Field Service Workorder Optimization

Salesforce Field Service provides a comprehensive solution for optimizing work orders in field service operations. The platform's optimization engine intelligently schedules and dispatches technicians based on factors like skills, availability, and proximity, ensuring the right technician is assigned to each job. It also includes features for real-time route optimization, inventory and equipment management, and mobile accessibility for technicians.Work orders are automatically created, assigned, and tracked from start to finish, reducing manual errors and improving efficiency.

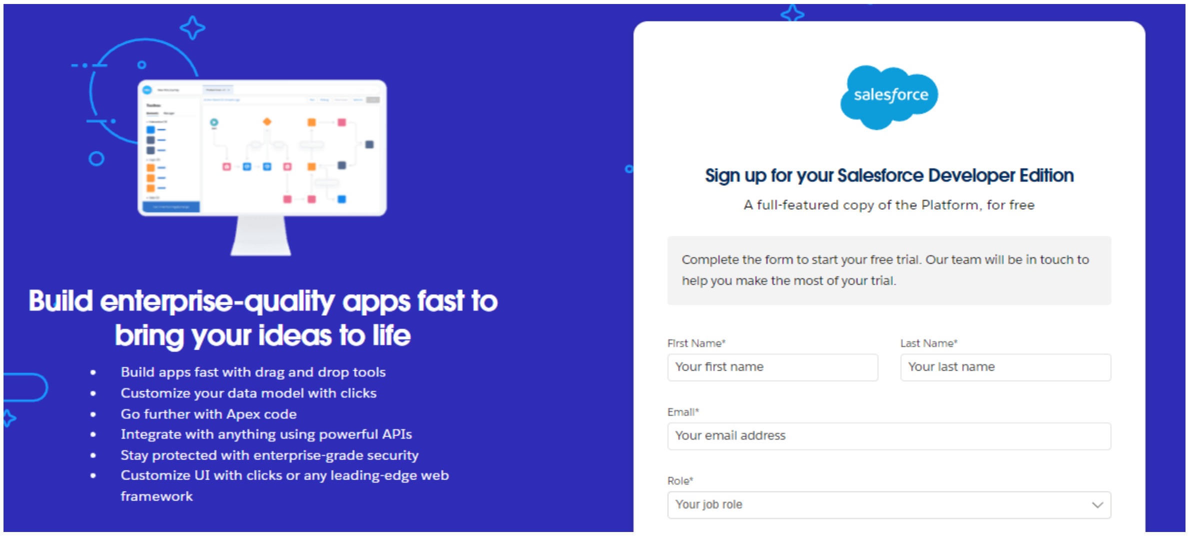
TASK 1: Creating Developer Account

Creating a developer org in salesforce.

1. Go to https://developer.salesforce.com/signup
2. On the sign up form, enter the following details :

- First name & Last name
- Email
- Role : Developer
- Company : College Name
- County : India
- Postal Code : pin code

- Username : should be a combination of your name and company

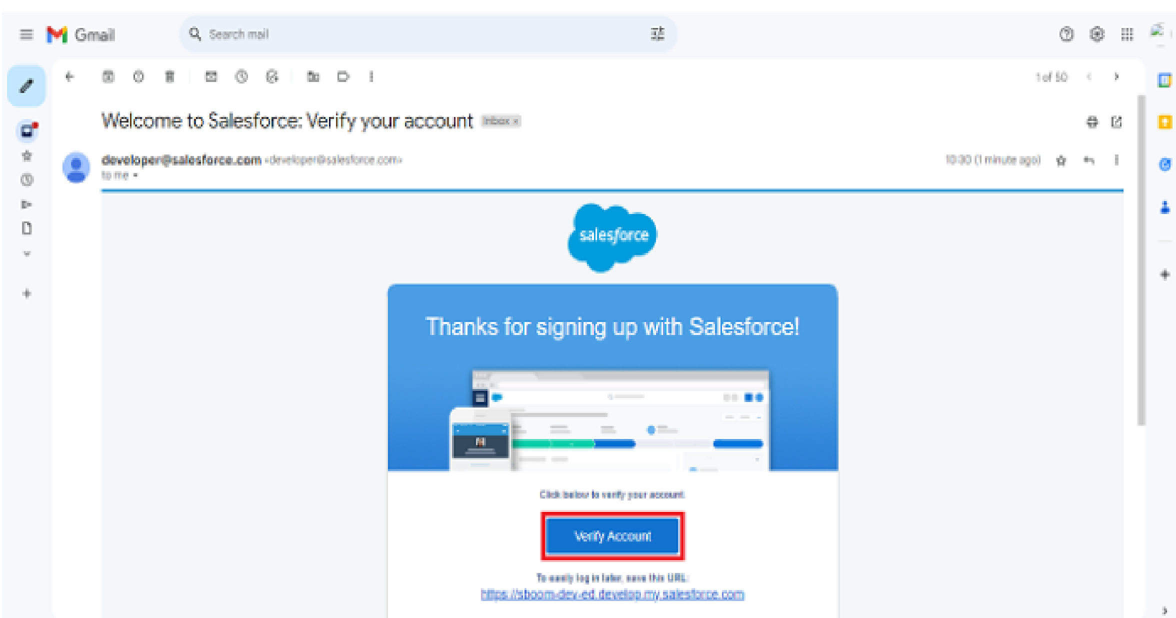


3.Click on sign me up after filling these details.

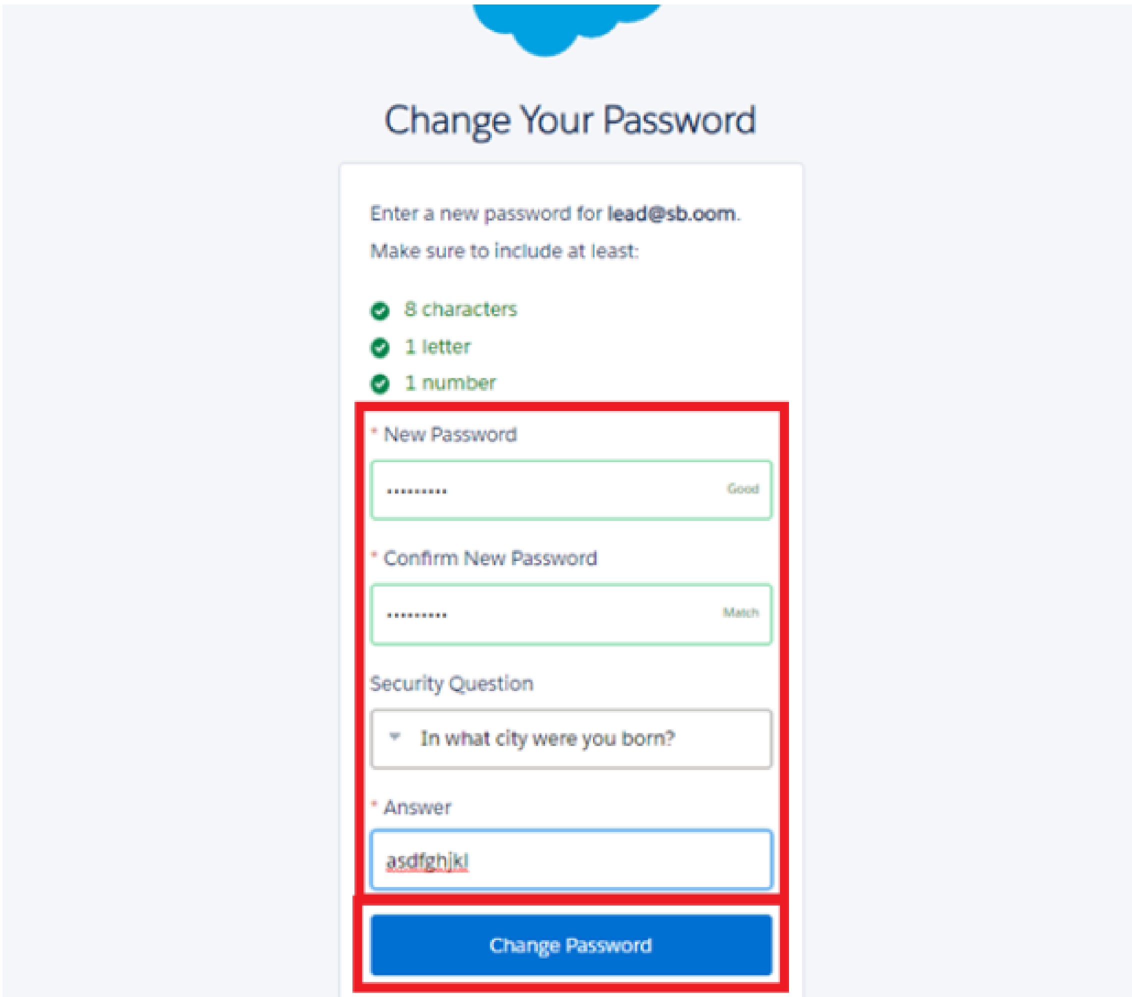
TASK 2: Account Activation

Activate the account that have been created.

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.

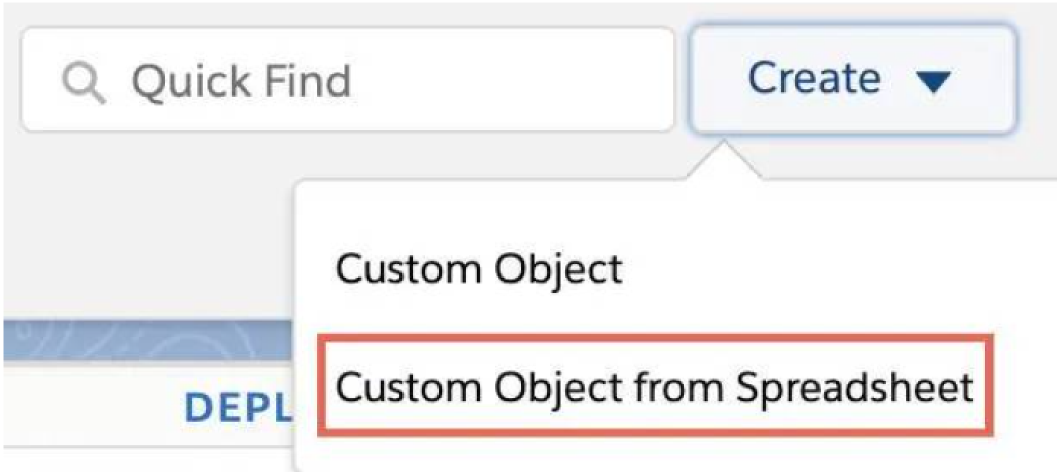


TASK 3: Object

1. To store the data as per business requirement.
2. There are 3 types of objects to create, they are as follow:

STEP-1: Create Technician Object

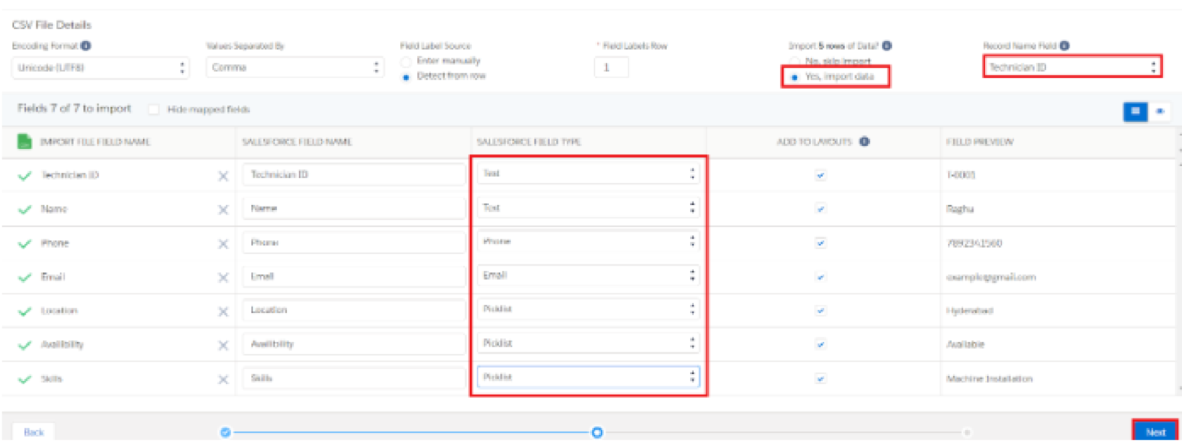
1)Download the spredsheet,edit the email column and save it as Technician.csv.
2)Log into your salesforce account, click on Gear icon, then select Setup.
3)Click the Object Manager tab.
4)Click Create.
5)Select Custom Object from Spreadsheet.
6)Click Login With Salesforce.



7)Enter your Salesforce account username and password and log in.

8)Navigate to the Technician.csv file you downloaded and upload it. Salesforce automatically detects the fields and populates all its record data.

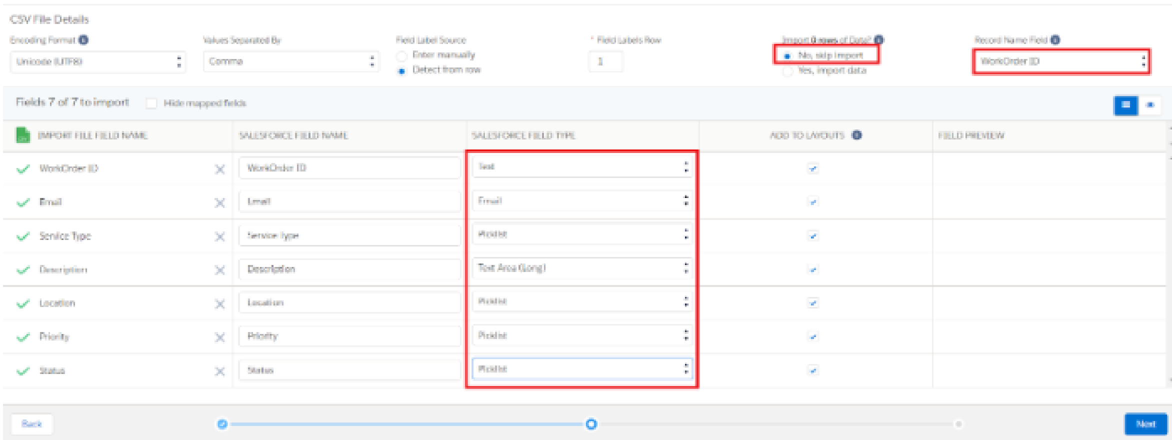
9)Choose Technician ID as the Record Name field and make sure all fields are given correct.



10) Click Finish. The Technician object is successfully created.

STEP-2: Create WorkOrder Object

1)Just as we have created Technician Object using this spreadsheet, now create the workorder object by downloading the spreadsheet and by uploading it.

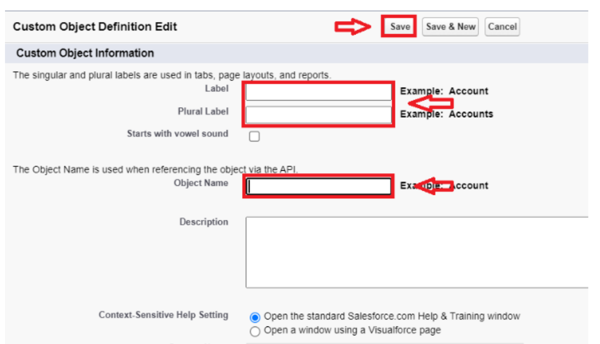


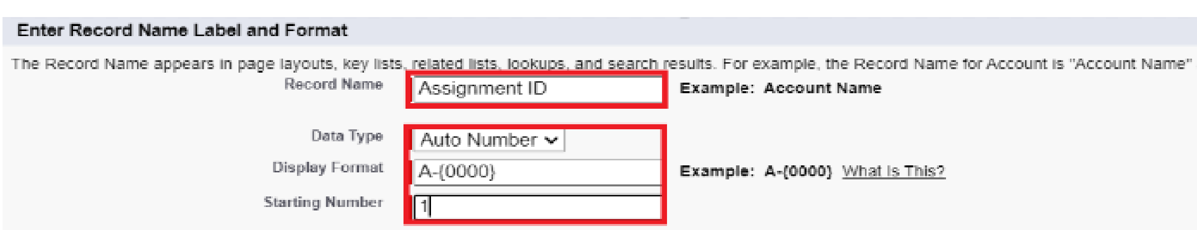
STEP-3: Create Assignment Object

- To create an assignment object go to setup page,

Click on Object Manager---> Click on Create --->Click on Custom Object.

- Now enter the label name as **Assignment.**
- And enter the plural label name as **Assignments,** Record name as **Assignment ID.**
- Data Type as **Auto Number**, Display Format as **A-{0000}**, Starting Number as **1.**
- Then click on **save.**

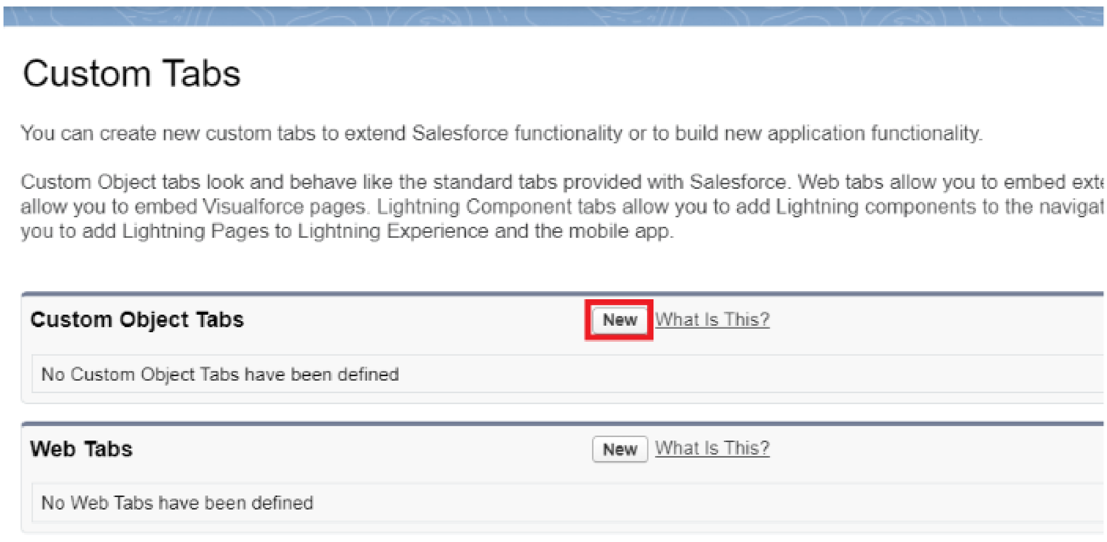


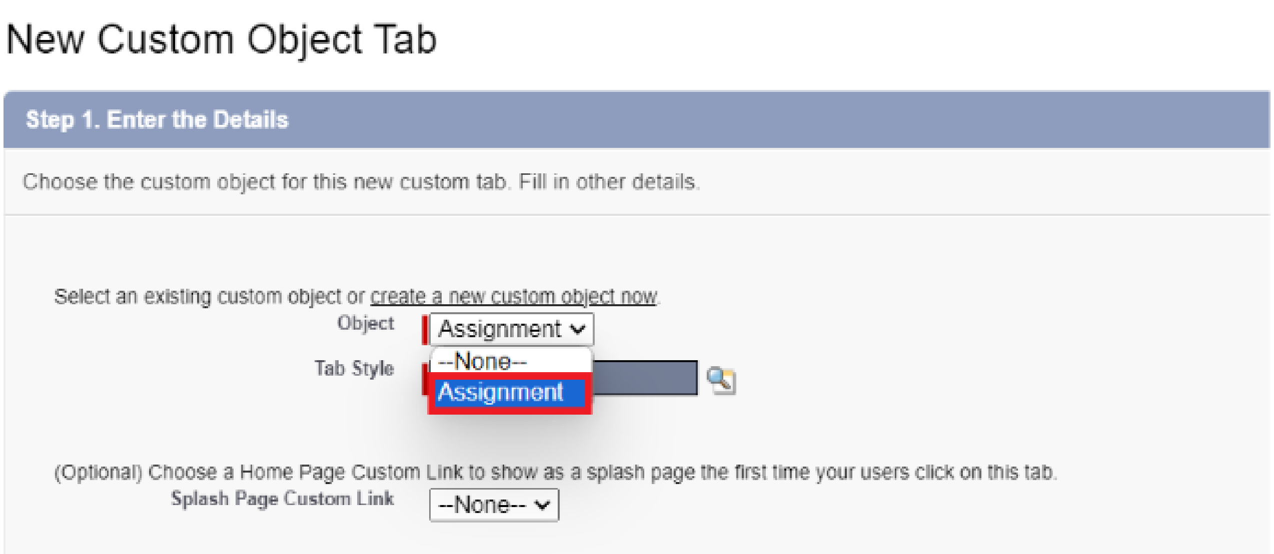


TASK 4: Tabs

Now we have to create a custom tab of assignment,to create a assignment tab follow these steps:

- Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object tab).
- Select Object(Assignment) --> Select any tab style
- Click Next, Next and Save.
- ➢ Tabs for WorkOrder & Technician objects do get created automatically. We do not need to create tabs for those objects.



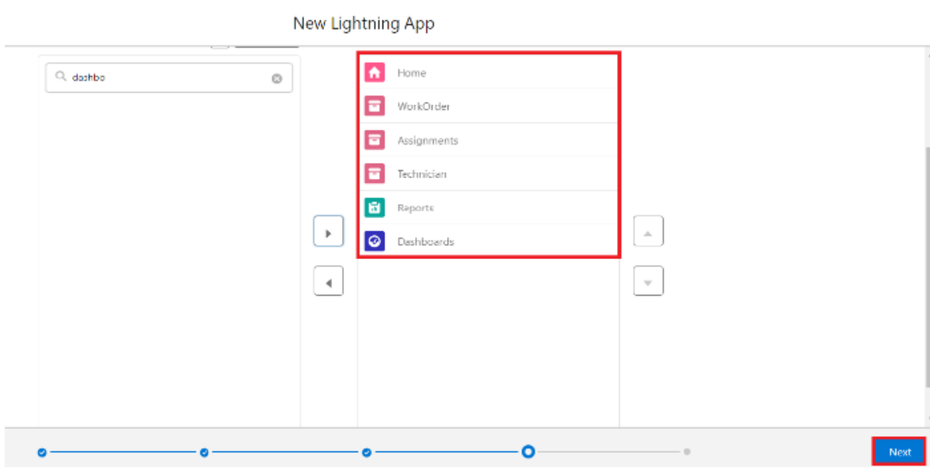


TASK 4: The Lightning App

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. Give the details as follows:
   App Name: Field Service WorkOrder Optimization
   Developer Name : this will auto populated
   Description : Give a meaningful description
   Image : optional, you can give an image of your choice.
   Primary color hex value : keep this default
3. Click Next, Next.
4. To Add Navigation Items: Search the items in the search bar(Home, WorkOrder, Technician, Assignment, Reports, Dashboard) from the search bar and move it.



5. To Add User Profiles: Search profiles (System administrator) in the search bar --> click on the arrow button.
6. Click on Save & Finish.

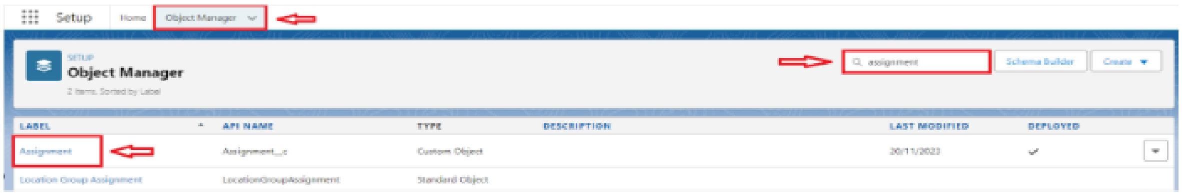
TASK 4: Fields & Relationship

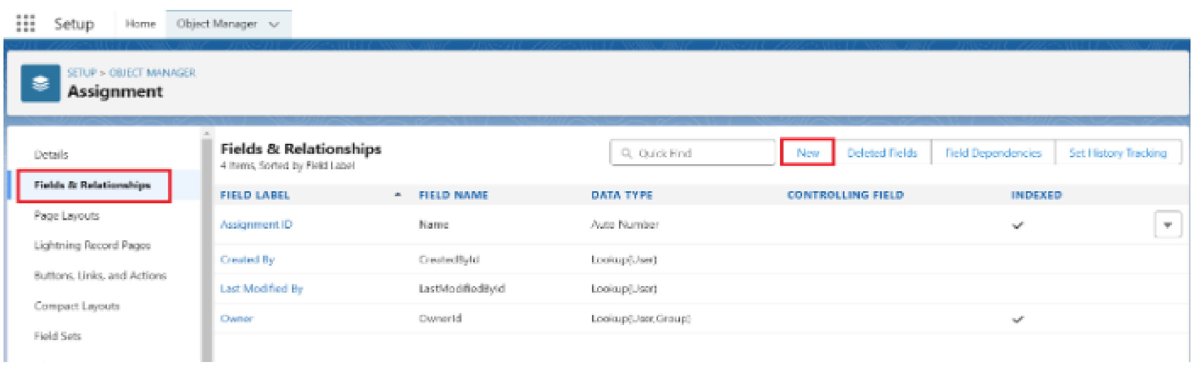
There are several steps to create things in fields & relationship.

STEP-1: Creating Lookup Field in Assignment Object

To create fields in an object:

1. Go to setup --> click on Object Manager --> type object name(Assignment) in quick find bar--> click on the object.
2. Now click on “Fields & Relationships” --> New





3.Select Data type as “Lookup”.

4. Click on Next.

5.For field label related to: select “WorkOrder” object and click Next.

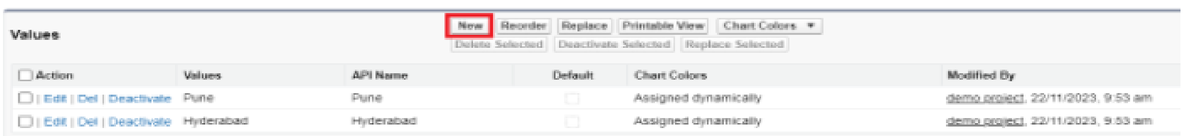
6. Field Label and Field Name as **Workorder ID.**

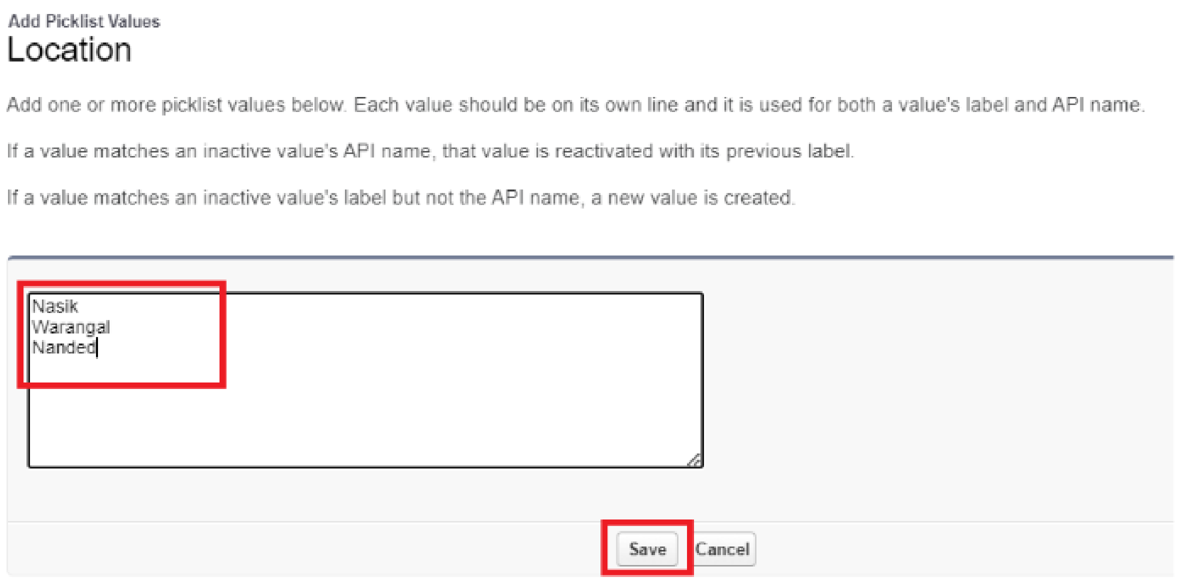
7.Click Next, Next and Save.

STEP-2: Manage Your Picklist Values

1. In object manager Search and Select WorkOrder object.

2. Go to fields & relationship, select Location field, scroll down to values and click "New".
3. Add the below values:
   Nasik
   Warangal
   Nanded
4. Click Save.





5.Add following values to the respective fields in WorkOrder object:

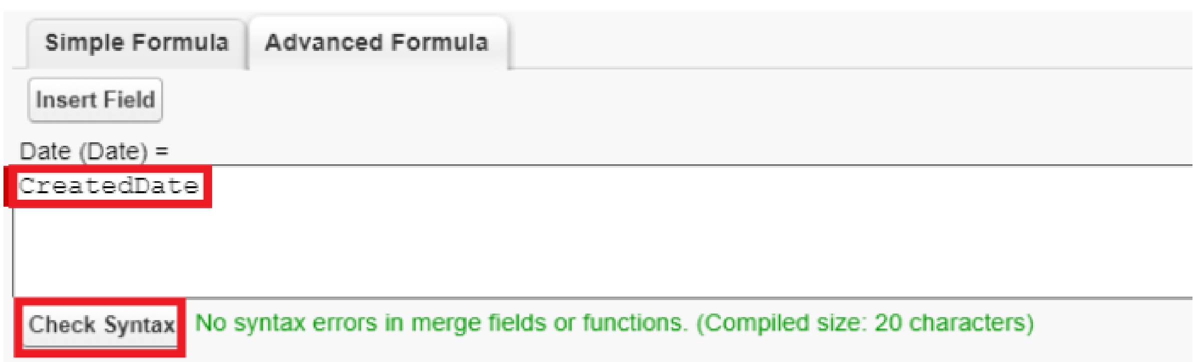
Field	**Values**
Priority	High
Service Type	Hardware Repair
	Troubleshoot/Debugging
	Lane-Management

STEP-2: Creating Formula Field in Workorder object

1. Go to setup --> click on Object Manager --> type object name(Assignment) 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 **Date.**
5. Select formula return type as **Date.**
6. Formula: **CreatedDate** and check Syntax.



7.Click Next, Next and Save.

STEP-2: Creating Fields for Respective Objects

1. Object Name : **Assignment**
   Field Name : **Technican ID**
   Datatype : **Lookup(technican)**

2. Object Name : **Assignment**
   Field Name : **Assignment Date**

Datatype : **Date**
Return Type : **Date**
Formula : **(WorkOrder_ID__r.Date__c)**

3.Object Name : **Assignment**
Field Name : **Completion Date**
Datatype : **Date**
Return Type : **Date**
Formula : **IF(ISPICKVAL(WorkOrder_ID__r.Status__c , 'Resolved'), WorkOrder_ID__r.LastModifiedDate , NULL)**

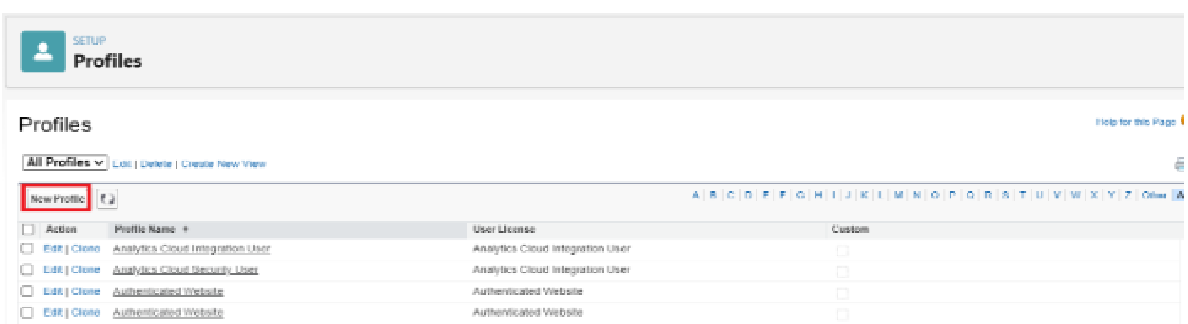
TASK 5: Profile

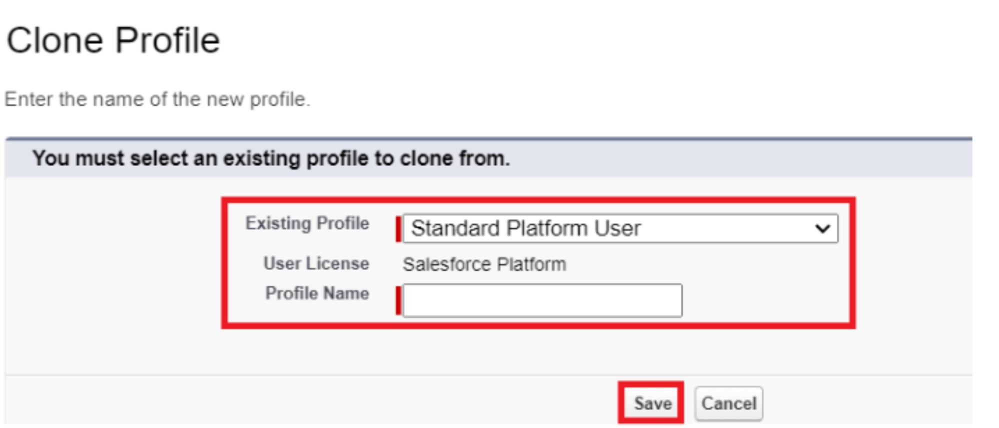
1. Go to setup --> type profiles in quick find box --> click on profiles --> click on new profile.
2. Existing Profile as **Standard Platform User.**
   Profile Name as **Technician**

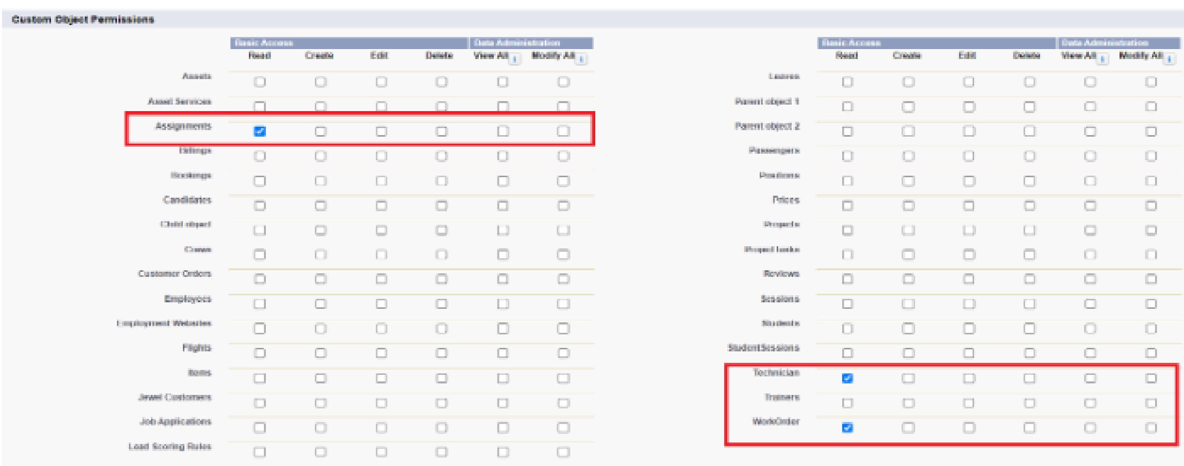
3.Scroll down to Custom Object Permissions and Give Read only access permissions for Technician, WorkOrder and Assignment objects.

4.Click on save.

5.From the profile detail page scroll down to custom field level security click on view next to WorkOrder object.

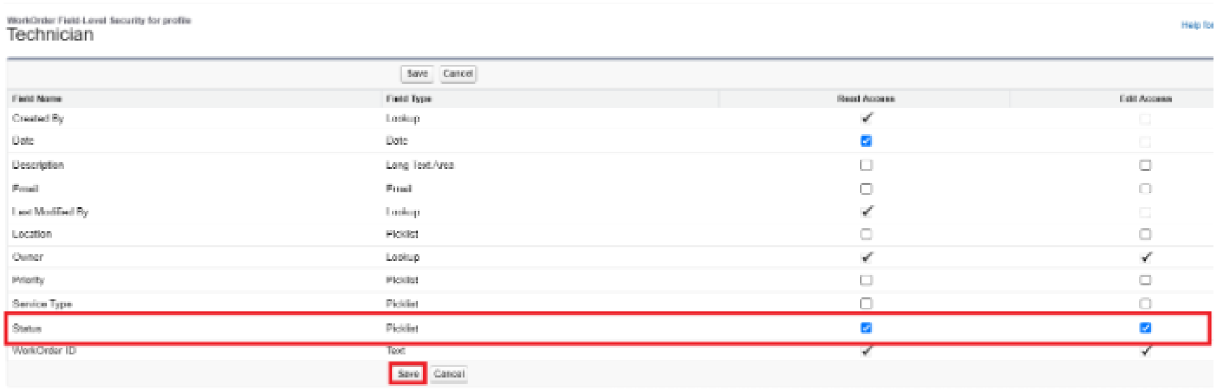






6.Click on Edit, enable the check box for the status field.

7.Click on Save.



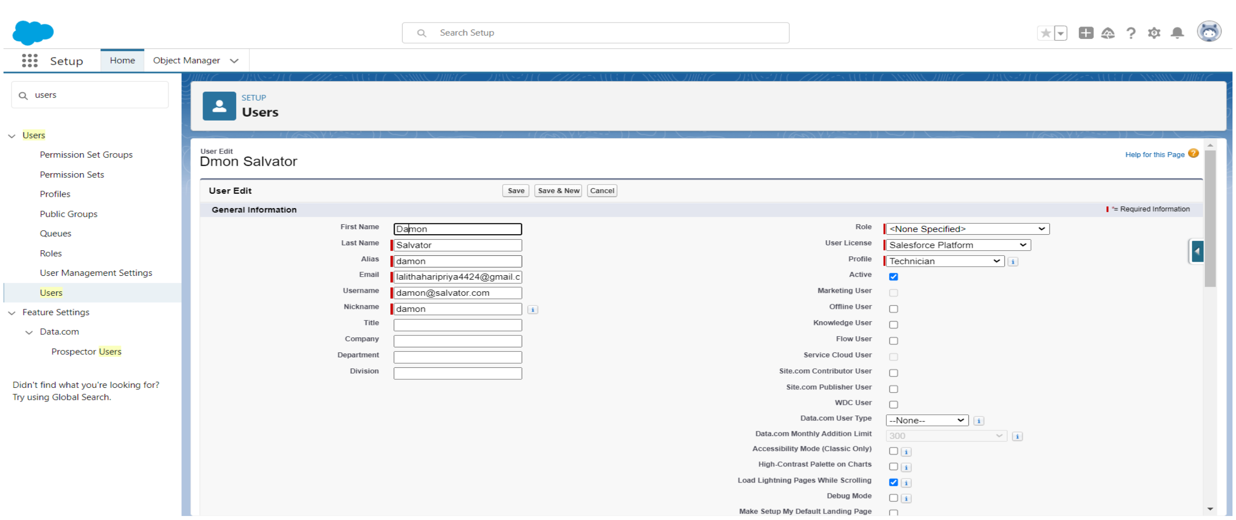
TASK 6: Users

1. Go to setup --> type users in quick find box --> select users --> click New user.
2. Fill te details:

   First Name : **Damon**

   Last Name : **Salvator**
   Alias : **Damon**
   Email id : **Give your Personal Email id**
   Username : Username should be in this form: text@text.text
   Nick Name : **Damon**
   Role :
   User license : **Salesforce Platform**
   Profiles : **Technician**

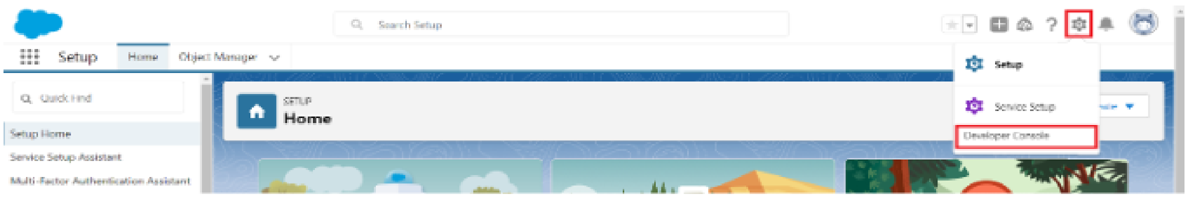
3.Click Save.

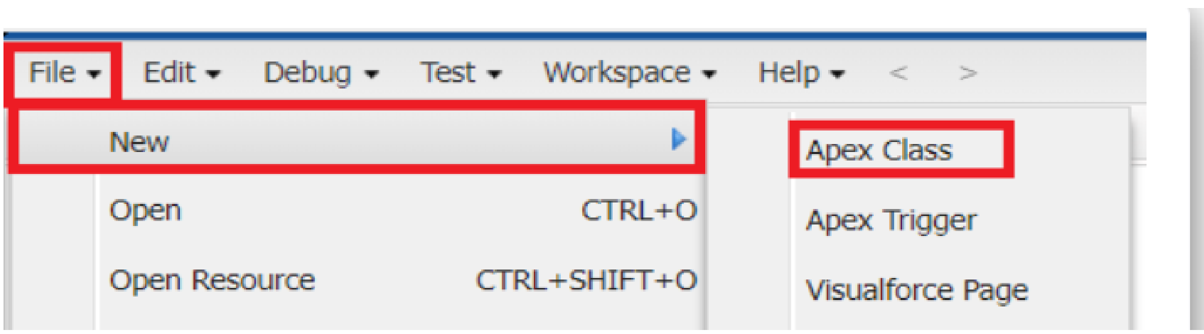


TASK 7: Apex Triggers

Here we have to create an apex Class and Triggers, to create Apex class

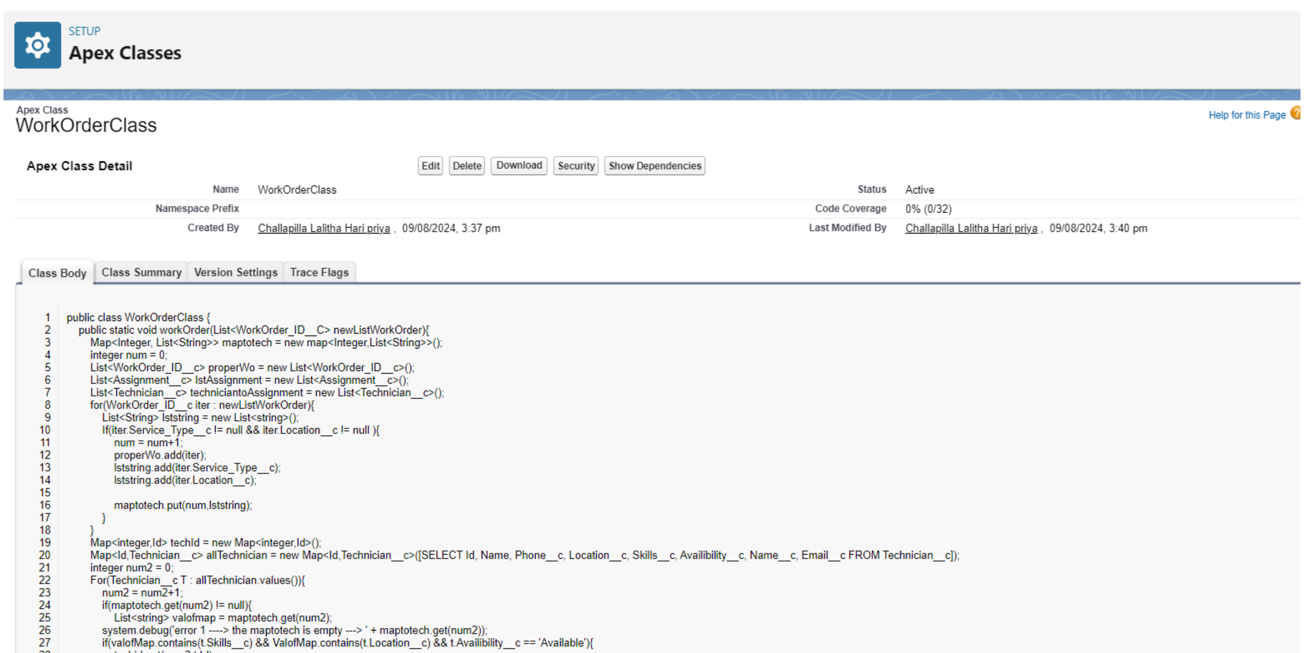
1. Go to Setup --> Click on the gear icon --> Select Developer Console.
2. Click on the developer console and you will navigate to a new console window.
3. Click on the file --> New --> Apex Class.
4. Click on the file --> New --> Apex Trigger, to create apex triggers.





There are different types of apex classes and triggers.

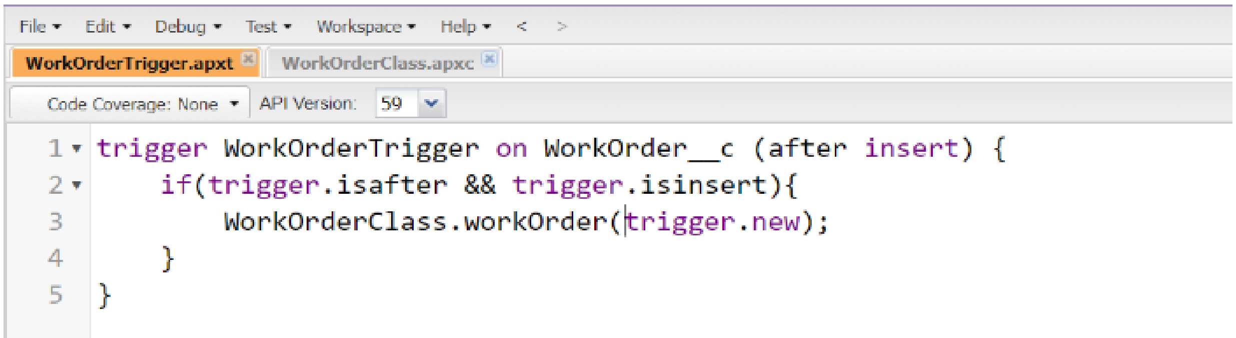
STEP-1: Creating Apex Class with Class Name as **WorkOrderClass.**

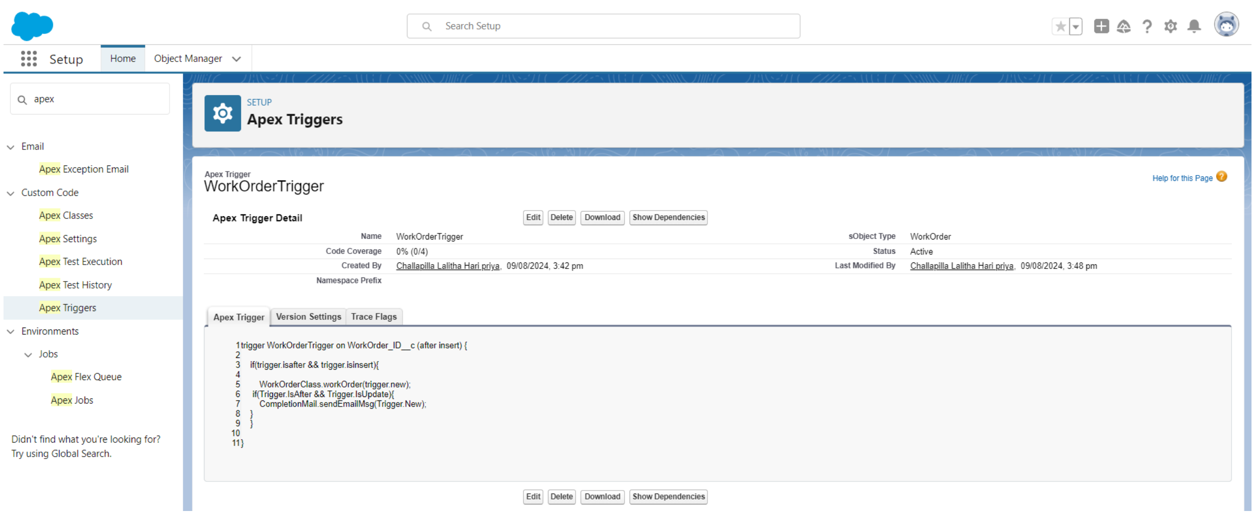


STEP-2: Create a Apex Trigger.

Create an ApexTrigger with Name : **WorkOrderTrigger**

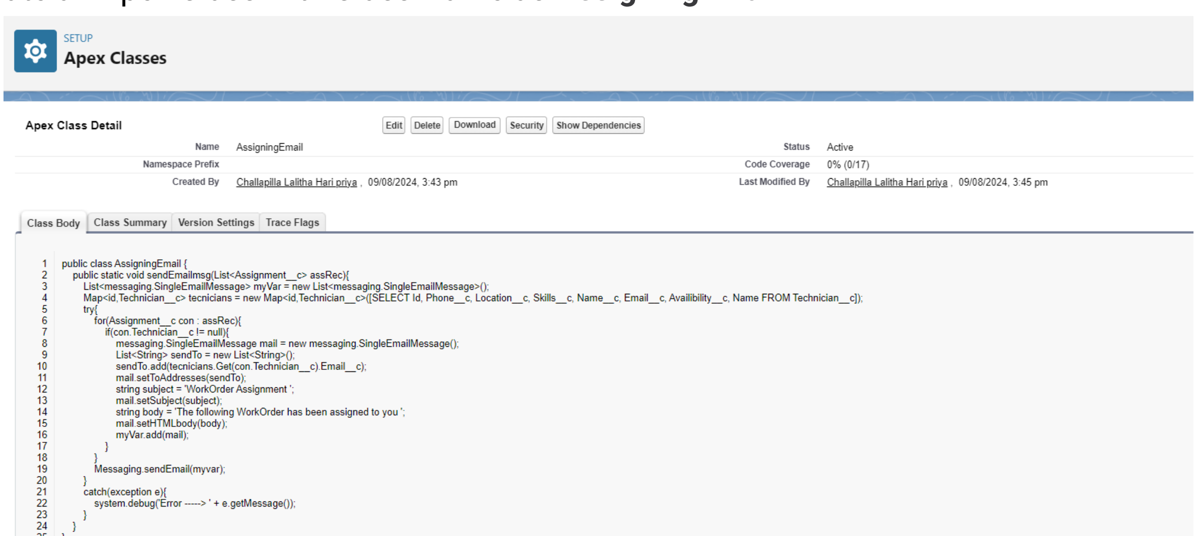
Select sObject as **WorkOrder__c**





STEP-3: Creating an Apex Class

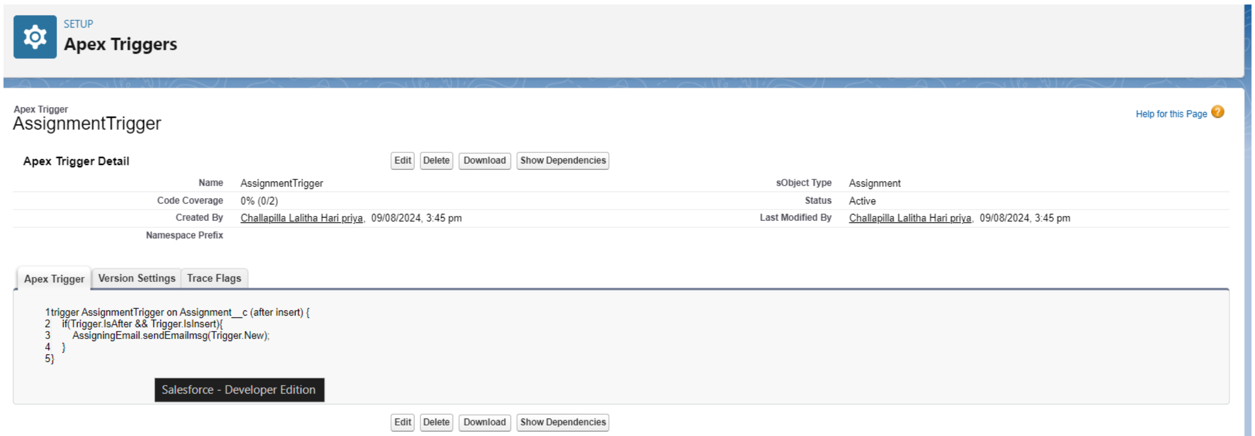
Create an Apex Class with Class Name as **AssigningEmail**



STEP-4: Creating an Apex Trigger

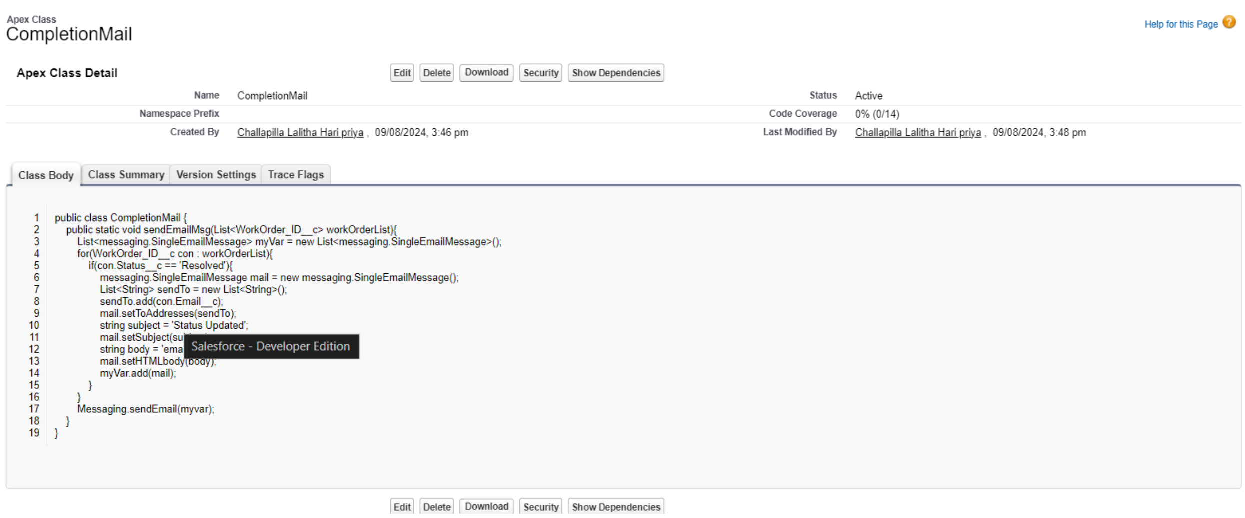
Create an Apex Class with Name : **AssignmentTrigger**

Select sObject as **Assignment__c**



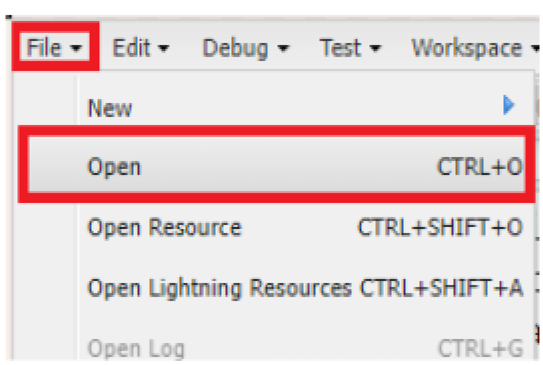
STEP-5: Creating an Apex Class

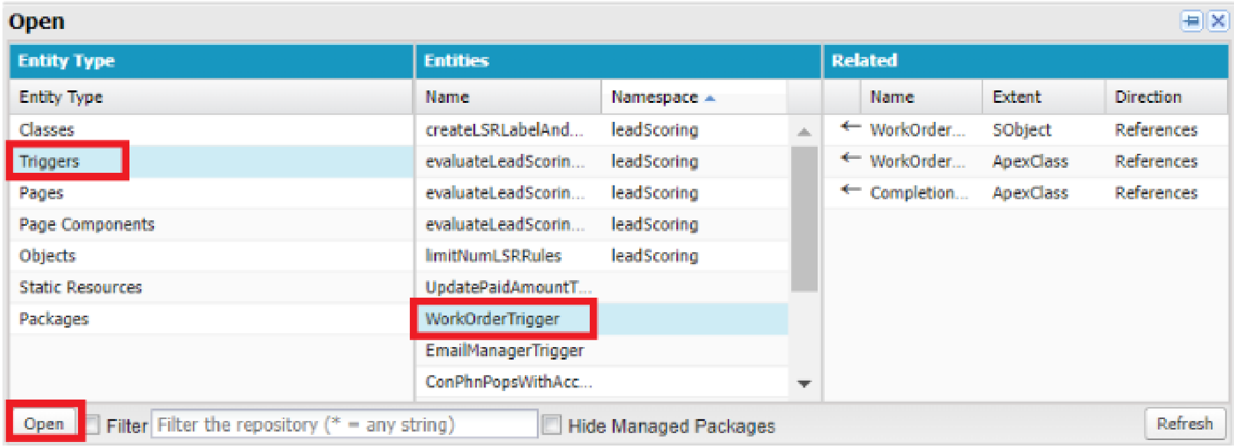
Create an Apex Class with Class Name : **CompletionMail**



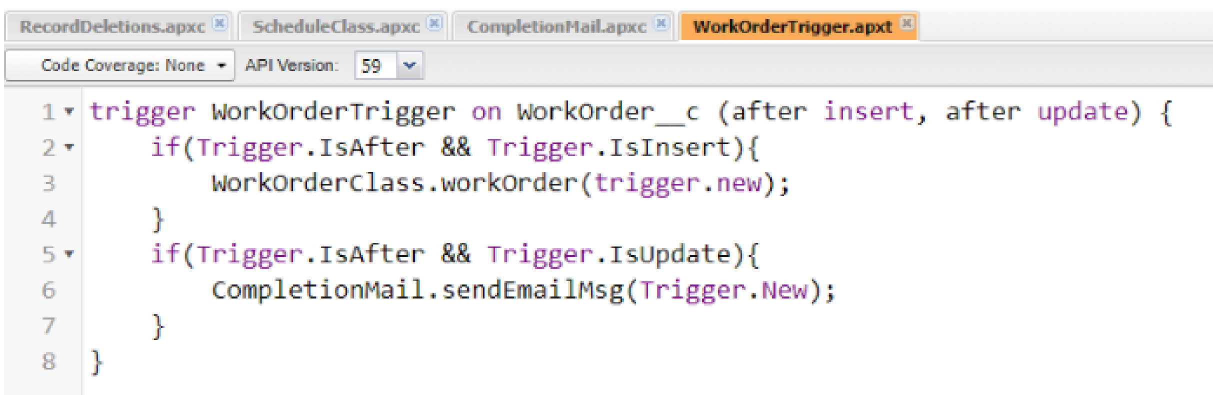
STEP-6: Creating an Apex Trigger

1. Click on the file --> Open.
2. A pop up window opens click on Triggers, then select “WorkOrderTrigger” and click on “Open”.





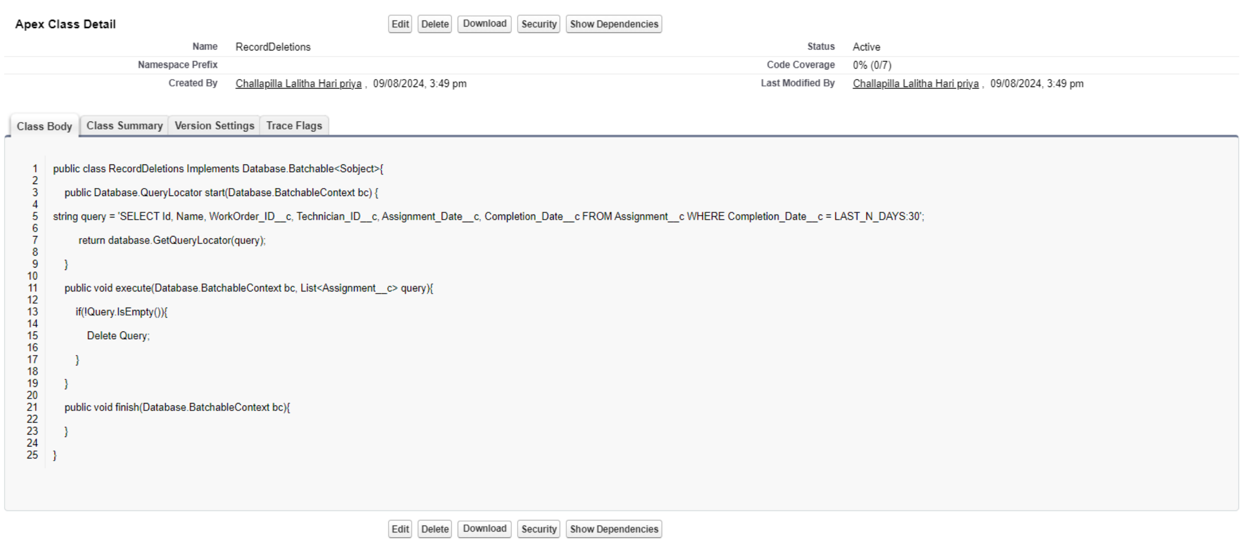
3.Now write the code.




```
trigger WorkOrderTrigger on WorkOrder__c (after insert, after update) {
    if(Trigger.IsAfter && Trigger.IsInsert){
        WorkOrderClass.workOrder(trigger.new);
    }
    if(Trigger.IsAfter && Trigger.IsUpdate){
        CompletionMail.sendEmailMsg(Trigger.New);
    }
}
```

STEP-7: Creating an Asynchronous Apex Class

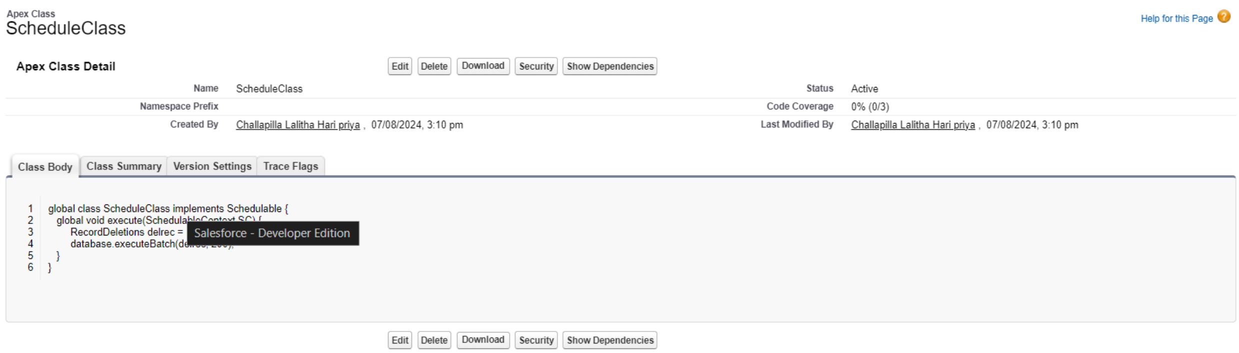
Create an Apex Class with Class Name as **RecordDeletion.**




```
public class RecordDeletions Implements Database.Batchable<Sobject>{

   public Database.QueryLocator start(Database.BatchableContext bc) {

string query = 'SELECT Id, Name, WorkOrder_ID__c, Technician_ID__c, Assignment_Date__c, Completion_Date__c FROM Assignment__c WHERE Completion_Date__c = LAST_N_DAYS:30';

       return database.GetQueryLocator(query);

   }

   public void execute(Database.BatchableContext bc, List<Assignment__c> query){

      if(!Query.IsEmpty()){

         Delete Query;

      }

   }

   public void finish(Database.BatchableContext bc){

   }

}
```

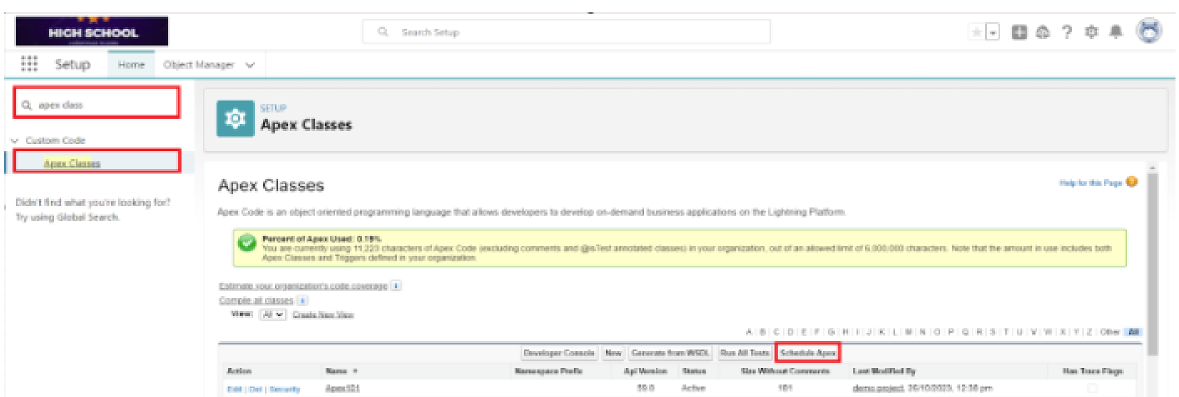
STEP-8: Creating an Apex Schedule Class

Create an apex Class with Class Name as **ScheduleClass.**



STEP-9: Creating a Schedule Apex

1. From the Setup page search for "**Apex Classes**" in quick search.
2. Click on "**Schedule Apex**" as shown below.



3.Fill the following details as follow:

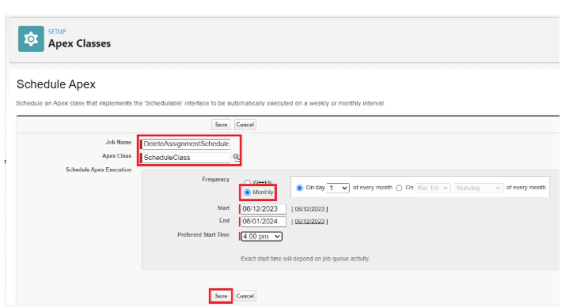
Job Name : **DeleteAssignmentSchedule**

Apex Class : **ScheduleClass (from clicking on lookup icon)**

Frequency : **Monthly**

Preferred Start Time : **Select any time**

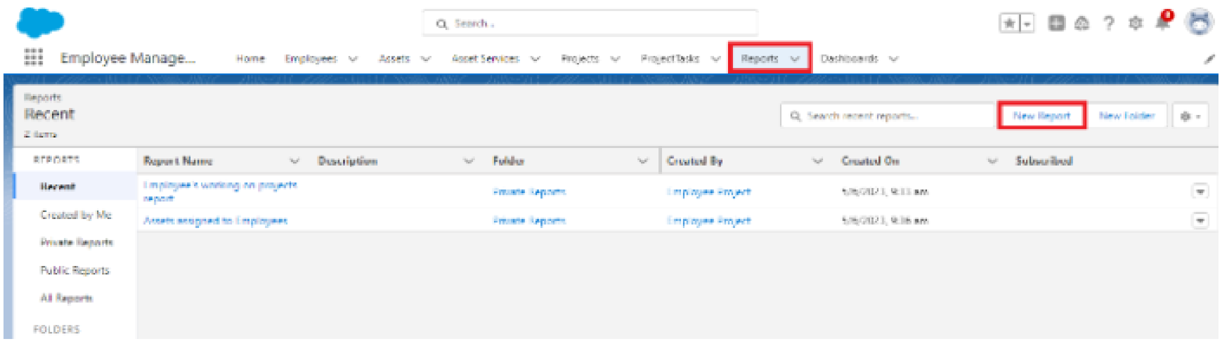
4.Click Save.



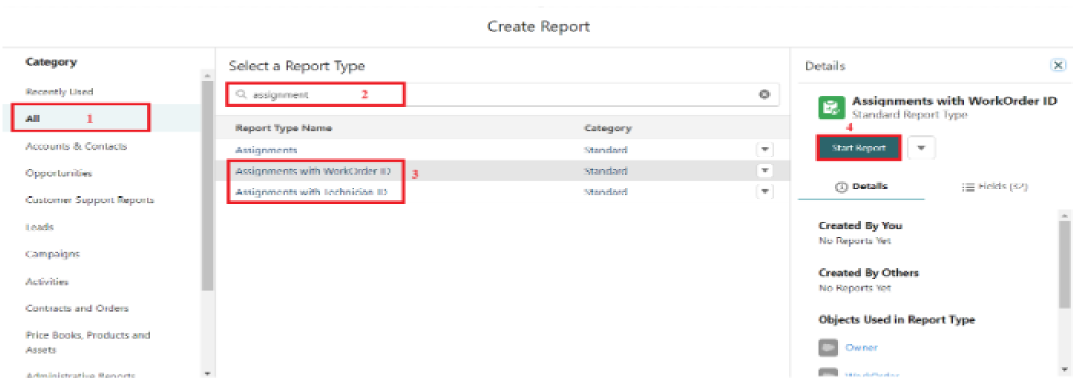
TASK 8: Report

We need to create the reports for Assignments objects.

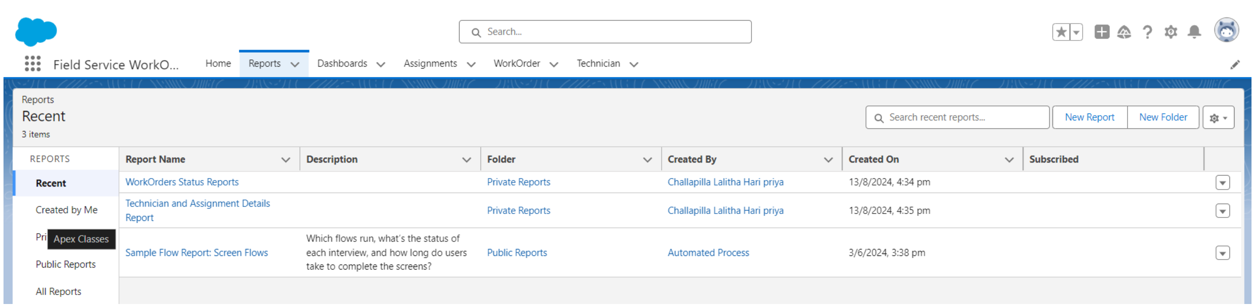
1. Go to the app --> click on the reports tab.
2. Click New Report.



3. Select report type from category All --> search for Assignment --> Click on Start report.

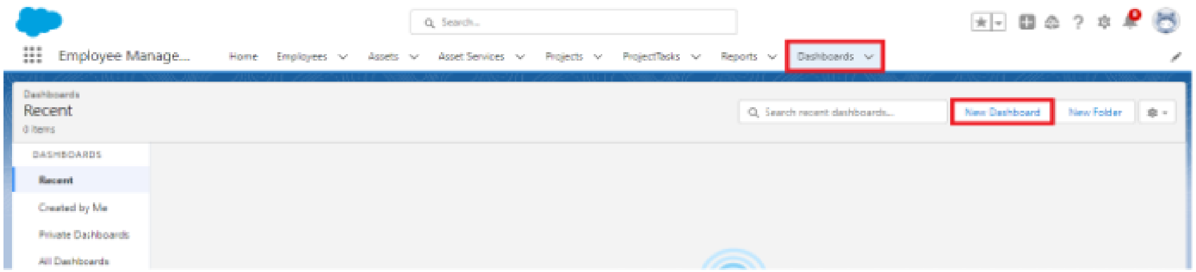


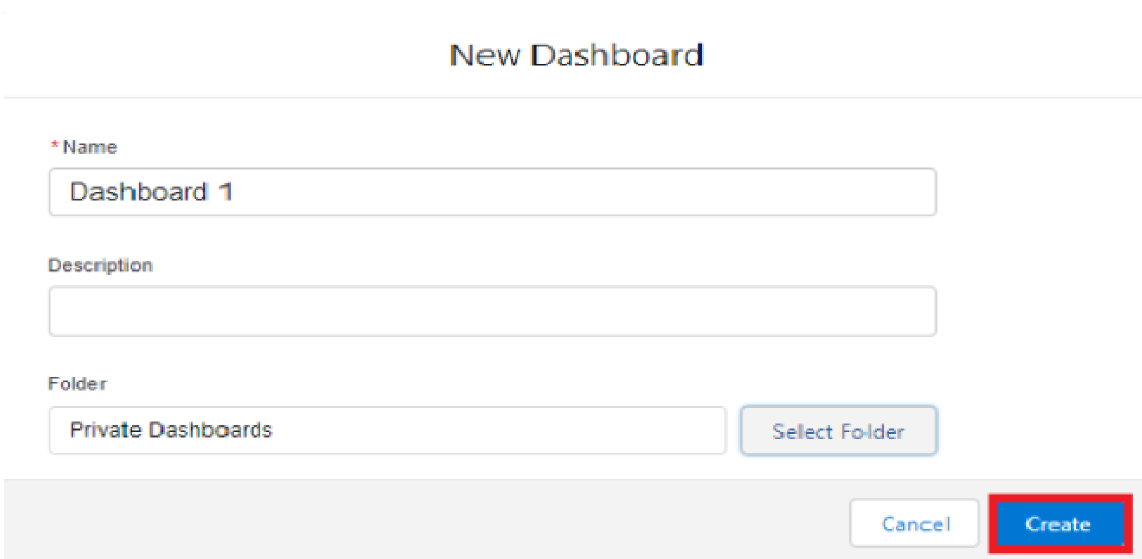
4. Create a report with report type: "WorkOrders Status Reports".
5. Create a report with report type: "Technician and Assignment Details Reports".



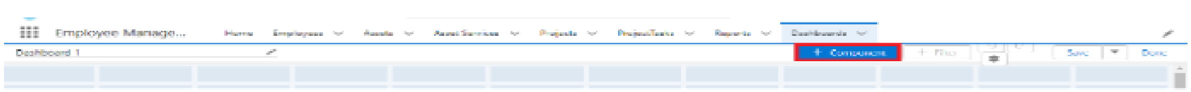
TASK 9: Dashboard

1. Go to the app --> click on the Dashboards tabs.
2. Give a Name and click on Create.

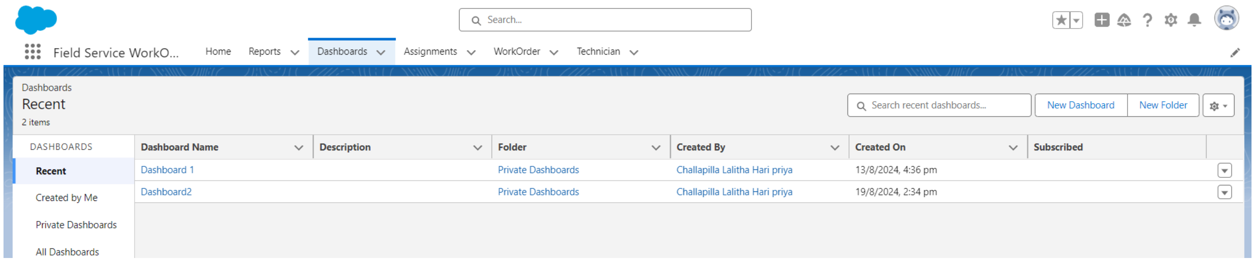




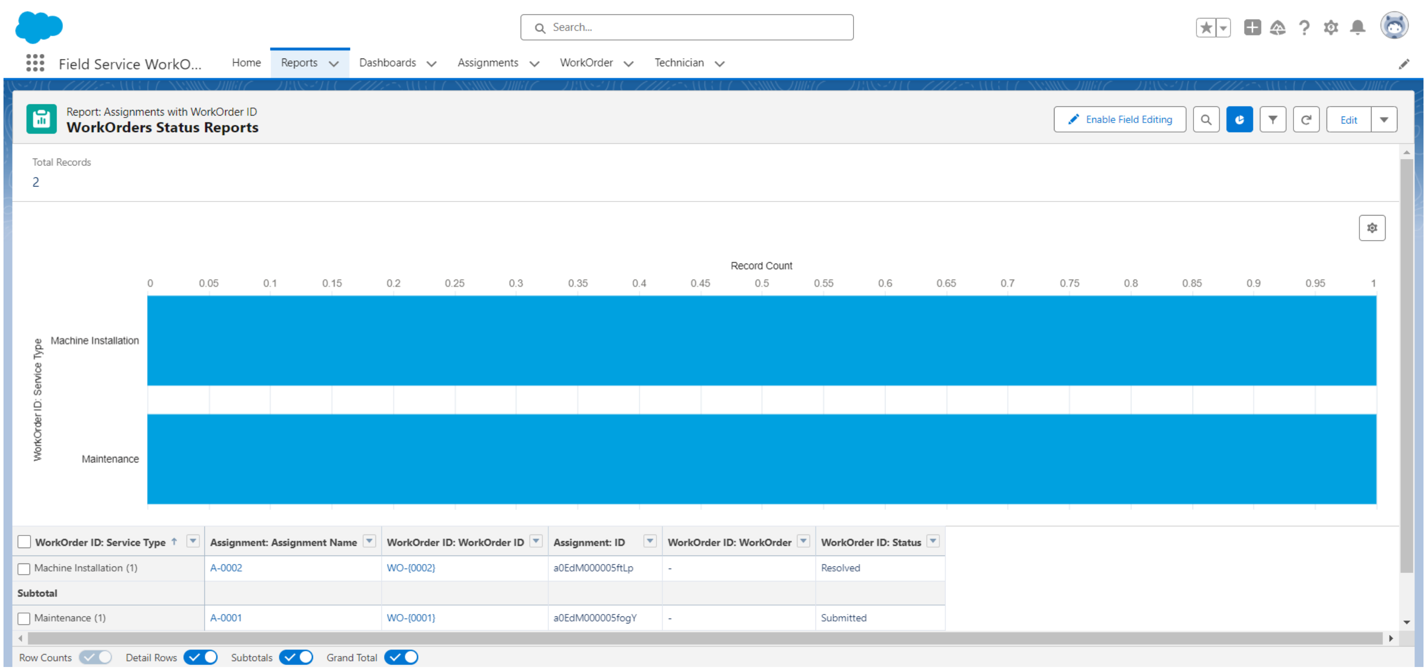
3. Select add component.



4. Select a Report which we have created in the previous activities and click on select.
5. Click on Add and Save you will able to see reports you have created.



6. Shows the details of completed workorder status in a vertical bar graph.



THANK YOU