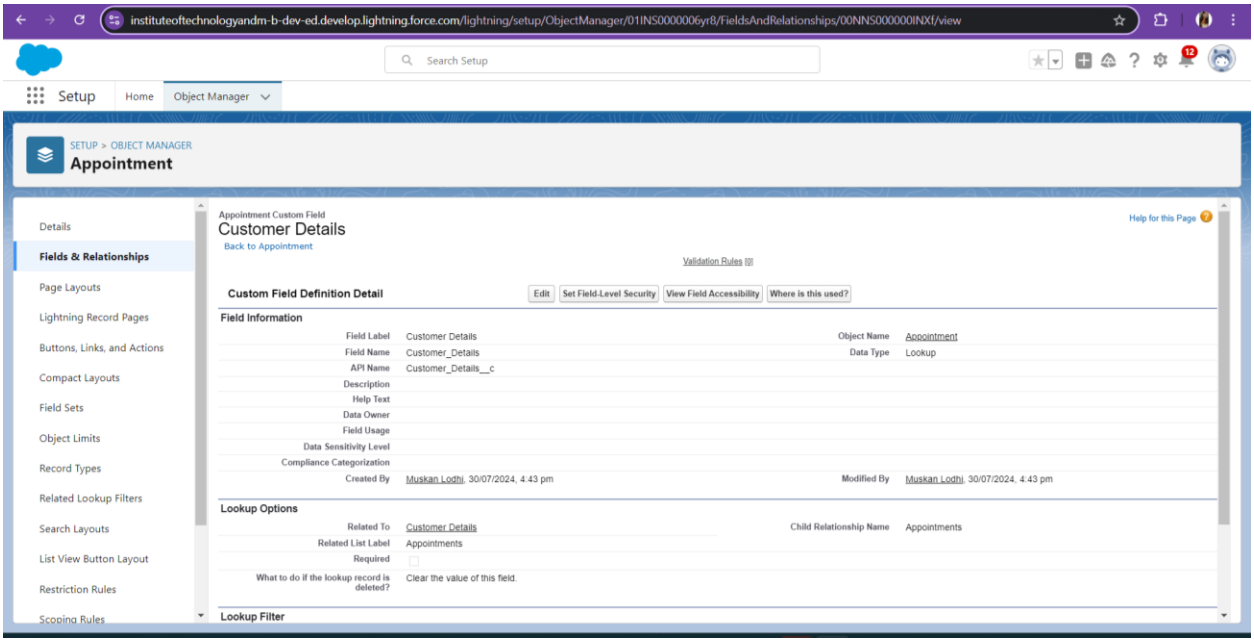
1. Go to setup >> click on Object Manager >> type object name(Customer Details) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Email” and Click on Next
4. Fill the Above as following:
    - Field Label : Gmail
    - Field Name : gets auto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

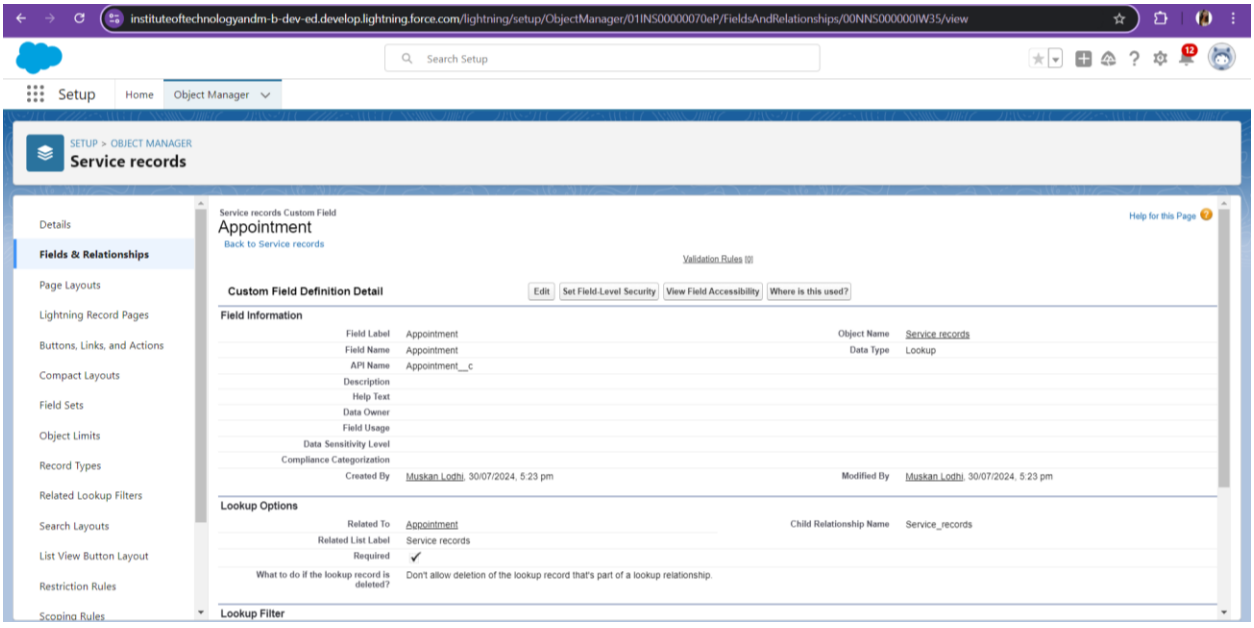


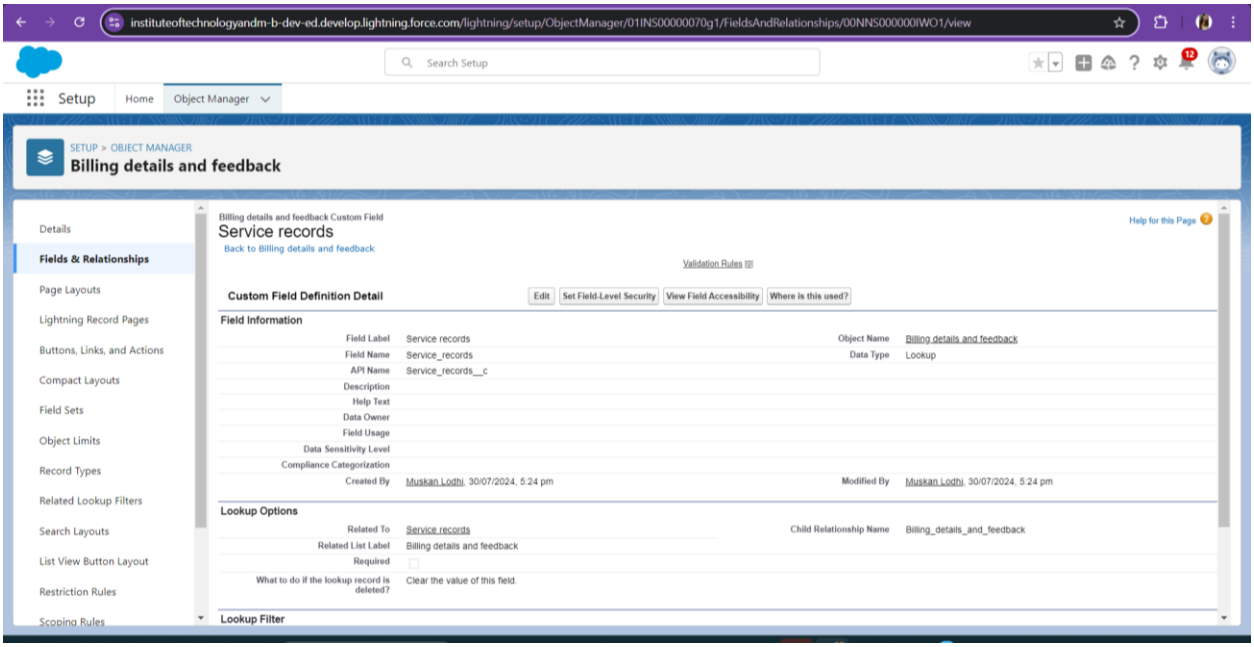
Creation of Lookup Fields

1. Go to setup >> click on Object Manager >> type object name(Billing details and feedback) in search bar >> click on the object.

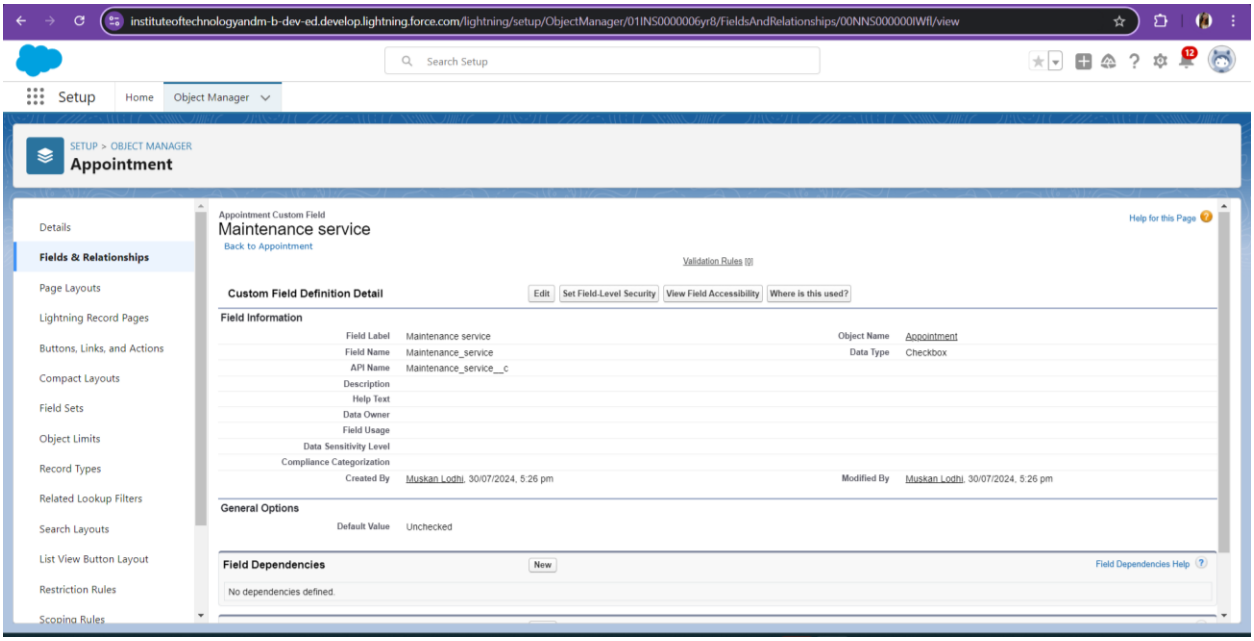
2. Now click on “Fields & Relationships” >> New.
3. Select “Look-up relationship” as data type and click Next.
4. Select the related object “ Service records” and click next.
5. Next >> Next >> Save & new.

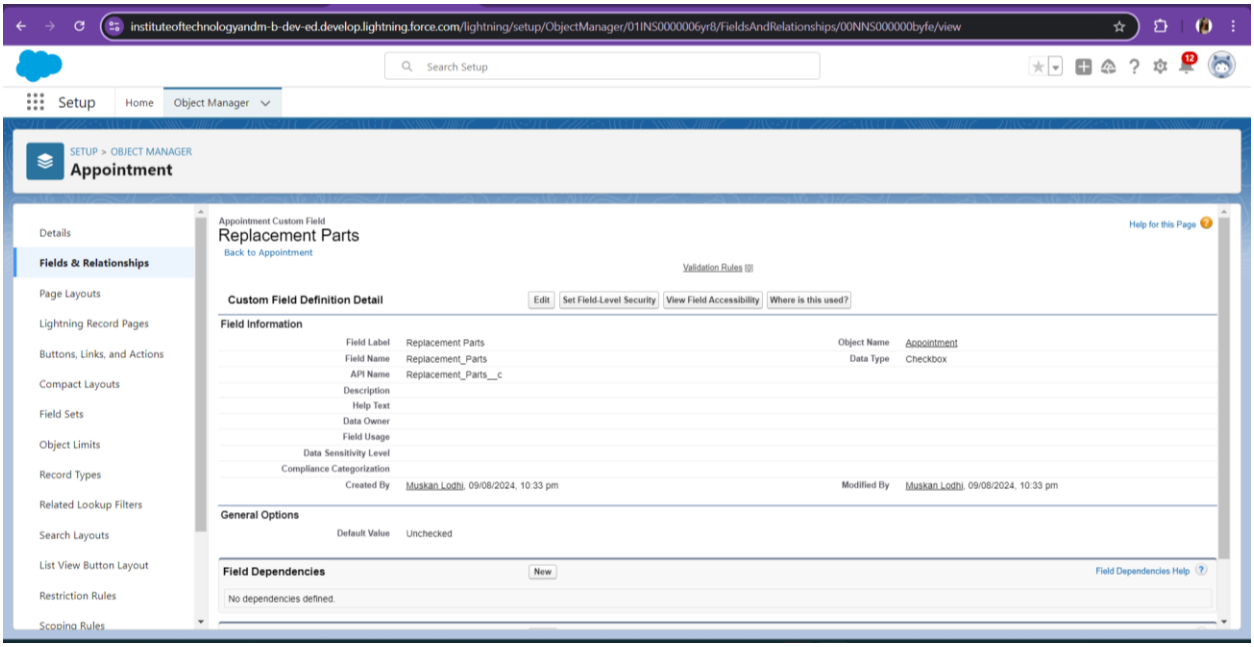


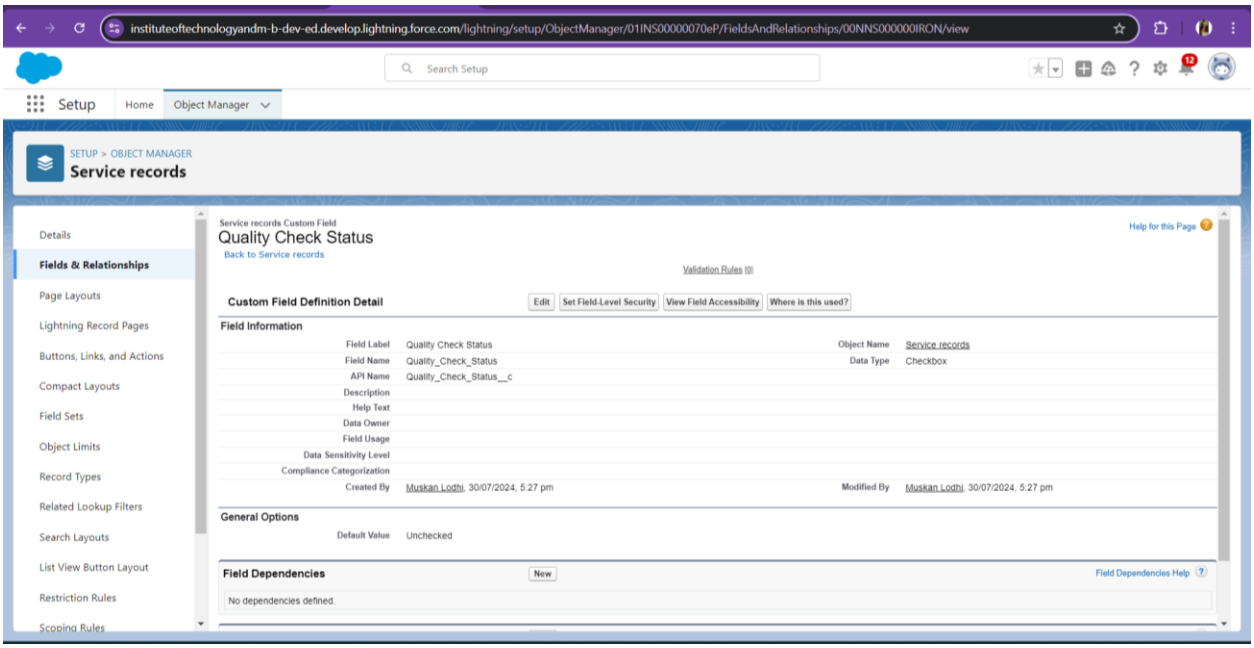




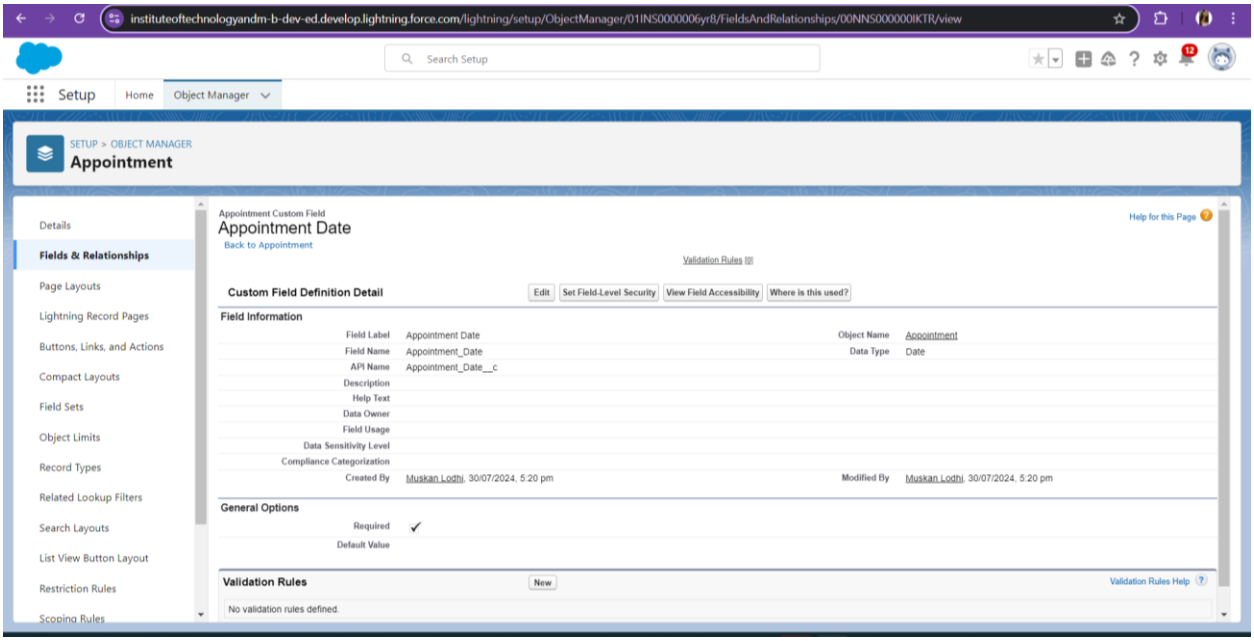
Creation of Checkbox Fields



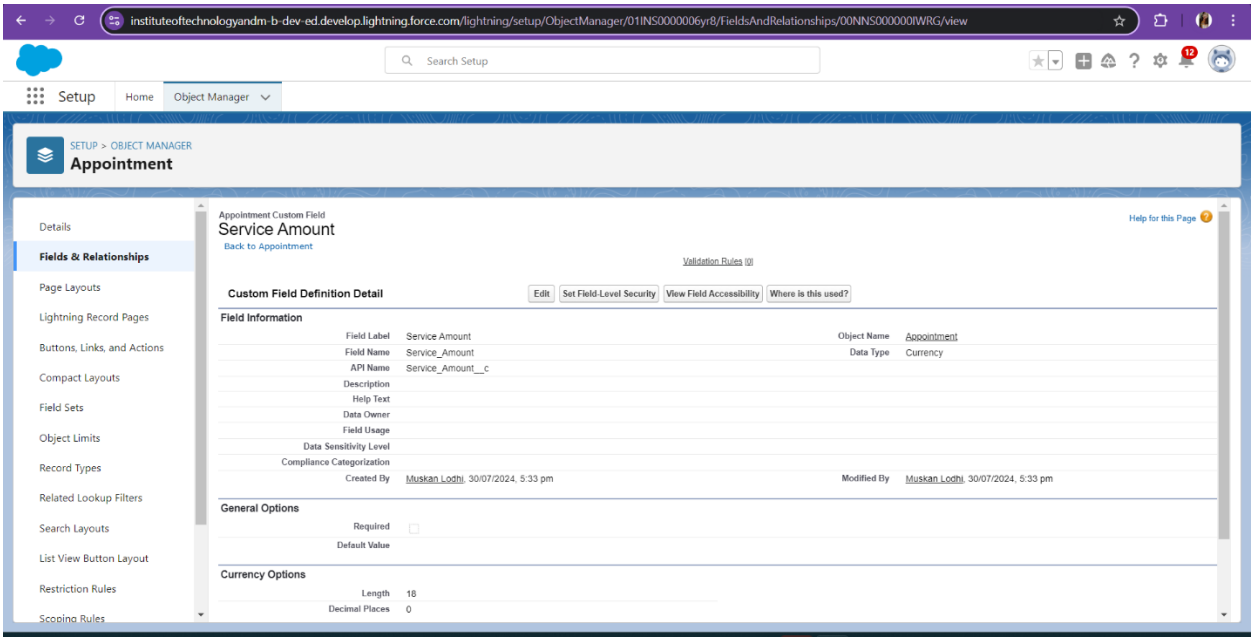




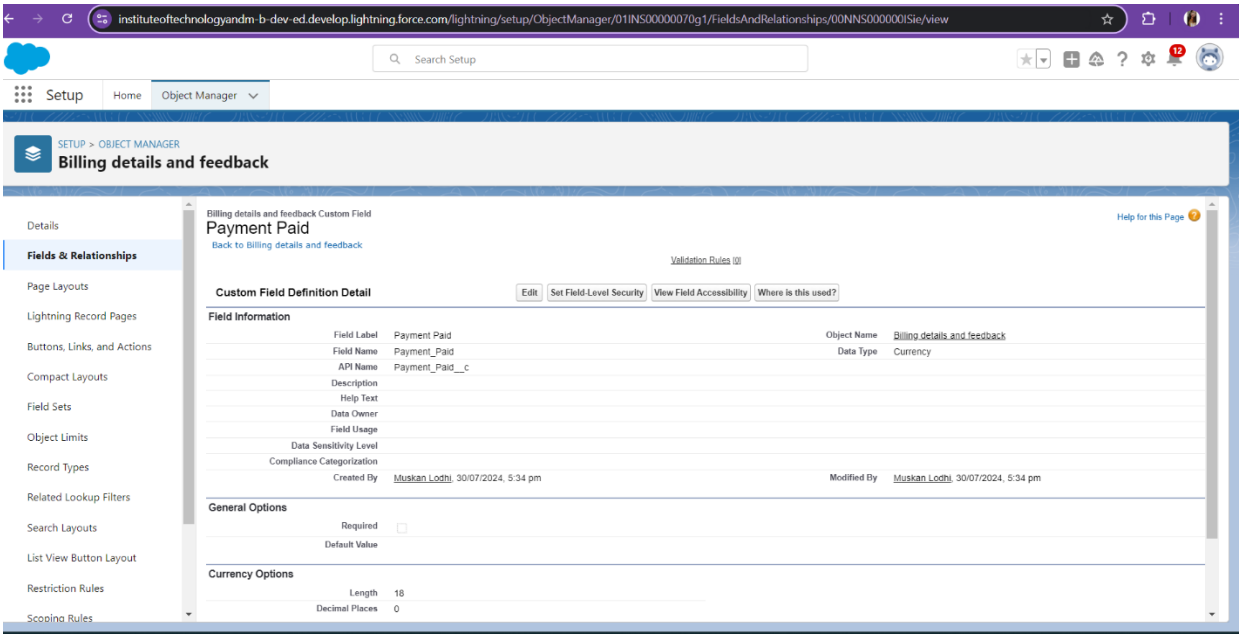
Creation of date Fields

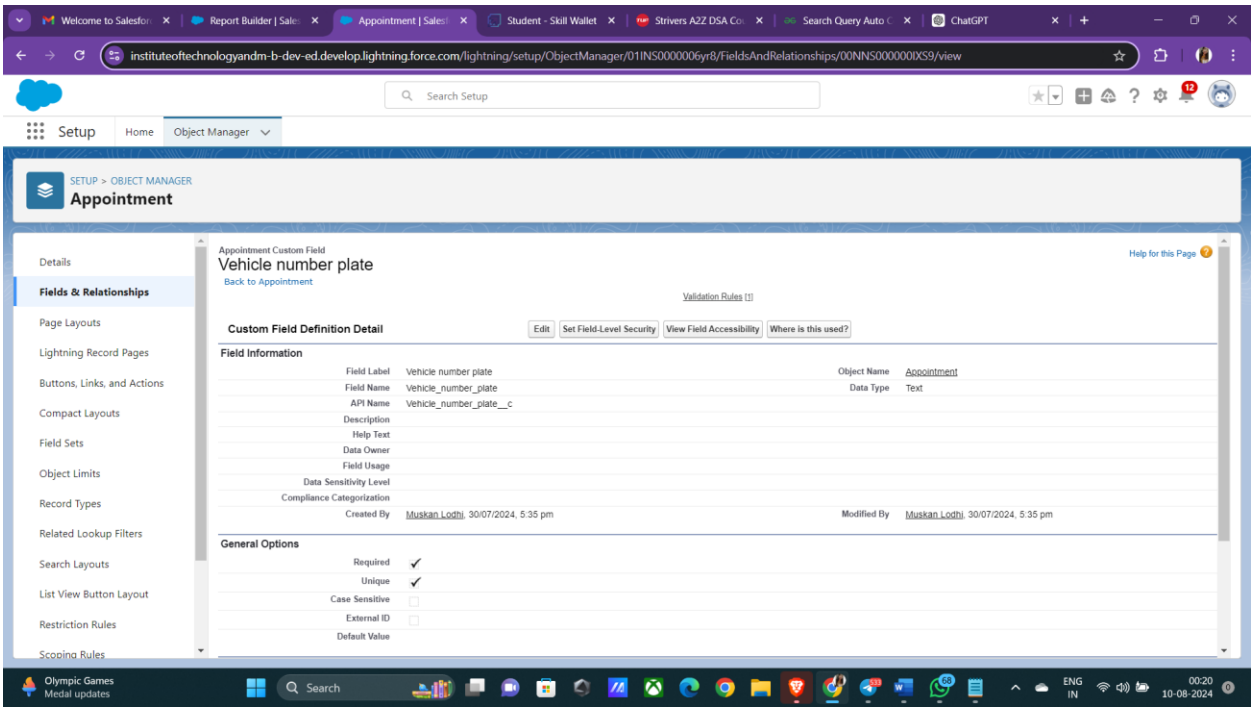


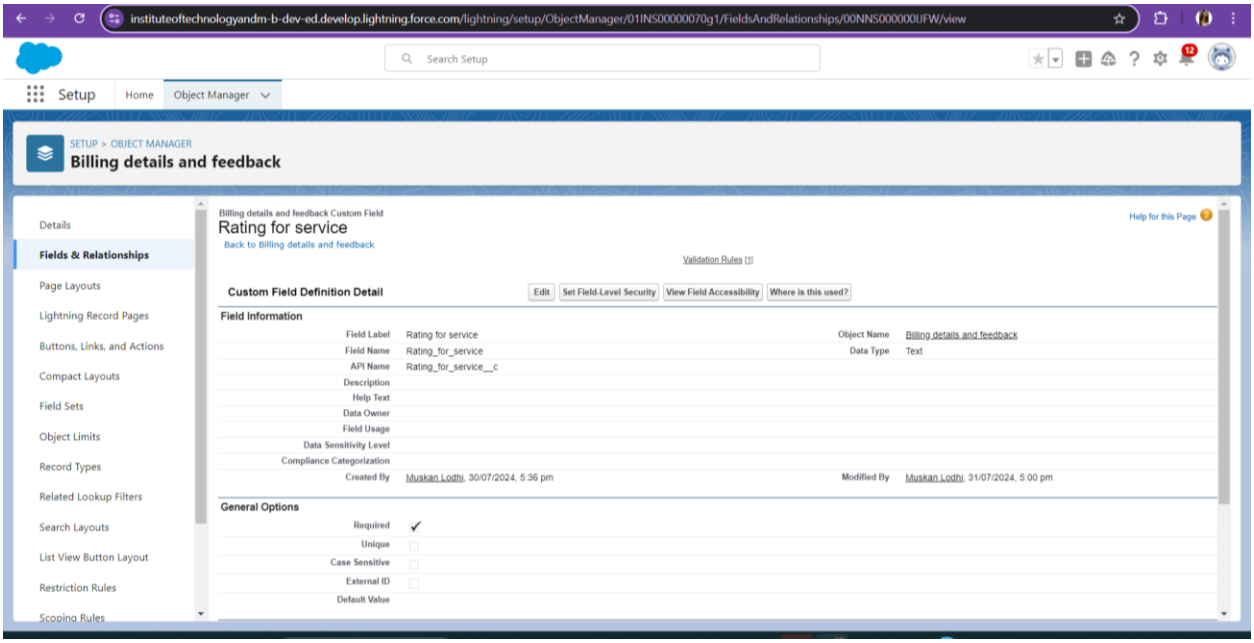
Creation of Currency Fields



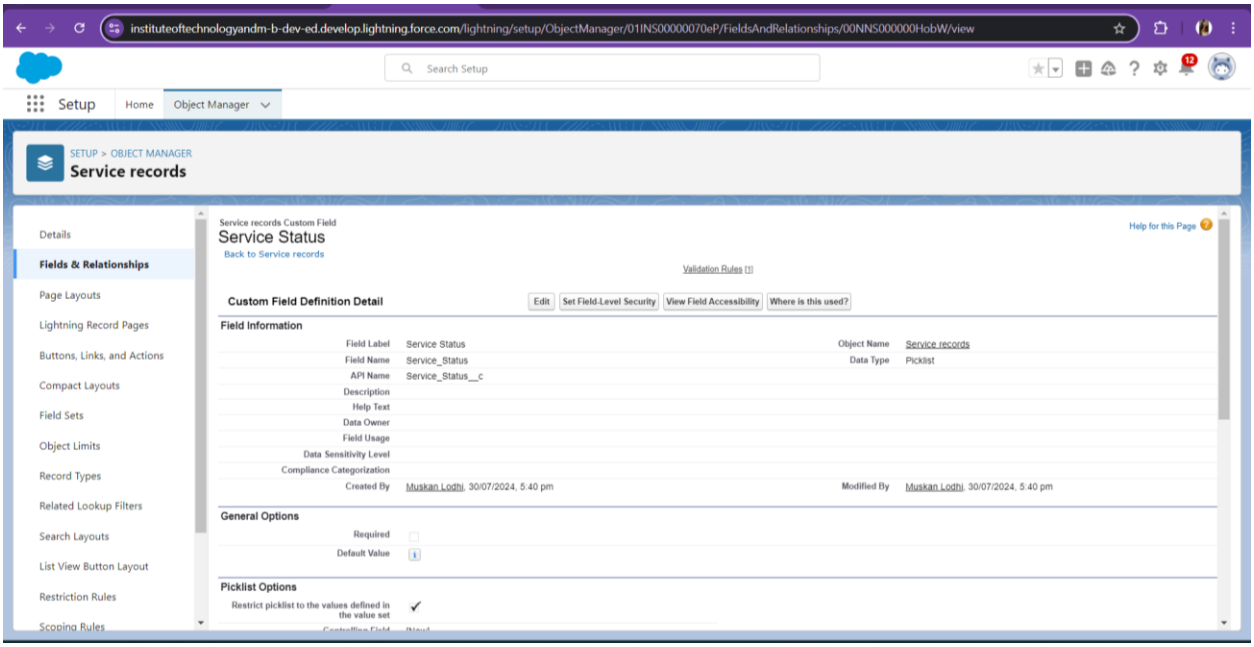
Creation of Text Fields

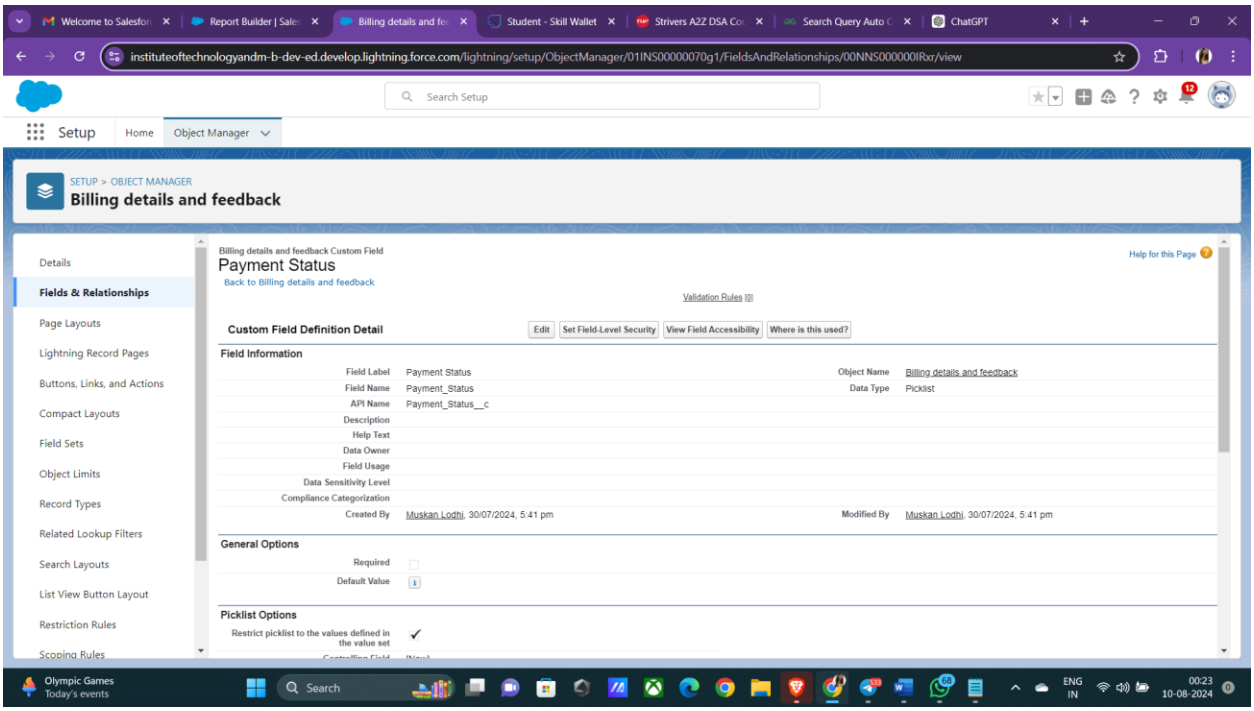




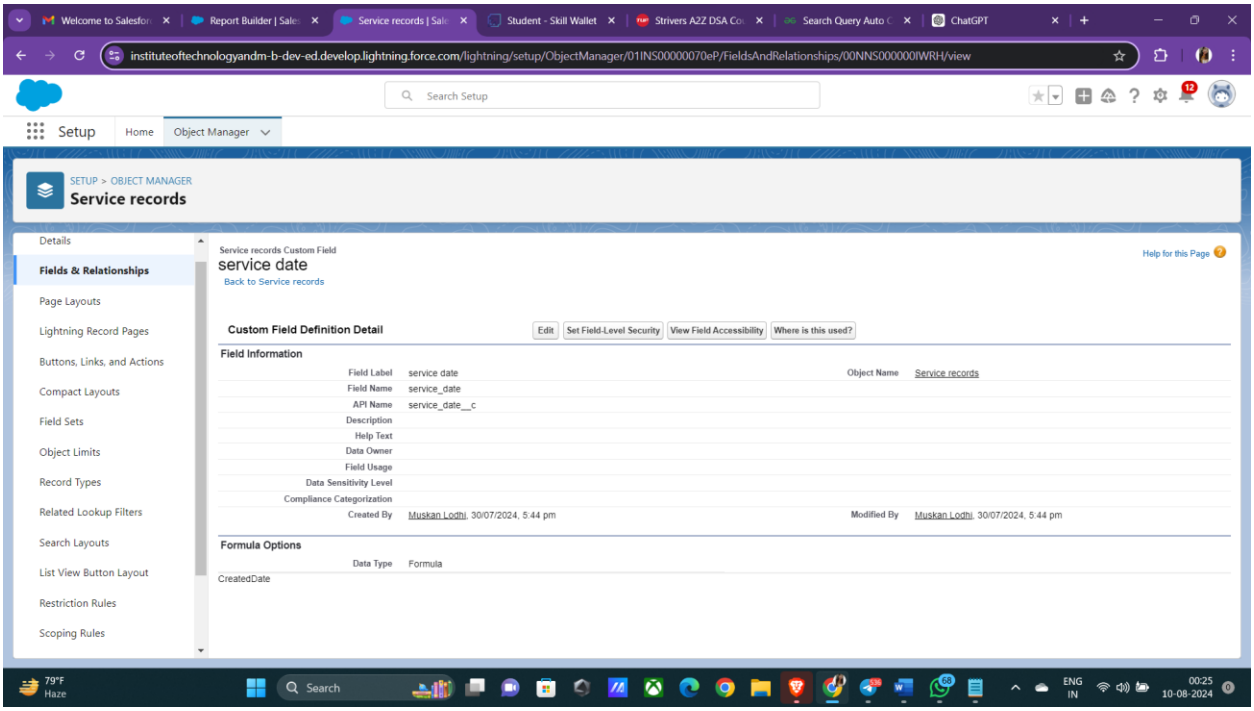


Creation of Picklist Fields





Creating Formula Field in Service records Object

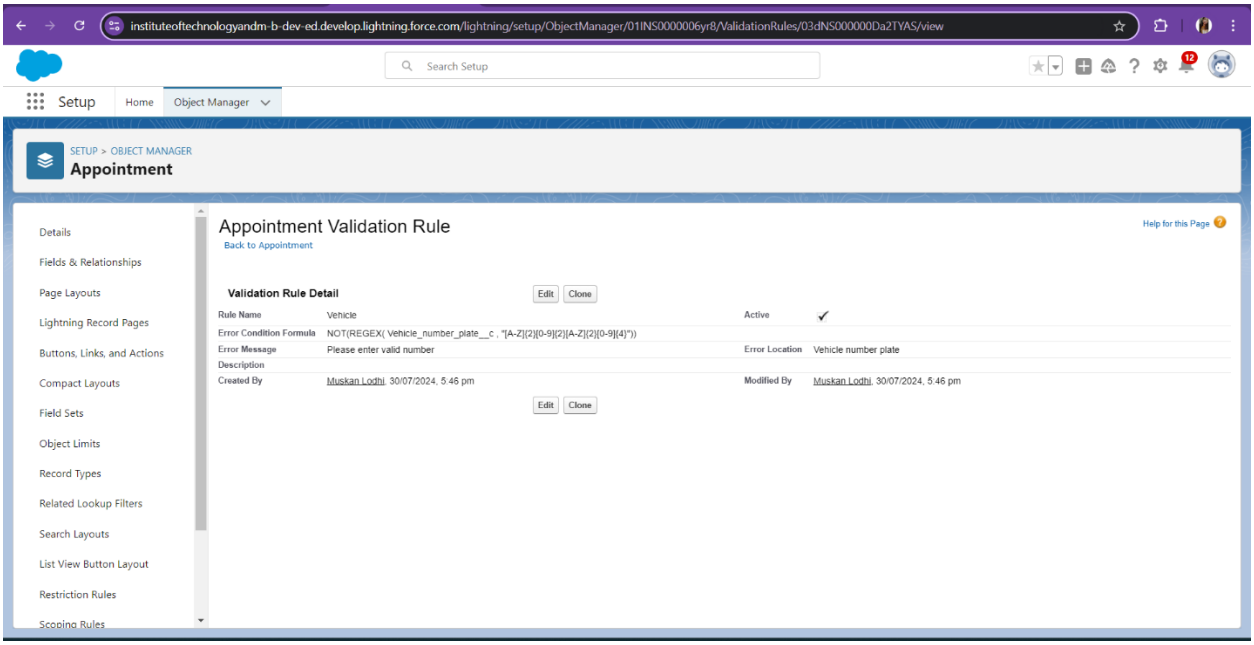


Task 5: Validation rule

Validation rules are applied when a user tries to save a record and are used to check if the data meets specified criteria. If the criteria are not met, the validation rule triggers an error message and prevents the user from saving the record until the issues are resolved.

To create a validation rule to an Appointment Object

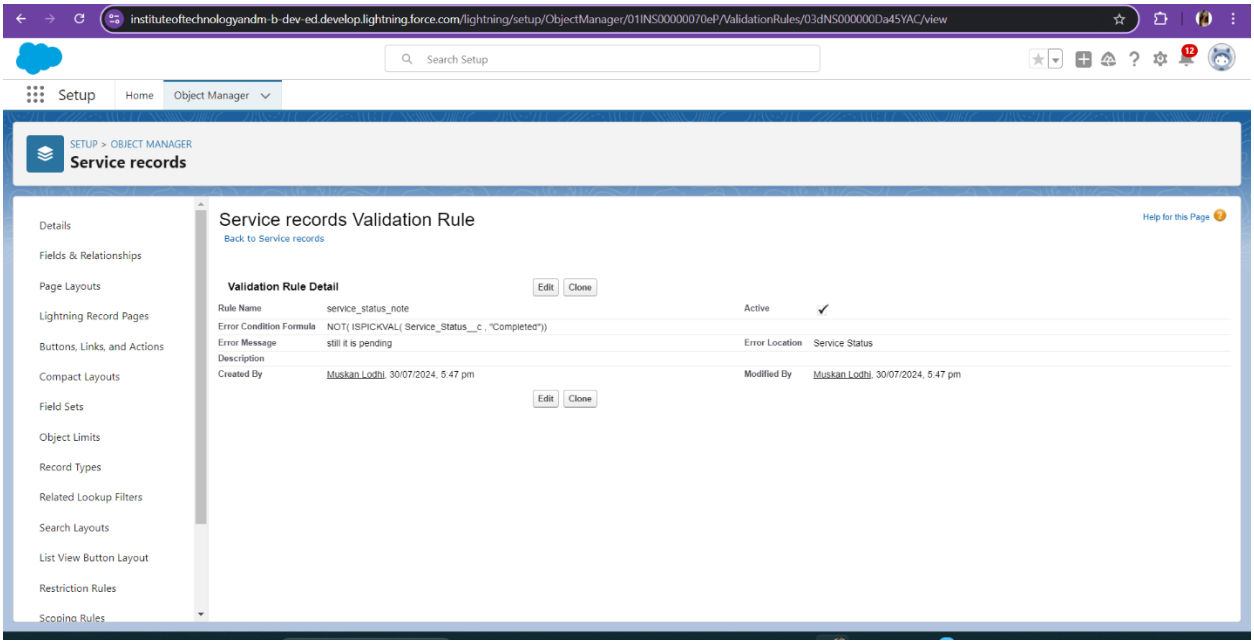
1. Go to the setup page >> click on object manager >> From drop down click edit for Appointment object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as " Vehicle ".
4. Insert the Error Condition Formula as : - NOT(REGEX(Vehicle_number_plate__c , "[A-Z]{2}[0-9]{2}[A-Z]{2}[0-9]{4}"))
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

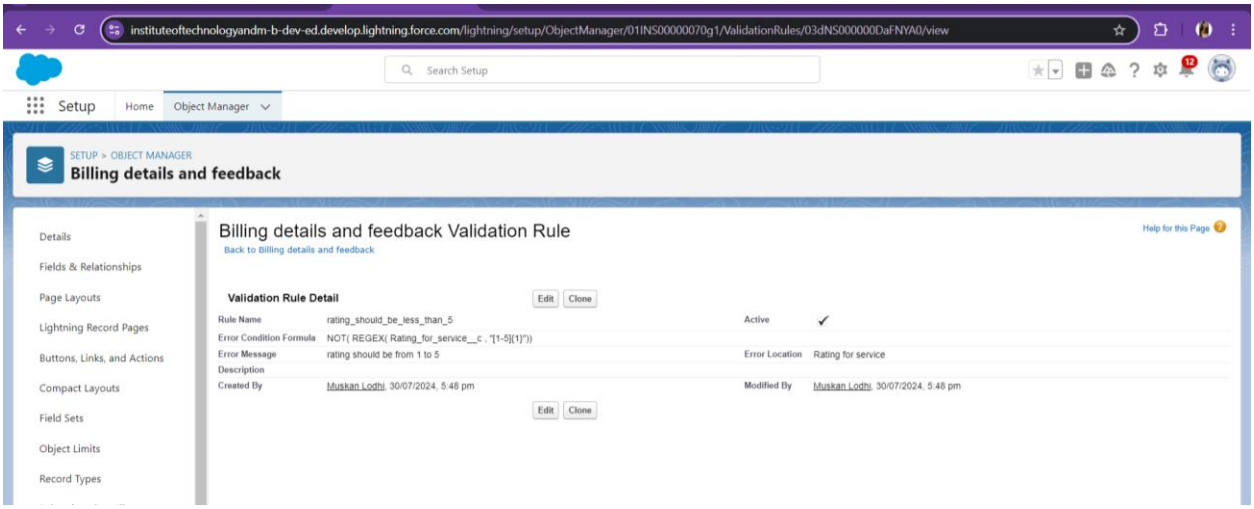
1. Go to the setup page >> click on object manager >> From drop down click edit for Service records object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as " service_status_note ".
4. Insert the Error Condition Formula as : - NOT(ISPICKVAL(Service_Status__c , "Completed"))

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



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

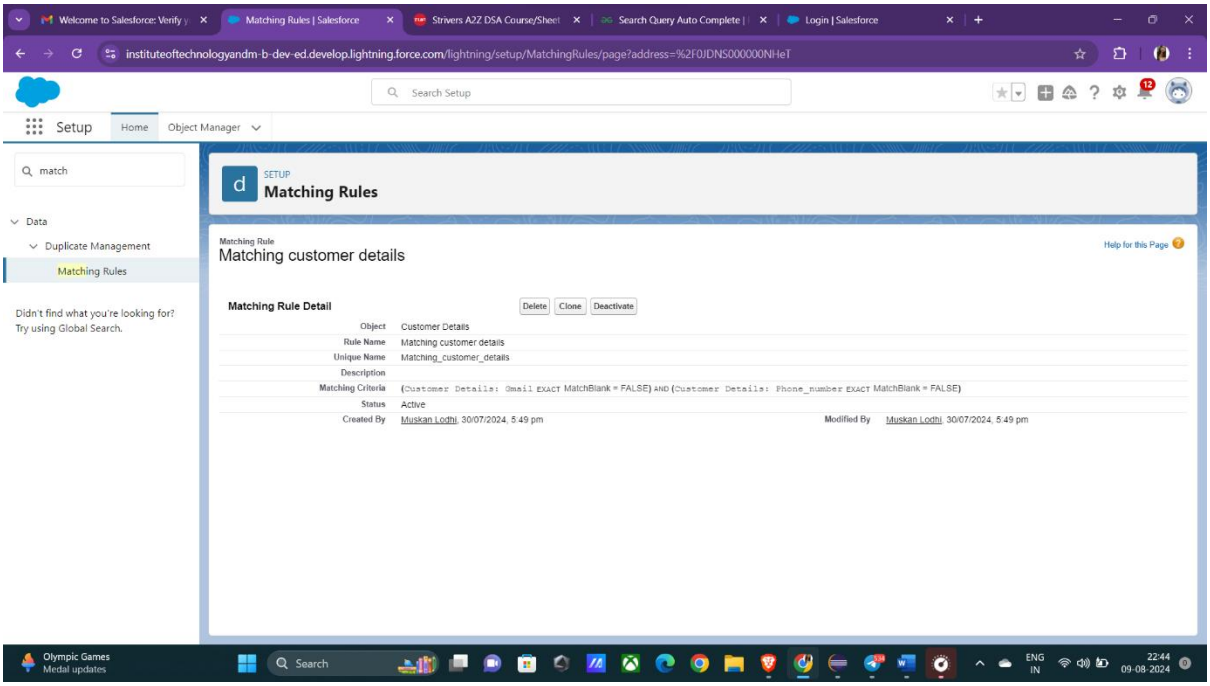
1. Go to the setup page >> click on object manager >> From drop down click edit for Billing details and feedback object.
2. Click on the validation rule >> click New.
3. Enter the Rule name as “ rating_should_be_less_than_5”.
4. Insert the Error Condition Formula as : - NOT(REGEX(Rating_for_service__c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



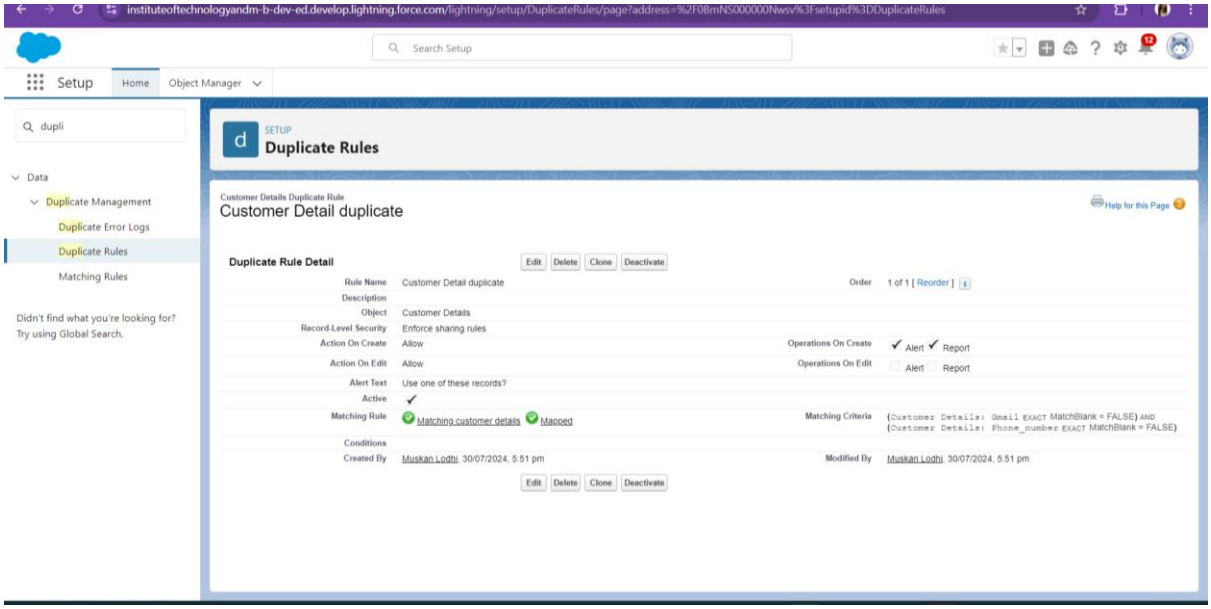
Task 6: Duplicate rule

<u>To create a matching rule to an Customer details Object</u>

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

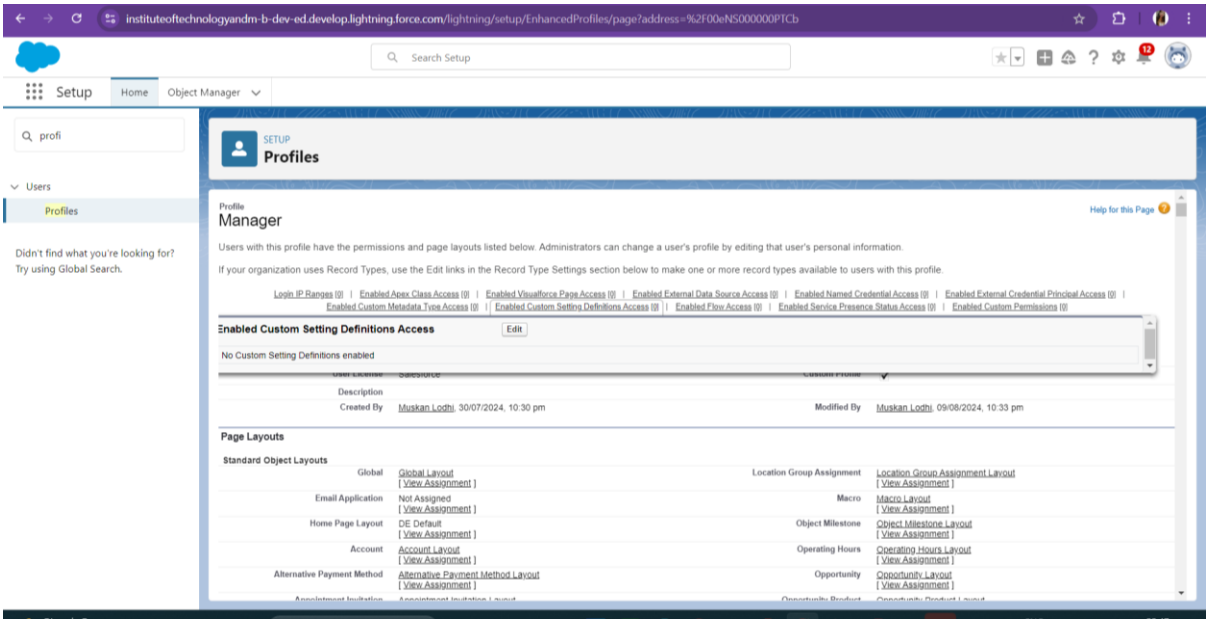


Task 7: PROFILES

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.

Manager Profile

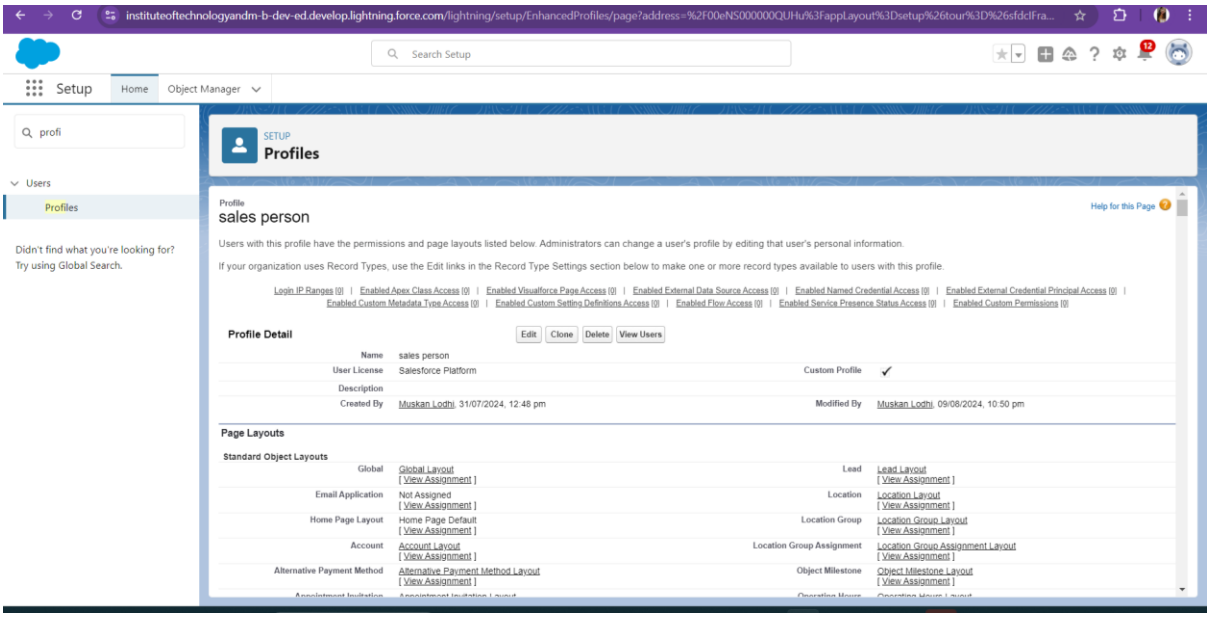
1. Go to setup >> type profiles in quick find box >> click on profiles >> clone the desired profile (Standard User) >> enter profile name (Manager) >> Save.
2. While still on the profile page, then click Edit.
3. Select the Custom App settings as default for the Garage management.
4. Scroll down to Custom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

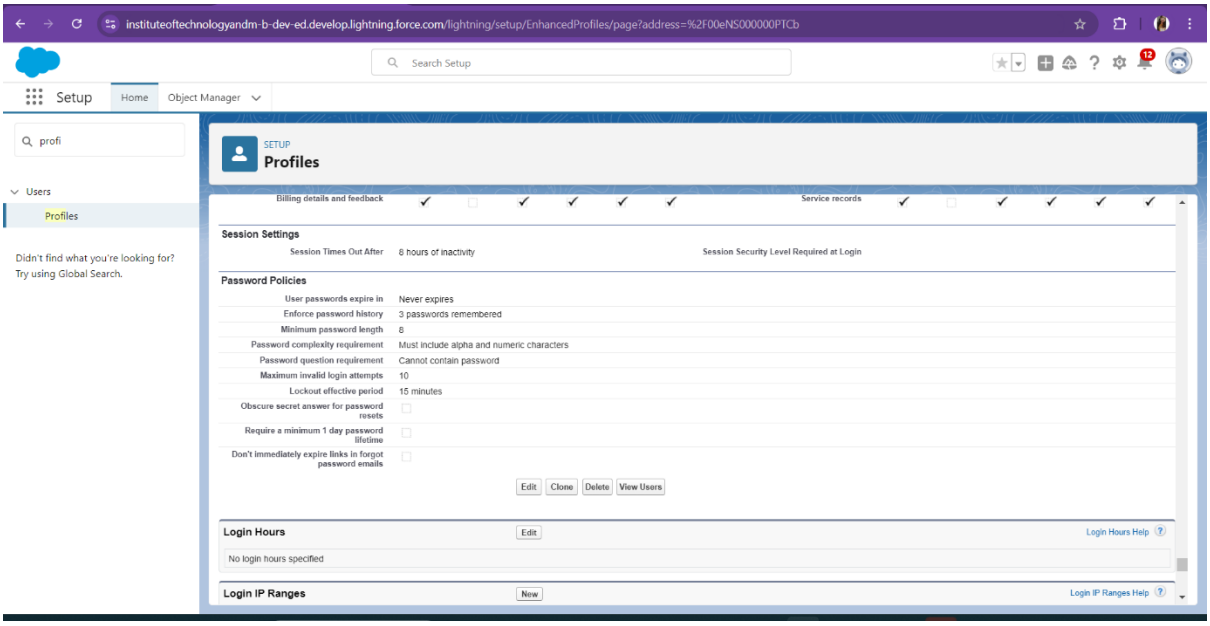


sales person Profile

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



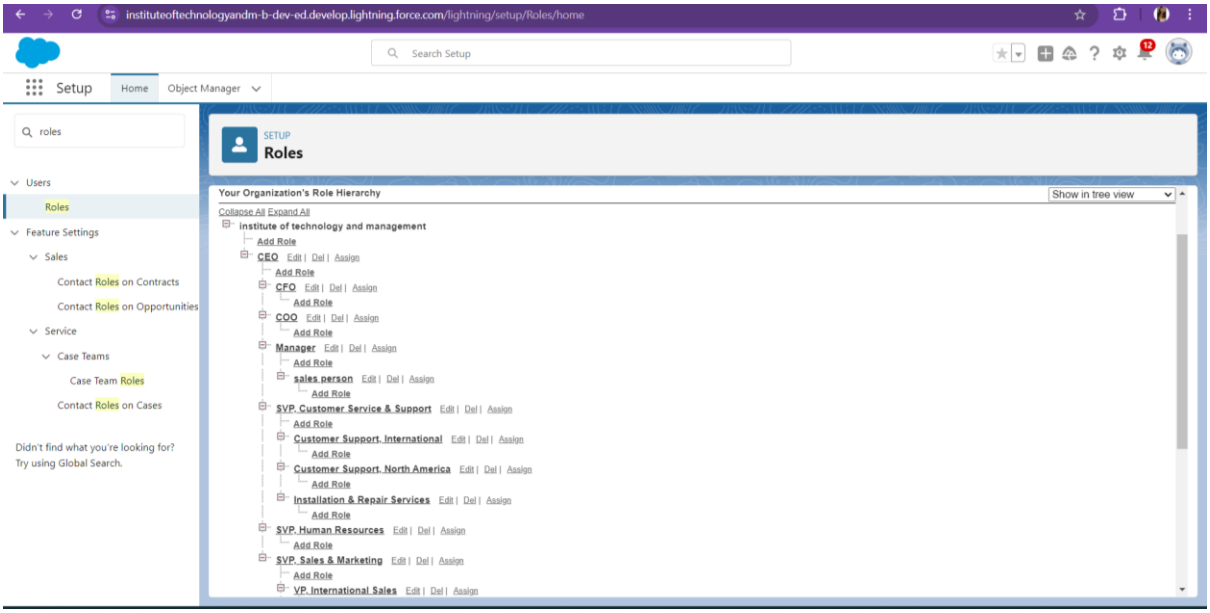


Task 8: Role & Role Hierarchy

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 organization can have to data. Simply put, it describes what a user could see within the Salesforce organization.

Creating Manager And Other Roles

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.

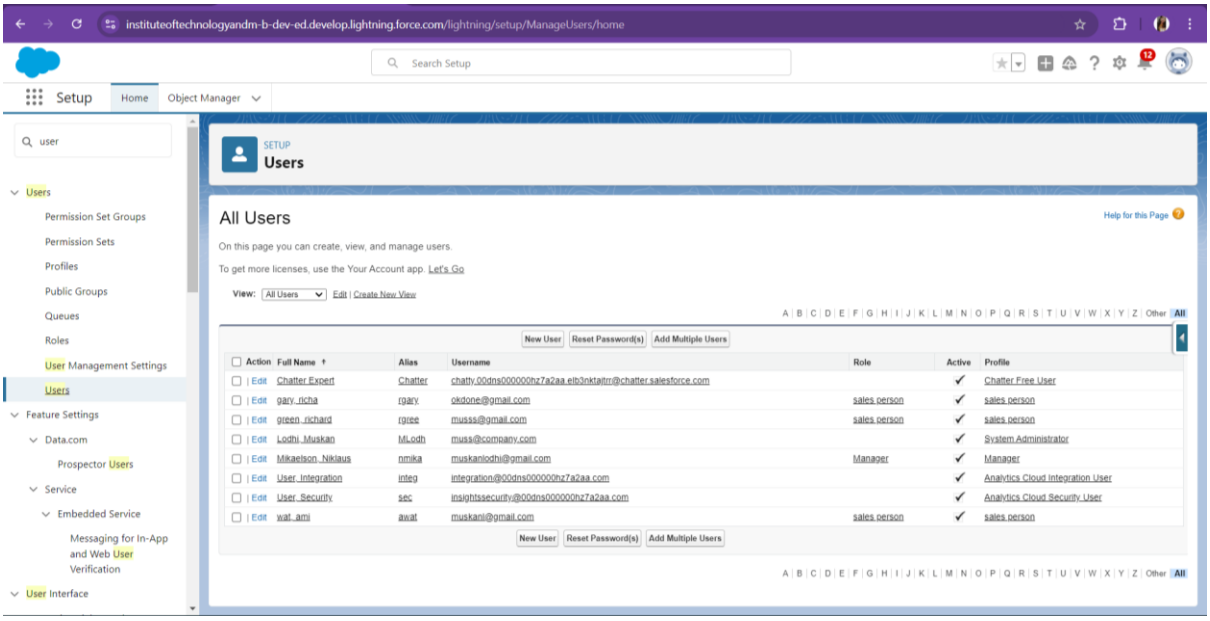


Task 9: Users

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

Create Users

1. Go to setup >> type users in quick find box >> select users >> click New user.
2. Fill in the fields
    - First Name : Niklaus
    - Last Name : Mikaelson
    - Alias : Give a Alias Name
    - Email id : Give your Personal Email id
    - Username : Username should be in this form: text@text.text
    - Nick Name : Give a Nickname
    - Role : Manager
    - User licence : Salesforce
    - Profiles : Manager
3. Save.

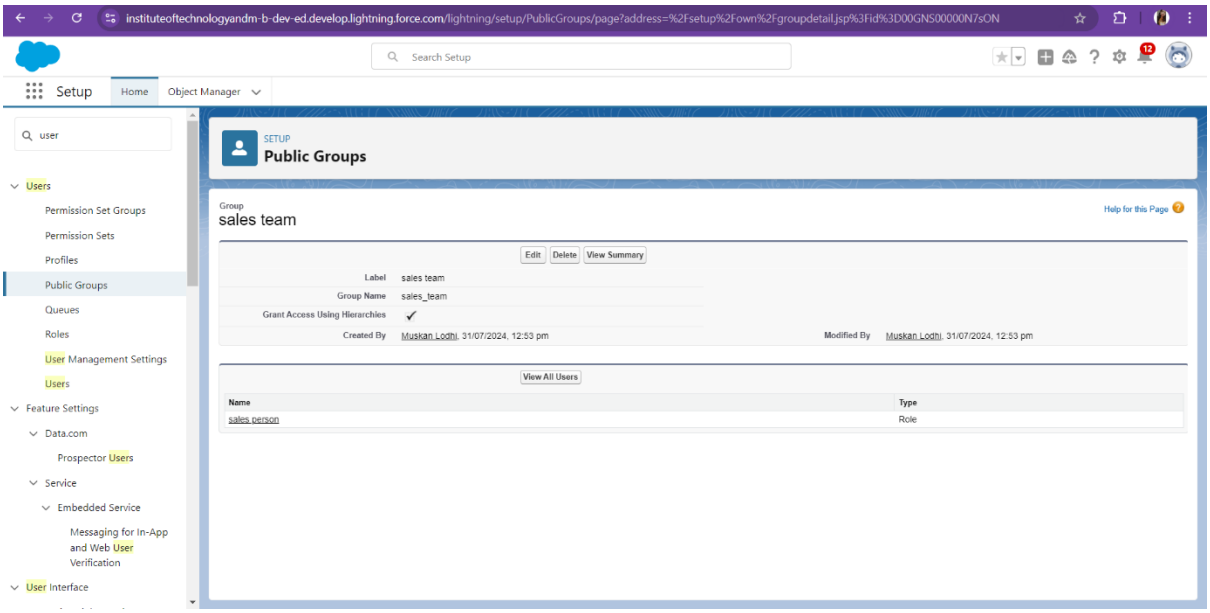


Task 10: Public groups

Public groups are a valuable tool for Salesforce administrators and developers to streamline user management, data access, and security settings. By creating and using public groups effectively, you can maintain a secure and organized Salesforce environment while ensuring that users have appropriate access to the resources they need.

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.

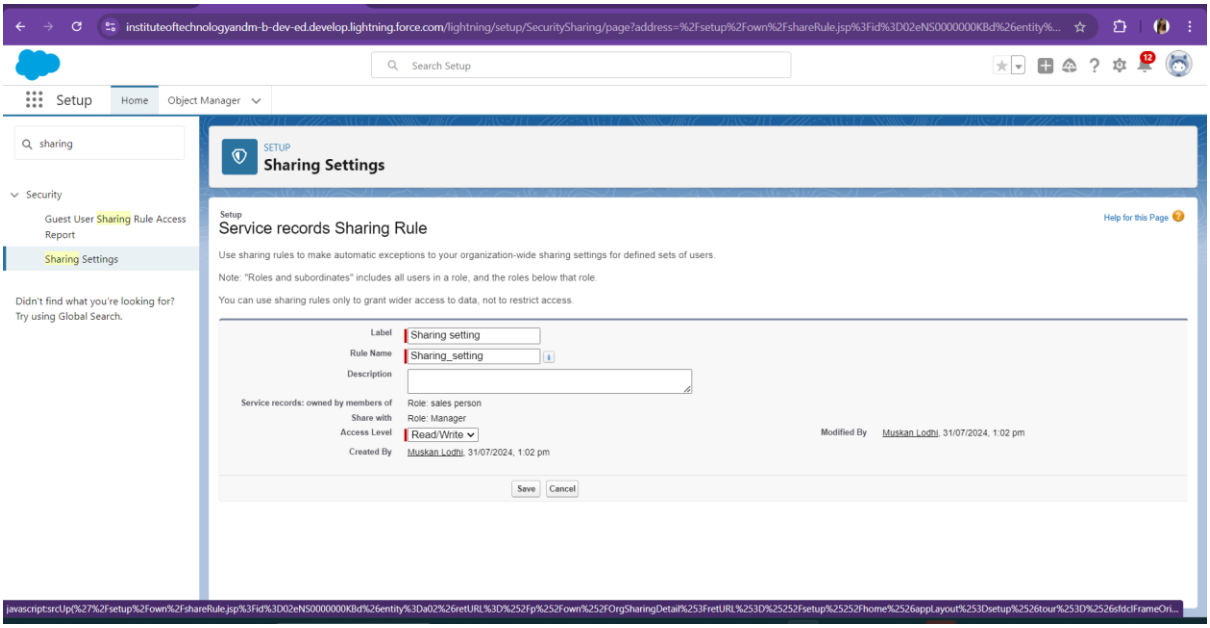


Task 11: Sharing Setting

Salesforce allows you to configure sharing settings to control how records are accessed and shared within your organization. These settings are crucial for maintaining data security and privacy.

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



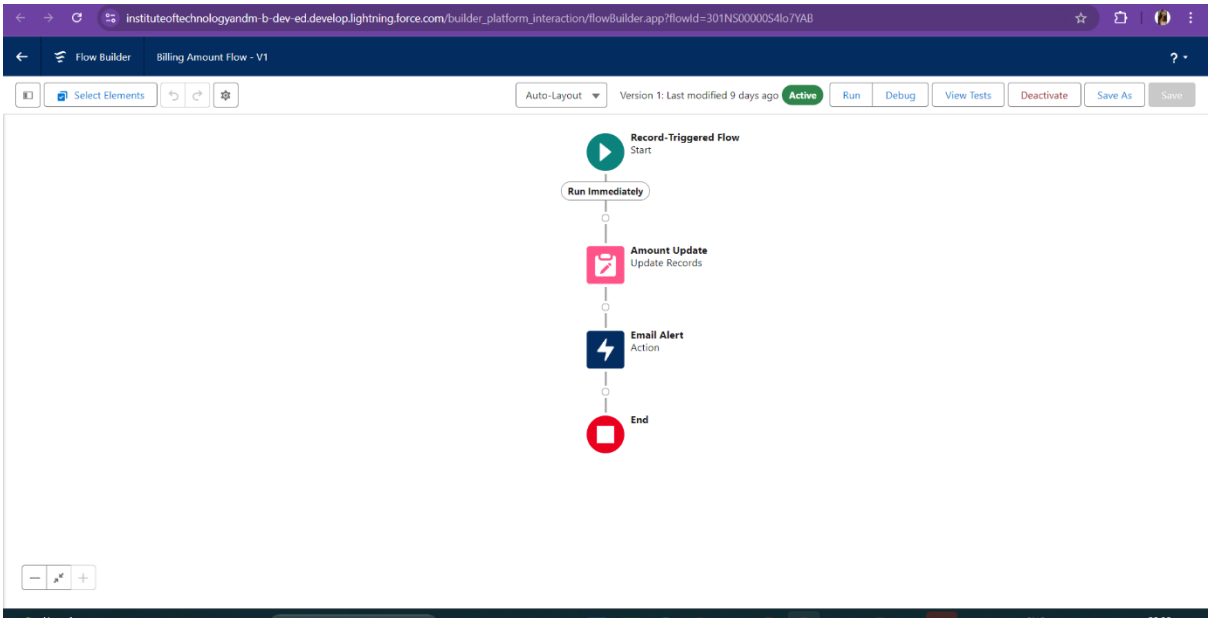
Task 12: Flows

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.

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},
23. 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.
24. Amount paid : {!$Record.Payment_Paid__c}
25. Thank you for Coming .
26. Click done.
27. Now Click on Add Element , select Action.
28. Their action bar will be opened in that search for “ send email ” and click on it.
29. Give the label name as “ Email Alert”
30. API name will be auto populated.
31. Enable the body in set input values for the selected action.
32. Select the text template that created , Body : {!alert}

33. Include recipient address list select the email form the record.
34. RecipientAddressList:
    {!$Record.Service_records__r.Appointment__r.Customer_Name__r.Gmail__c} 32. Include subject as “ Thank You for Your Payment - Garage Management”.
35. Click done.
36. Click on save. Give the Flow label , Flow Api name will be autopopulated.
37. And click save, and click on activate.



Task 13: Apex Trigger

Apex can be invoked by using triggers. Apex triggers enable you to perform custom actions before or after changes to Salesforce records, such as insertions, updates, or deletions.
A trigger is Apex code that executes before or after the following types of operations:

- insert
- update
- delete
- merge
- upsert
- undelete

For example, you can have a trigger run before an object's records are inserted into the database, after records have been deleted, or even after a record is restored from the Recycle Bin.

You can define triggers for top-level standard objects that support triggers, such as a Contact or an Account, some standard child objects, such as a CaseComment, and custom objects. To define a trigger, from the object management settings for the object whose triggers you want to access, go to Triggers.

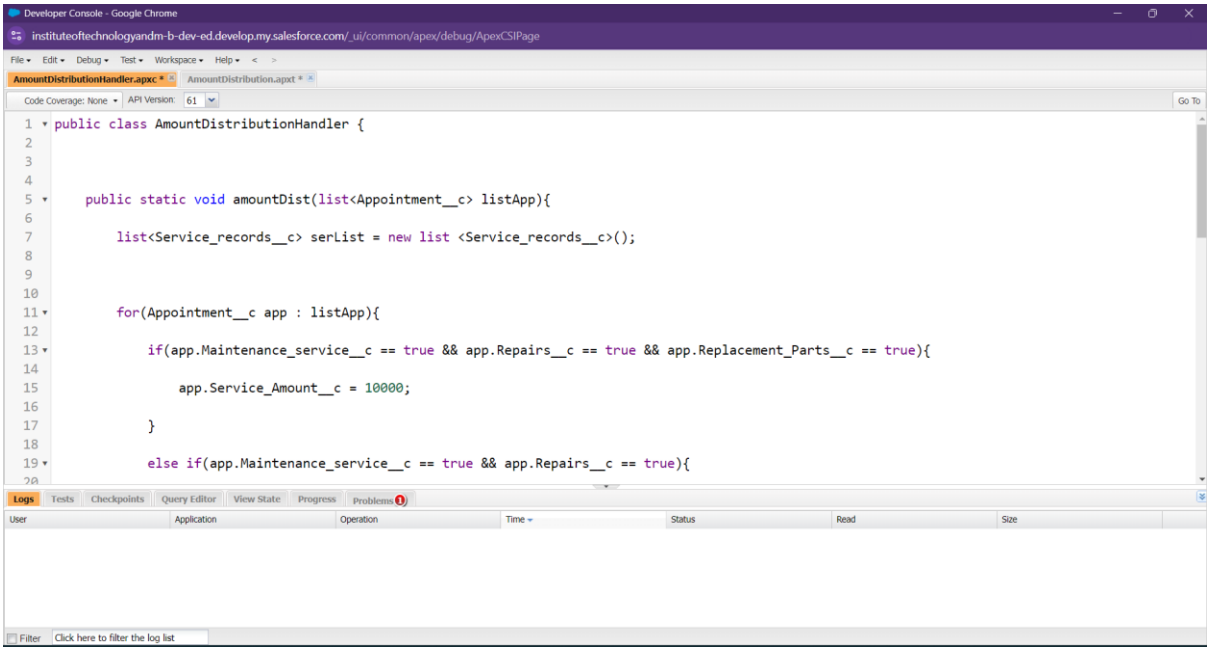
Apex handler

1. UseCase : This use case works for Amount Distribution for each Service the customer selected for there Vehicle.
2. Login to the respective trailhead account and navigate to the gear icon in the top right corner.
3. Click on the Developer console. Now you will see a new console window.
4. In the toolbar, you can see FILE. Click on it and navigate to new and create New apex class.
5. Name the class as “AmountDistributionHandler ”.

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

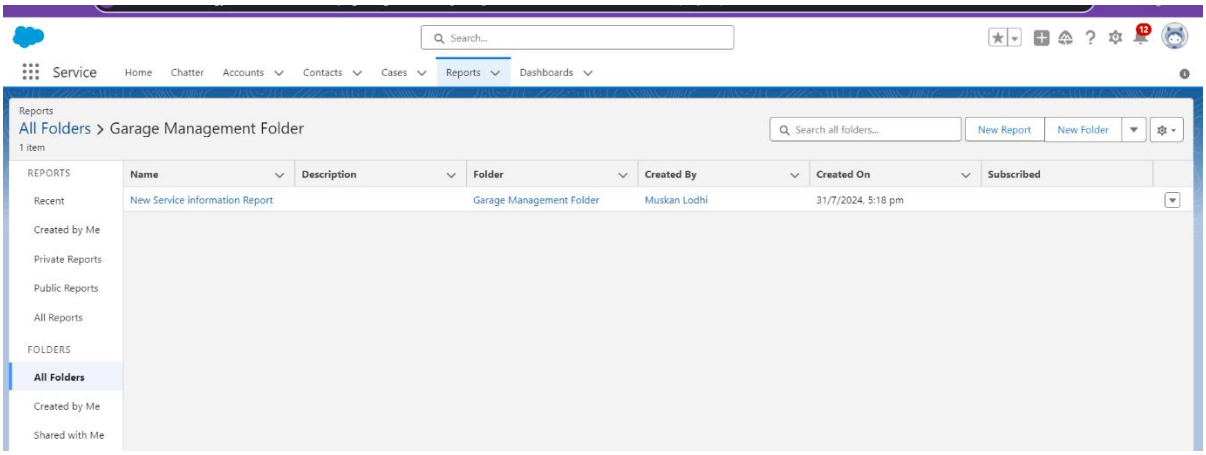

Developer Console - Google Chrome
instituteoftechnologyandm-b-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage
File Edit Debug Test Workspace Help
AmountDistributionHandler.apxc *
AmountDistribution.apxt *
Code Coverage: None
API Version: 61
Go To
public class AmountDistributionHandler {
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){
Logs
Tests
Checkpoints
Query Editor
View State
Progress
Problems
User
Application
Operation
Time
Status
Read
Size
Filter
Click here to filter the log list

Task 14: Reports

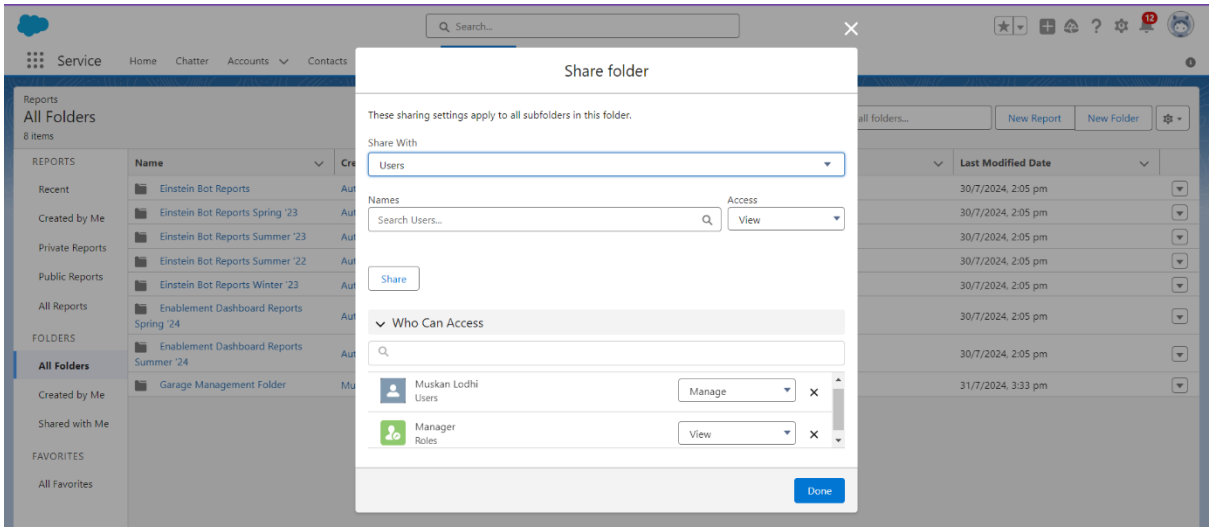
Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

create a report folder

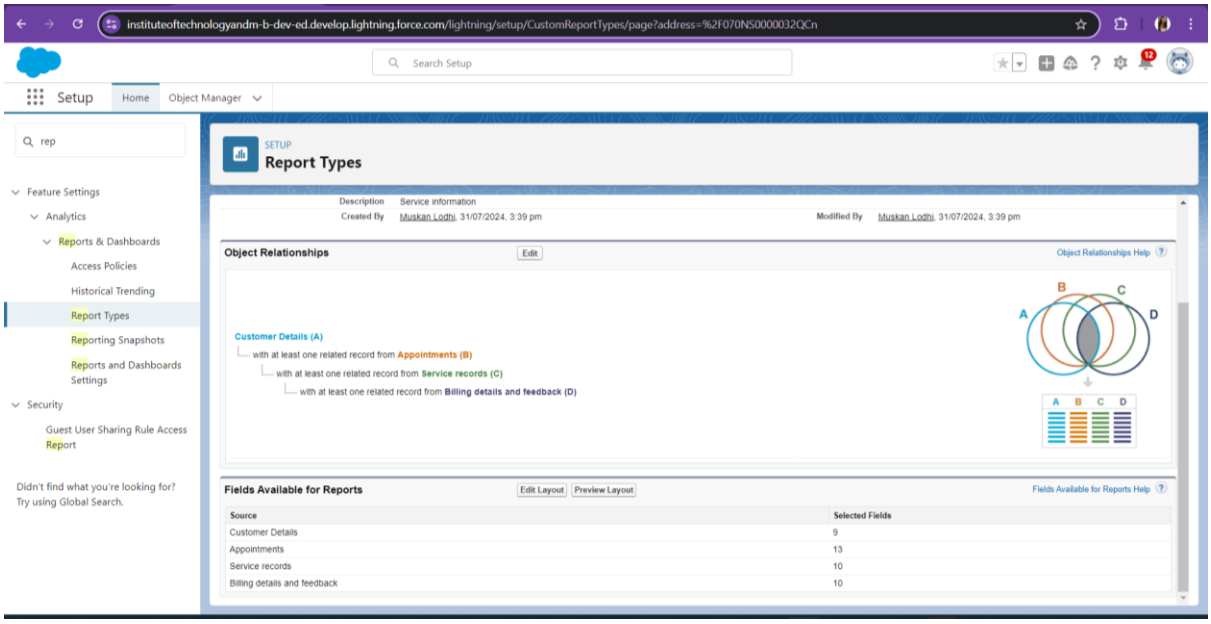
1. Click on the app launcher and search for reports.
2. Click on the report tab, click on new folder.
3. Give the Folder label as “Garage Management Folder”, Folder unique name will be auto populated.
4. Click save.



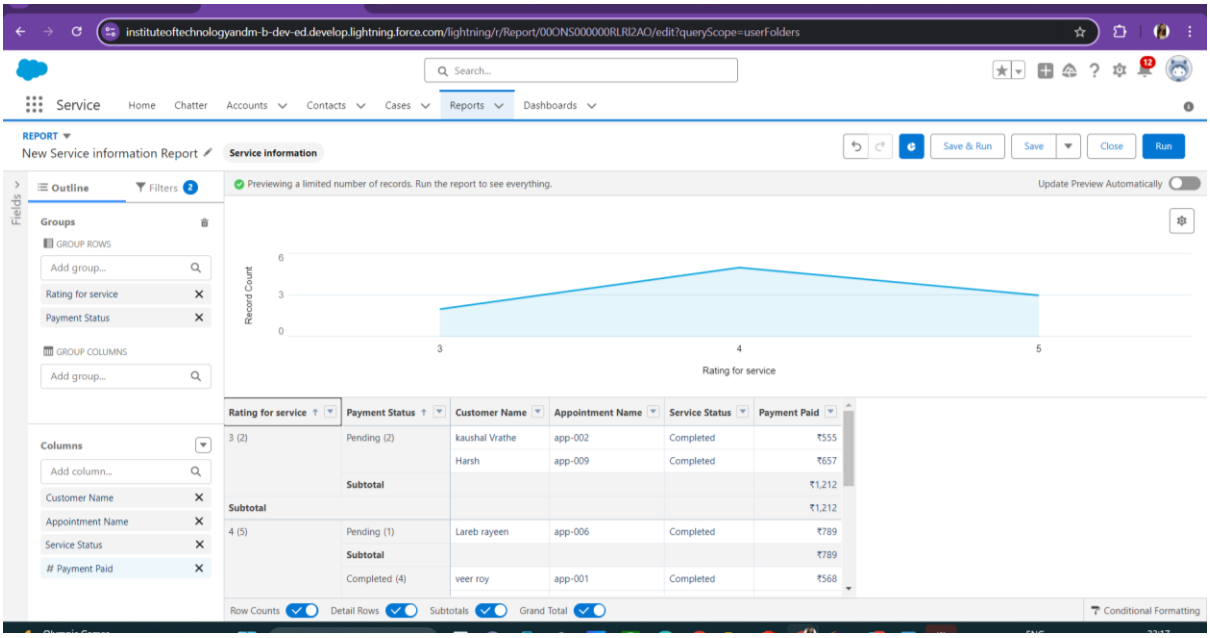
Sharing a report folder



Create Report Type



Create Report

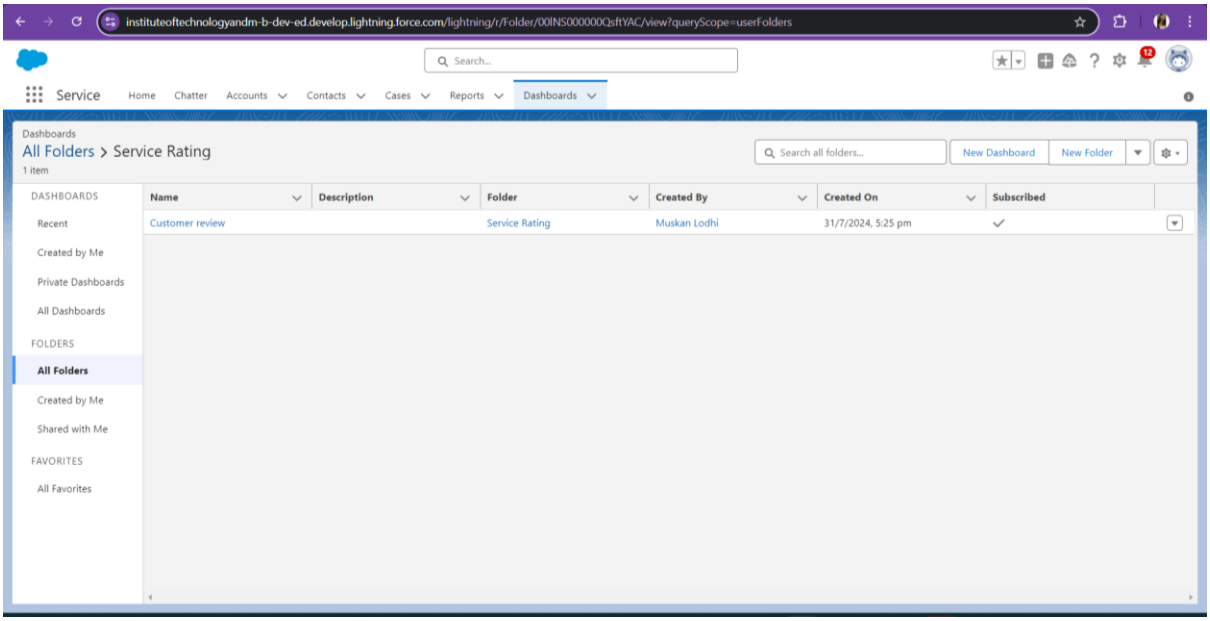


Task 15: Dashboards

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.

Create Dashboard Folder

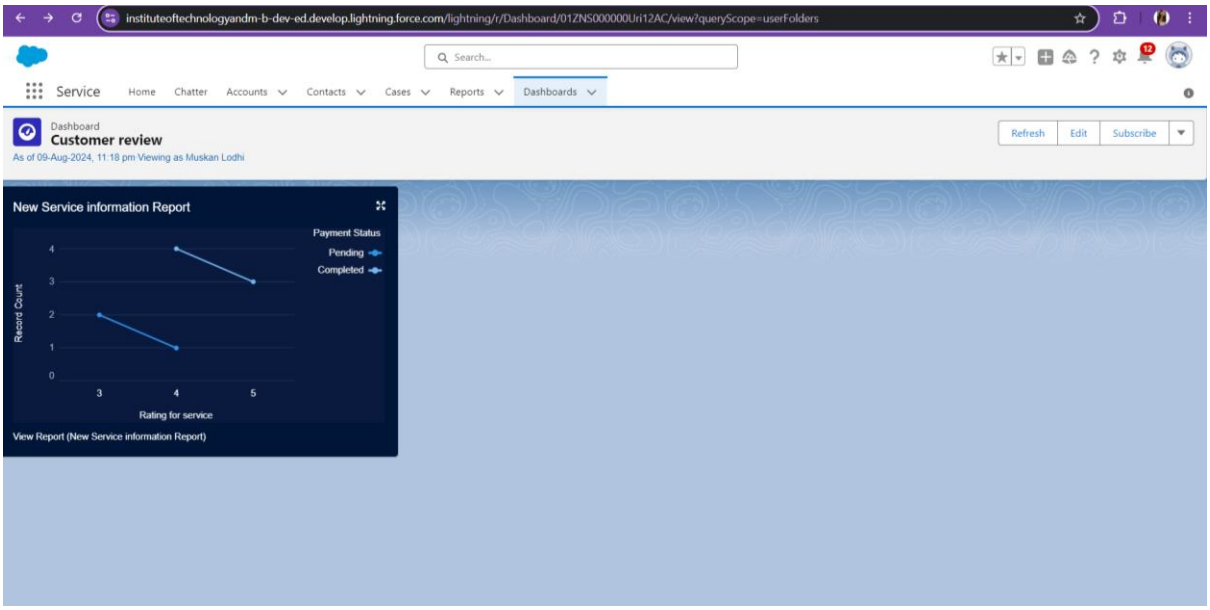
1. Click on the app launcher and search for dashboard.
2. Click on dashboard tab.
3. Click new folder, give the folder label as " Service Rating dashboard".
4. Folder unique name will be auto populated.
5. Click save.
6. Follow the same steps, form milestone 15, and activity 2, and provide the sharing settings for the folder that just created.



Create 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.



Thank you