FIELD SERVICE WORKORDER OPTIMIZATION Report

Rekha S C
rekhasc49@gmail.com
East point College Of engineering and Technology

PROJECT ABSTRACT

The Field Service Workorder Optimization project aims to enhance the efficiency and effectiveness of managing field service operations. By implementing automated scheduling systems, the project ensures work orders are prioritized and assigned based on technician availability, skills, and proximity, thereby reducing downtime and travel time. Real-time data integration and GPS tracking provide technicians with up-to-date information and directions, facilitating seamless communication with the back office. An intuitive user interface allows technicians to easily access and update job details, while managers benefit from dashboards displaying key performance metrics. This optimization not only increases operational efficiency and reduces costs but also improves customer satisfaction by ensuring timely and high-quality service delivery. Overall, the project leverages technology and data analytics to streamline field service management, resulting in significant improvements in resource utilization and service outcomes.

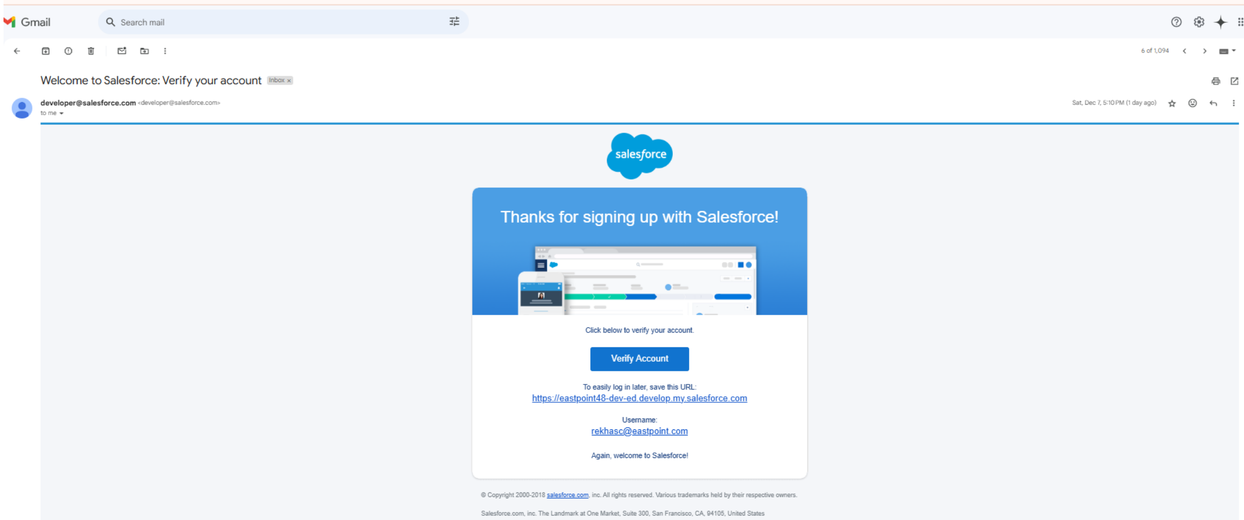
INTRODUCTION

Efficient management of field service operations is crucial for organizations aiming to provide timely and high-quality service to their customers. The Field Service Workorder Optimization project addresses this need by leveraging advanced scheduling algorithms, real-time data integration, and intelligent resource allocation. In an industry where minimizing downtime, reducing travel time, and enhancing customer satisfaction are paramount, this project seeks to streamline the process of managing and executing work orders. By incorporating technology and data-driven strategies, the project aims to transform traditional field service management, ensuring optimal use of resources and improved service outcomes.

CONTENTS

1. Salesforce

- Creating Developer Account : Created a developer organization in salesforce platform by filling all the relevant details.



1. **Account Activation :** Then I have got the mail, verifiedmy account, and set up a password.

2.Object

- **Create Technician Object :** After downloading the given Technician spreadsheet, create custom object from spreadsheet, upload the technician.csv file and importthe data as shown.
- **Create WorkOrderObject :** Same steps to be followed for work order object, here we no need to import the data as shown in the steps.
- **Create Assignment Object :** Creating a custom object with the label name as Assignment and enter the details, then save.

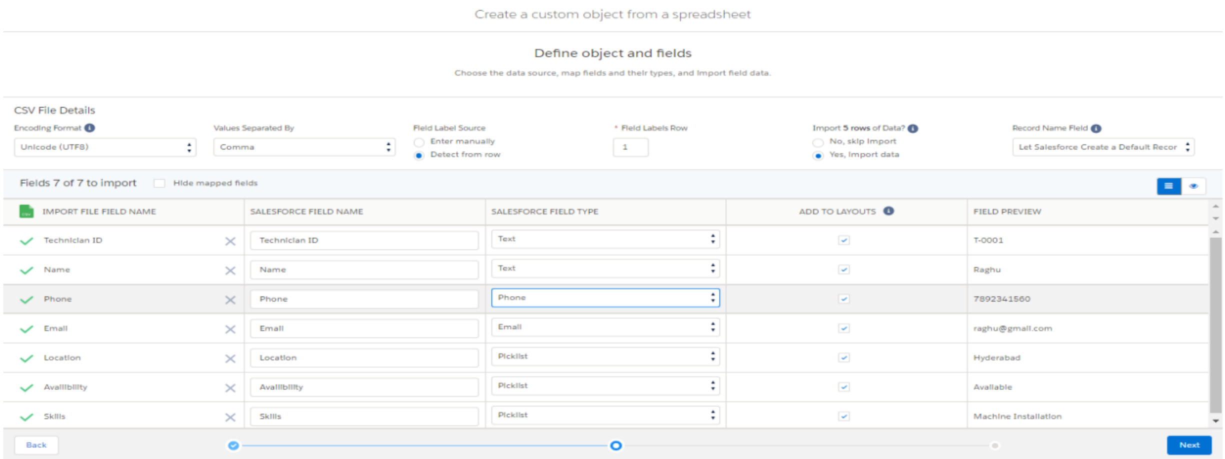


FIG 2.1: Create Technician Object

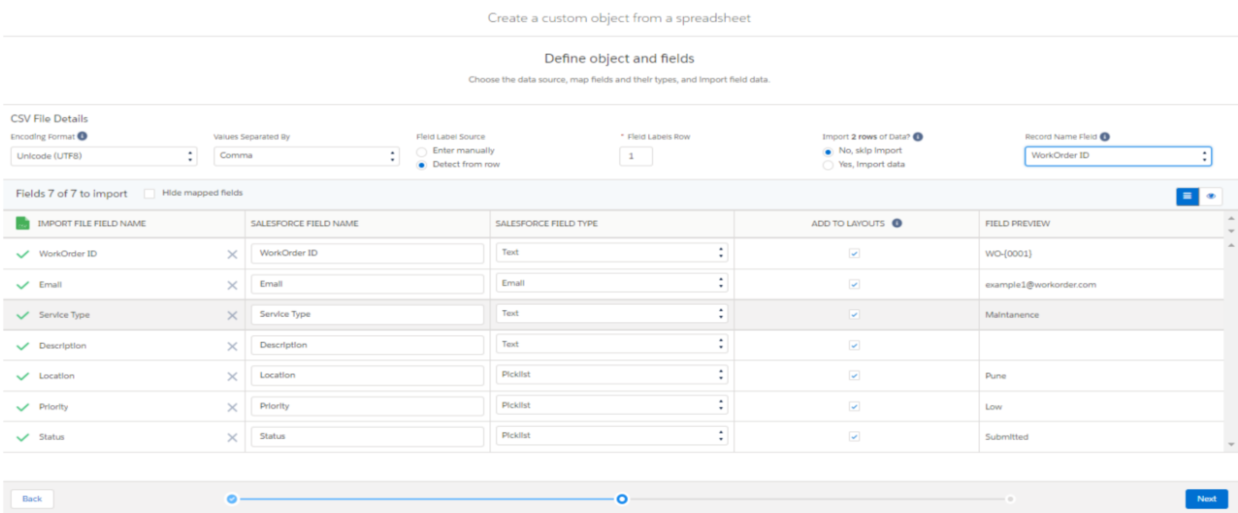
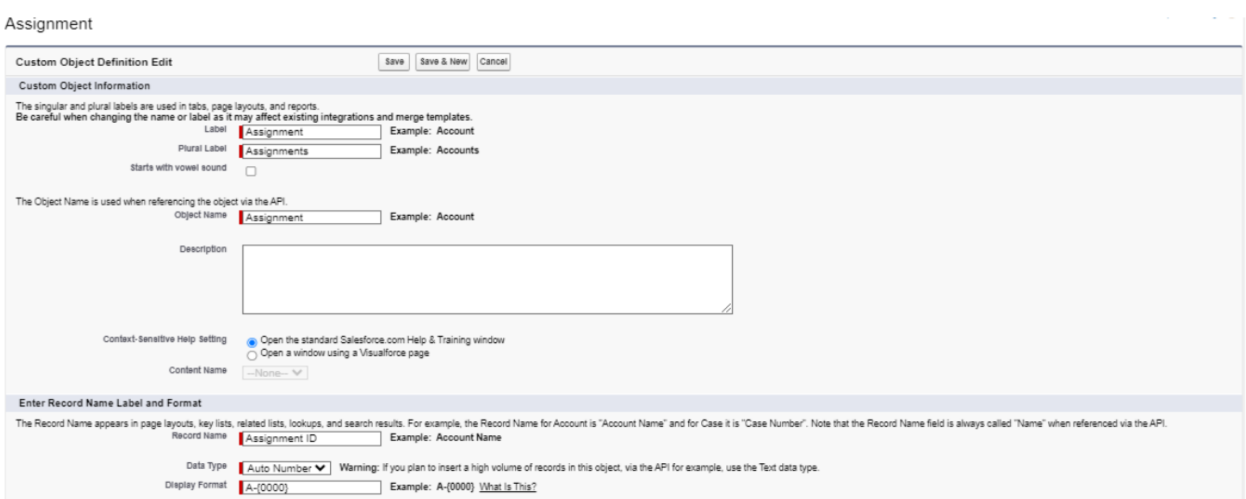


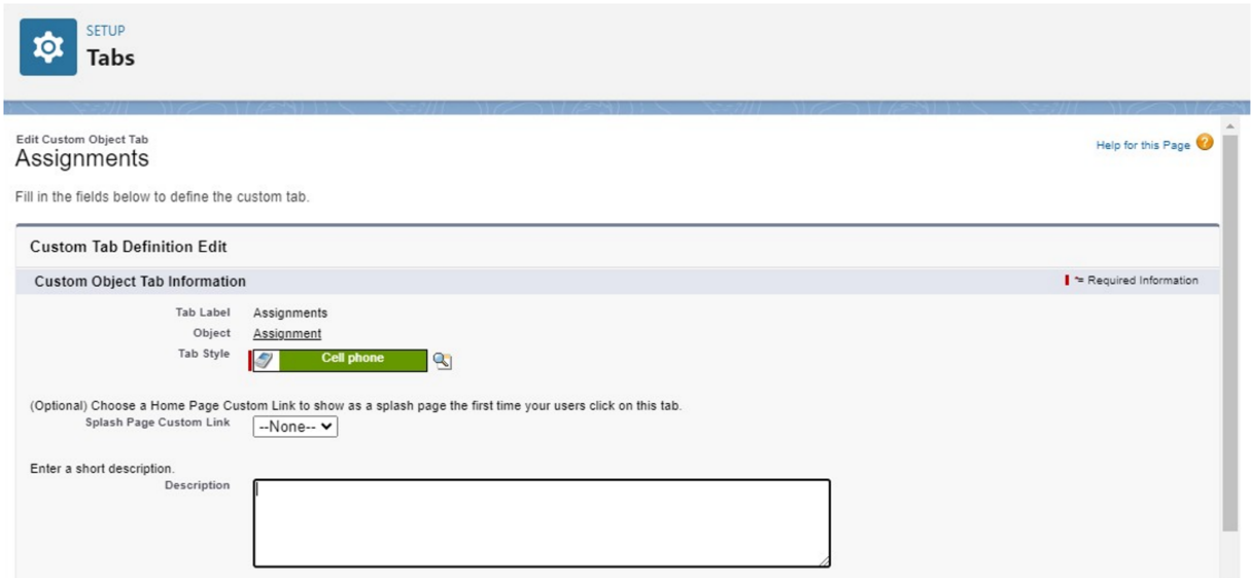
FIG 2.2 : Create WorkOrderObject

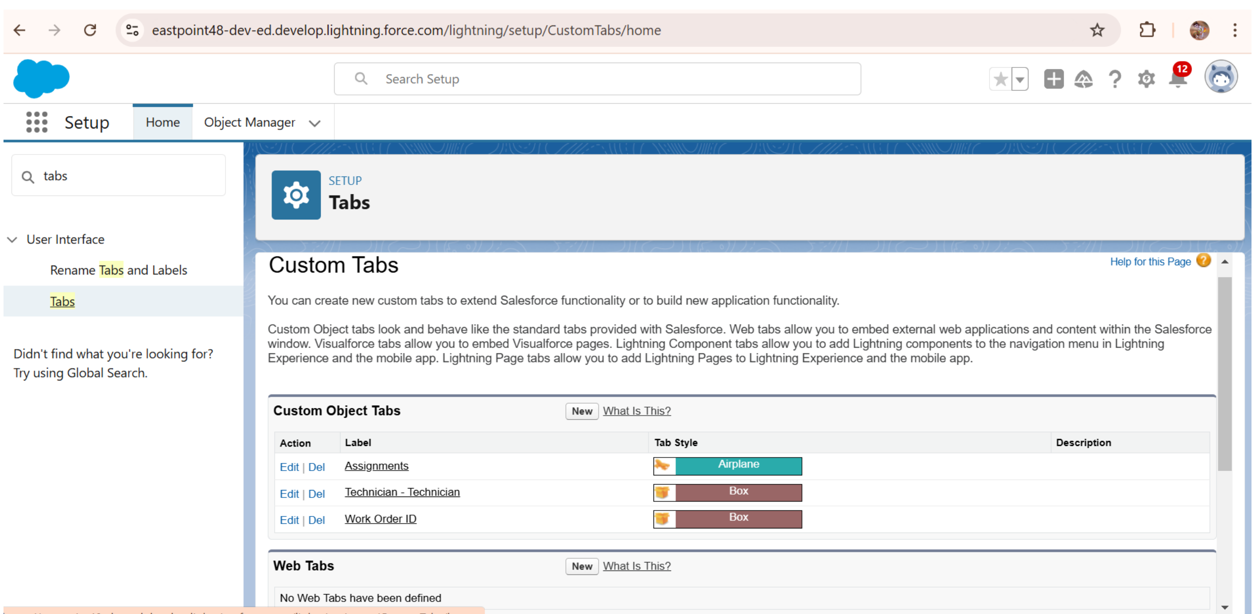
FIG 2.3 : Create Assignment Object



3.Tabs

Creating a Custom Tab : Select the Tabs optionin Quick find box and create new tab namedAssignment





By default, Technician and WorkOrder tabs will be created once the customobject is created.

4.The Lightning App

1. **Create a Lightning App :** Again, in quick find box, go to app manager and create newlightning app with the name of project and some furtherdetails.
    a. Add Navigation Items (i.e, Home, WorkOrder, Assignments, Technician, Reportsand Dashboards)

b. Add User Profile(i.e, System Administrator)

c. Then click save and finish

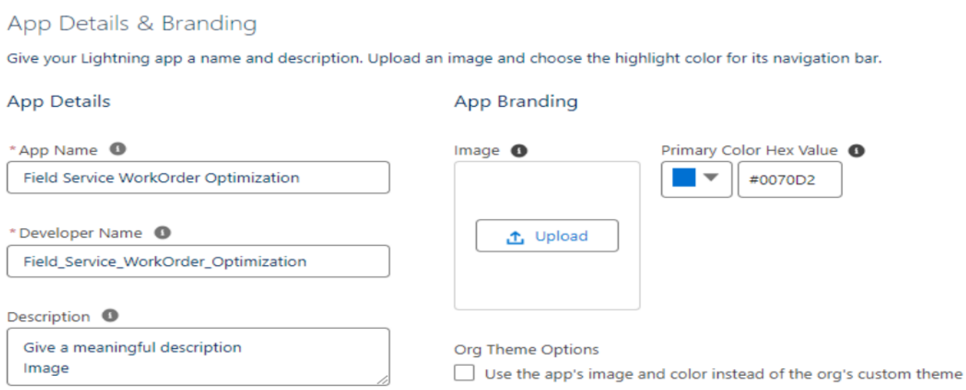


FIG 4.1: Create LightningApp

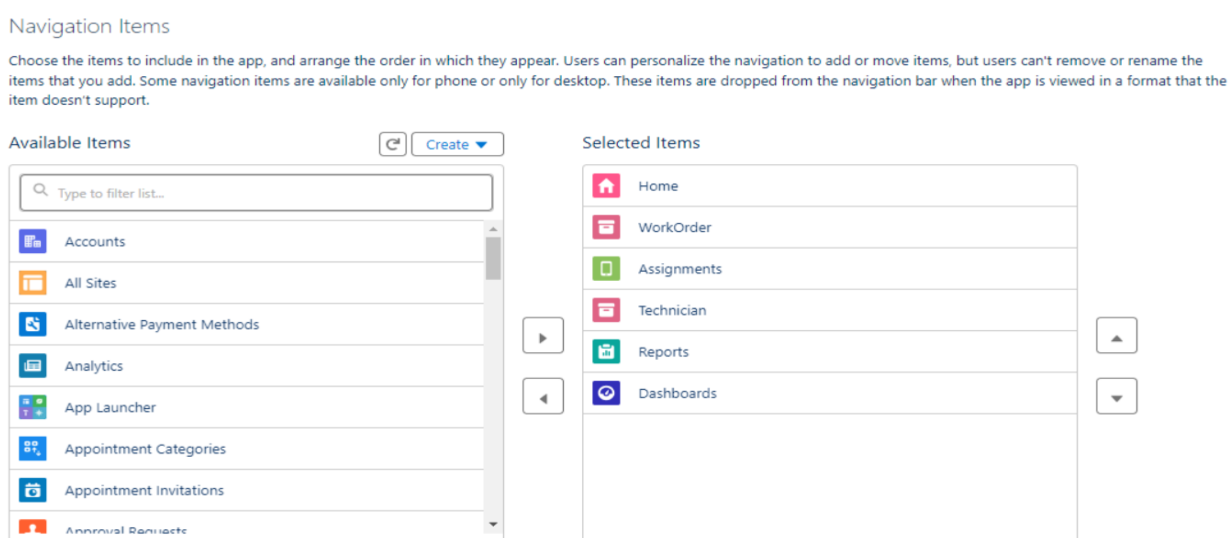


FIG 4.2 : Add Navigation Items

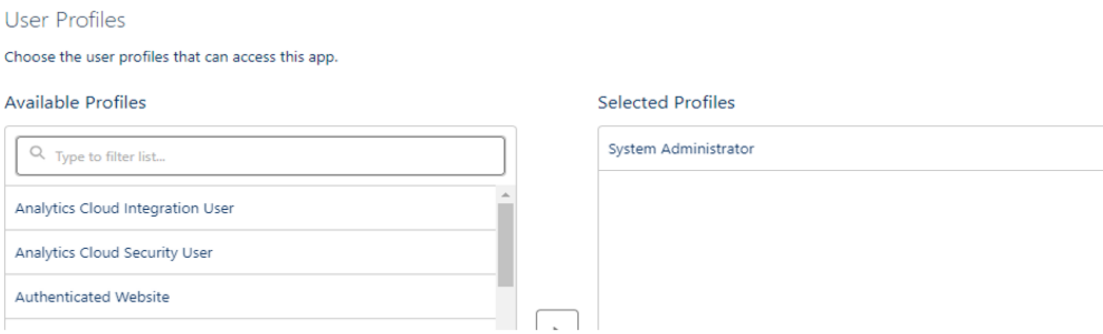
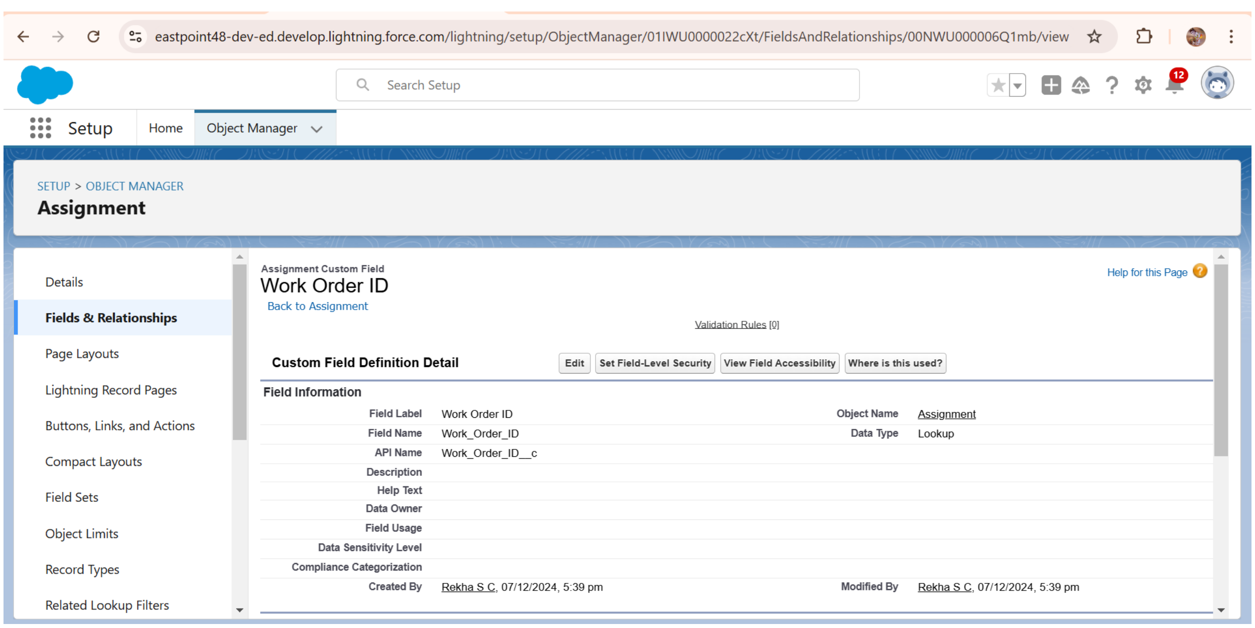


FIG 4.3 Add User Profile

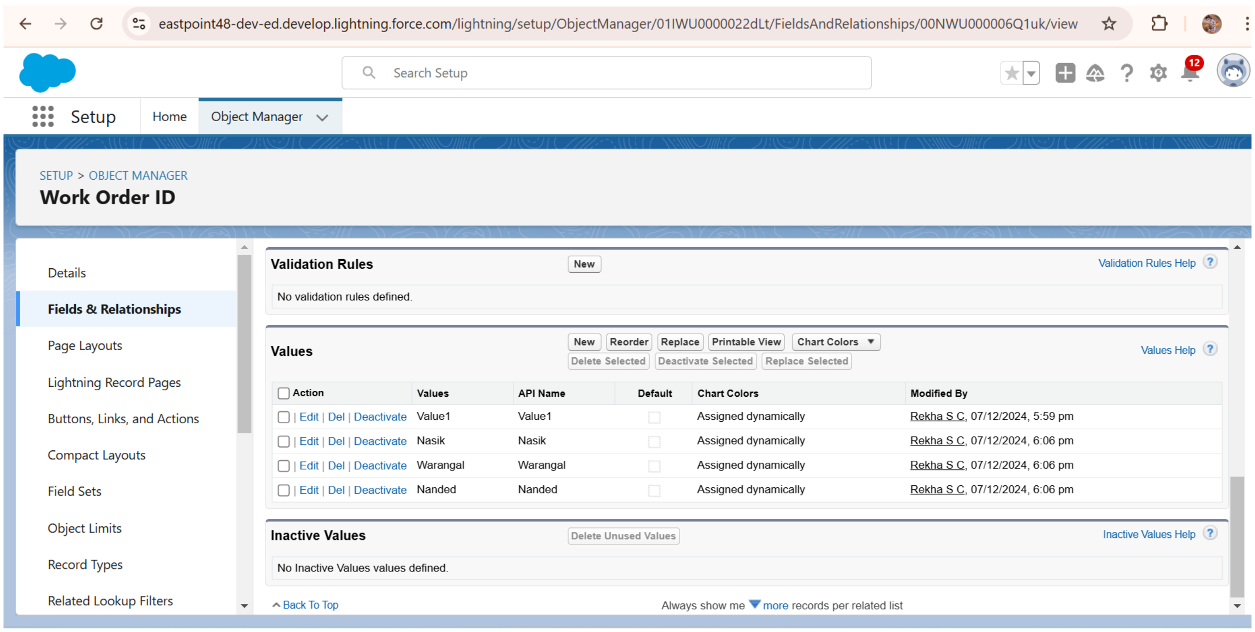
5. Fields & Relationships

Creating Lookup Field In Assignment Object : In Assignment go to Fields& Relationships and createa new field labeled as WorkOrder and datatype as Lookup

.

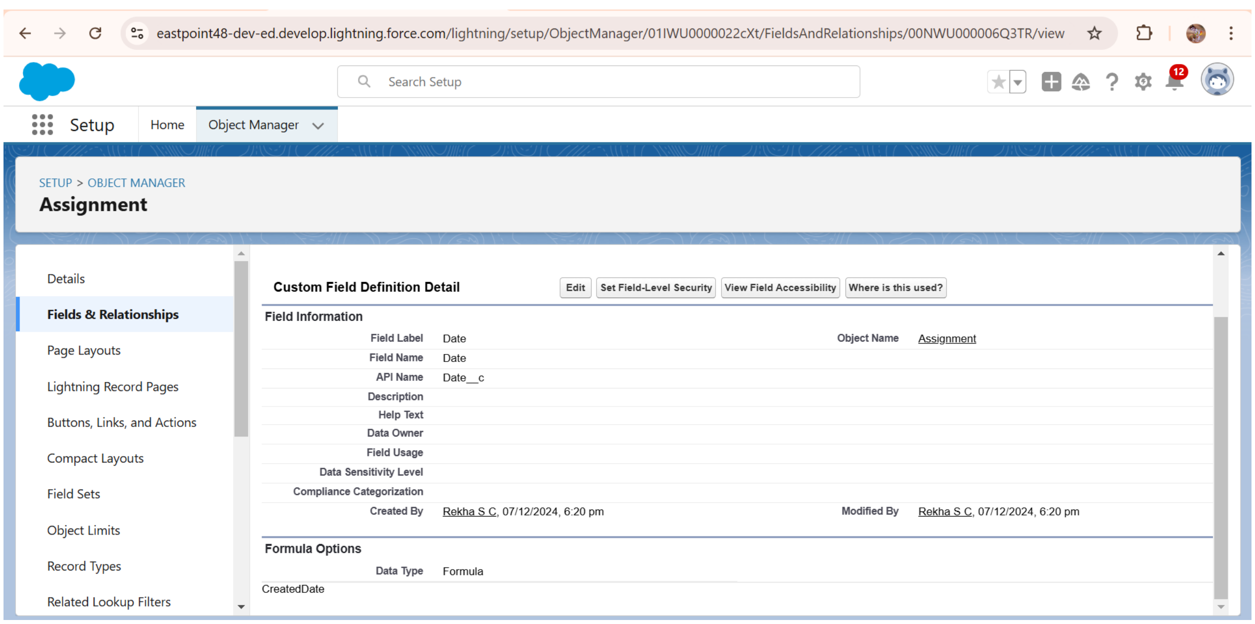


Manage your Picklist Values: In ObjectManager select WorkOrder object go to fields &relationships. In that location field add new values (i.e,Nasik, Warangal, Nanded).

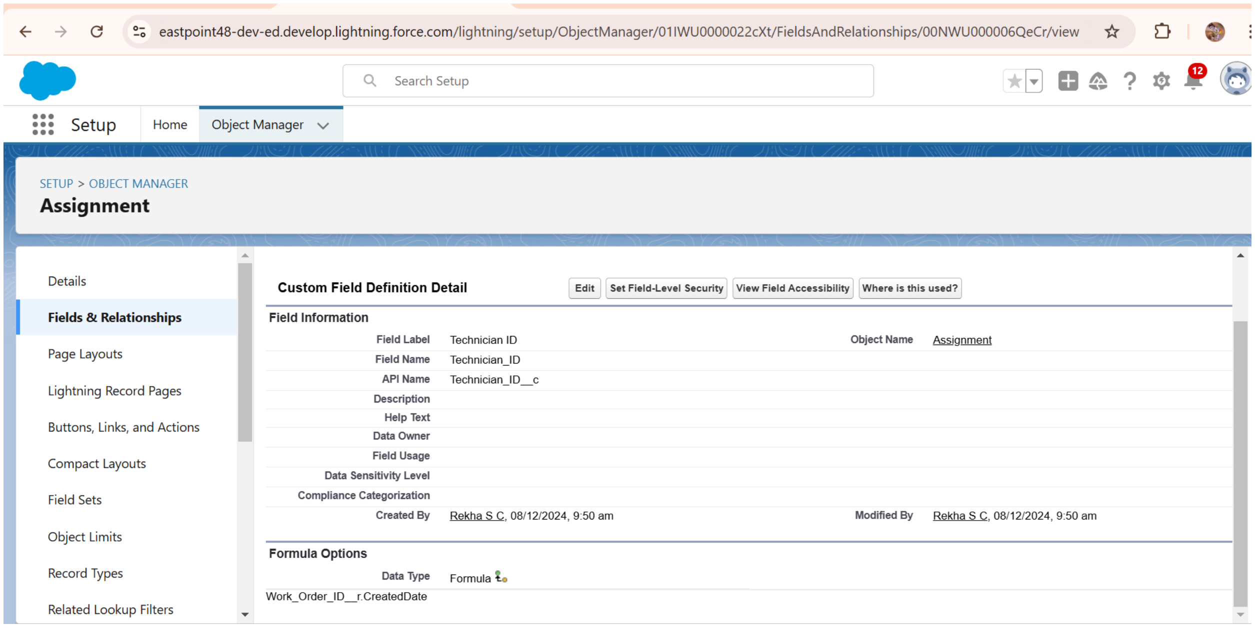


Add more values in the fields of priority(i.e, High) and Servicetype(i.e, Hardware repair,Troubleshoot/Debugging, Lane-Management).

Creating Formula Field in WorkOrder Object: Now create a Formula Datatypeand givethe field label as "date". The formula is "CreateDate".



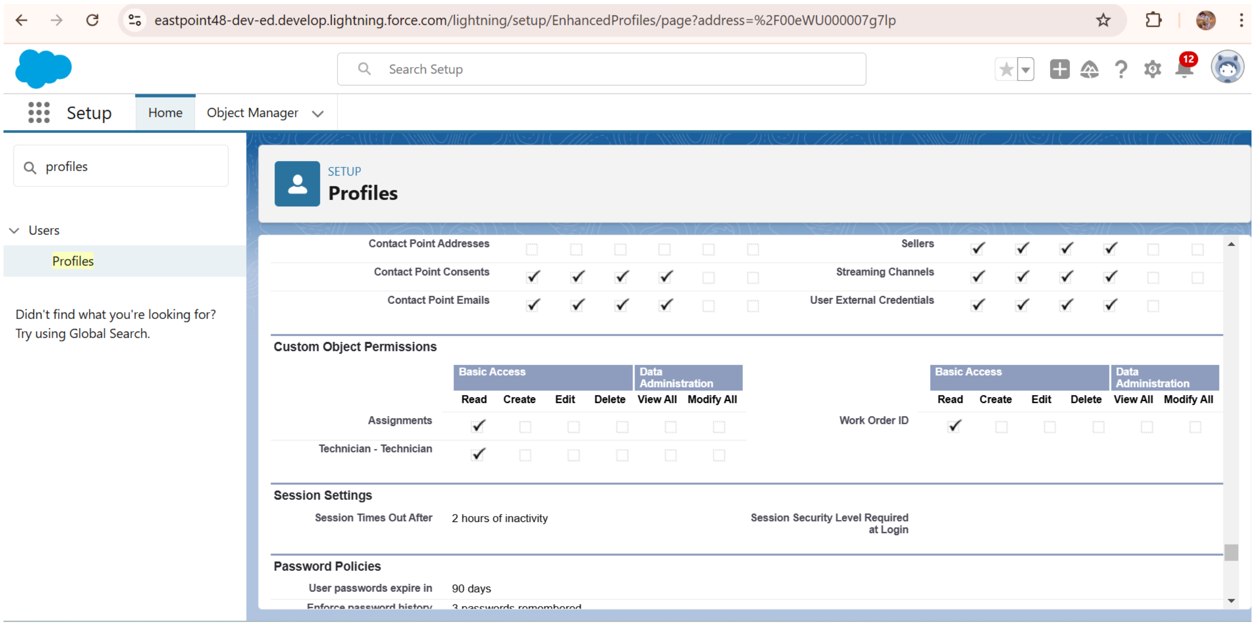
Now, in the Assignment object, create a Formula Datatypein Fields &relationships. Add Technician ID with return type Date.



Add Assignment Date with Formulawith return type date(WorkOrder_ID_r.Date_c).
Add Completion Date with Formula with return type date " IF(ISPICKVAL(WorkOrder_ID_r.Status_c , 'Resolved'), WorkOrder_ID_r.LastModifiedDate ,NULL)"

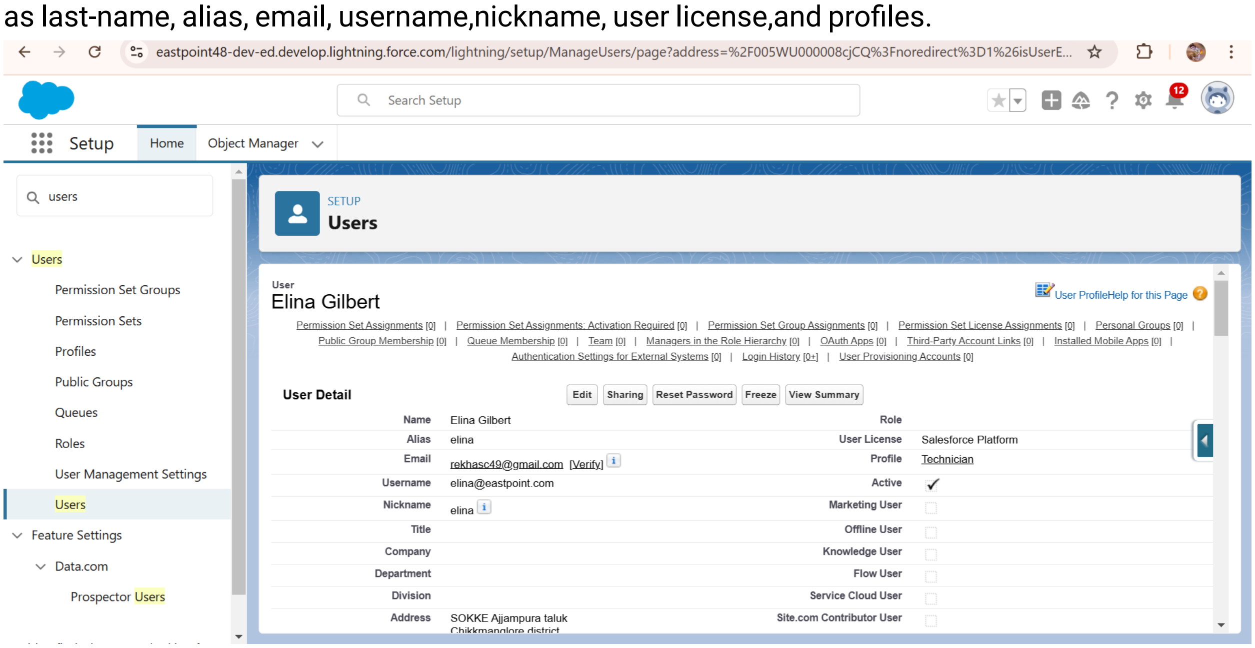
6.Profiles

Technician Profile : To create a new profile in Salesforce, navigate to Setup, type "Profiles" in the Quick Find box, and select "Profiles." Click "New Profile," choose "Standard Platform User" as the existing profile, name it "Technician," and click "Save."On the profile page, click "Edit." Scroll to Custom Object Permissions and grant Read- only access for Technician, WorkOrder, and Assignment objects, then click "Save." On the profile detail page, scroll to Custom Field-Level Security, click "View" next to the WorkOrder object, then "Edit." Enable the checkbox for the Status field and click "Save."



7.Users

Create User : Go to User and create a new one with new name and other detailssuch as last-name, alias, email, username,nickname, user license,and profiles.



8.Apex Trigger

Create Apex Class : To create a new Apex Class in Salesforce, go to Setup, click the gear icon, and select "Developer Console." The Developer Console will open in a new window. Click on "File," then "New," and select "Apex Class." Name the class "WorkOrderClass" and click "OK."

Create Apex Trigger : To create a new Apex Trigger in Salesforce, open the Developer Console, click on "File," then "New," and select "Apex Trigger." Name the trigger "WorkOrderTrigger" and select "WorkOrder c" from the sObject dropdown. Click"Submit" to create the trigger.

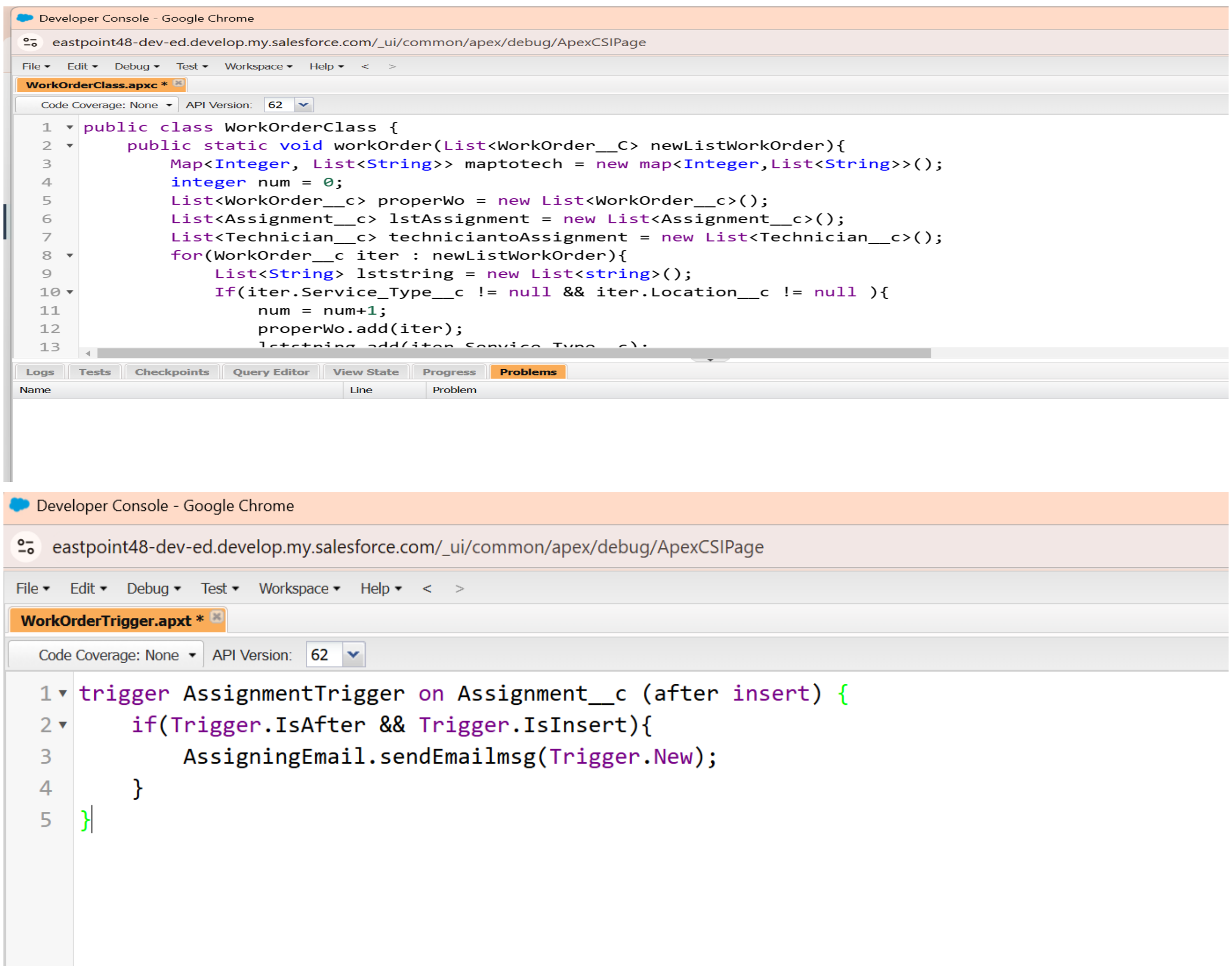


FIG 8.1 WorkOrder Apex Class and Trigger Code

Create Apex Class : To create a new Apex Class in Salesforce, go to Setup, click the gear icon, and select "Developer Console." The Developer Console will open in a new window. Click on "File," then "New," and select "Apex Class." Name the class "AssigningEmail" and click "OK."

Create Apex Trigger : To create a new Apex Trigger in Salesforce, open the Developer Console, click on "File," then "New," and select "Apex Trigger." Name the trigger "AssignmentTrigger" and select "WorkOrder c" from the sObject dropdown. Click "Submit" to create the trigger.

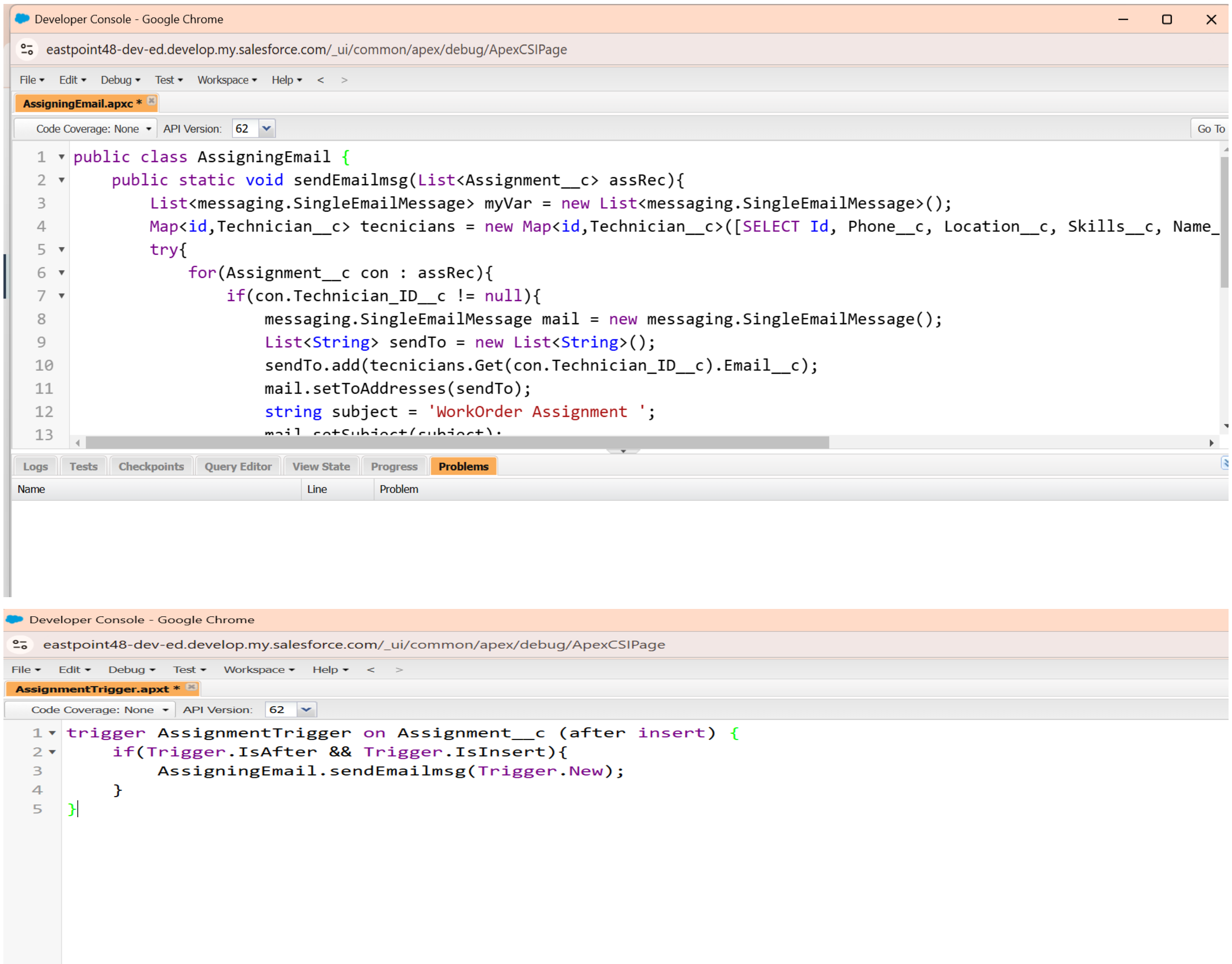


FIG 8.2 Assignment Apex Class and Trigger Code

Create Apex Class : To create a new Apex Class in Salesforce, go to Setup, click the gear icon, and select "Developer Console." The Developer Console will open in a new window. Click on "File," then "New," and select "Apex Class." Name the class "CompletionMail" and click "OK".

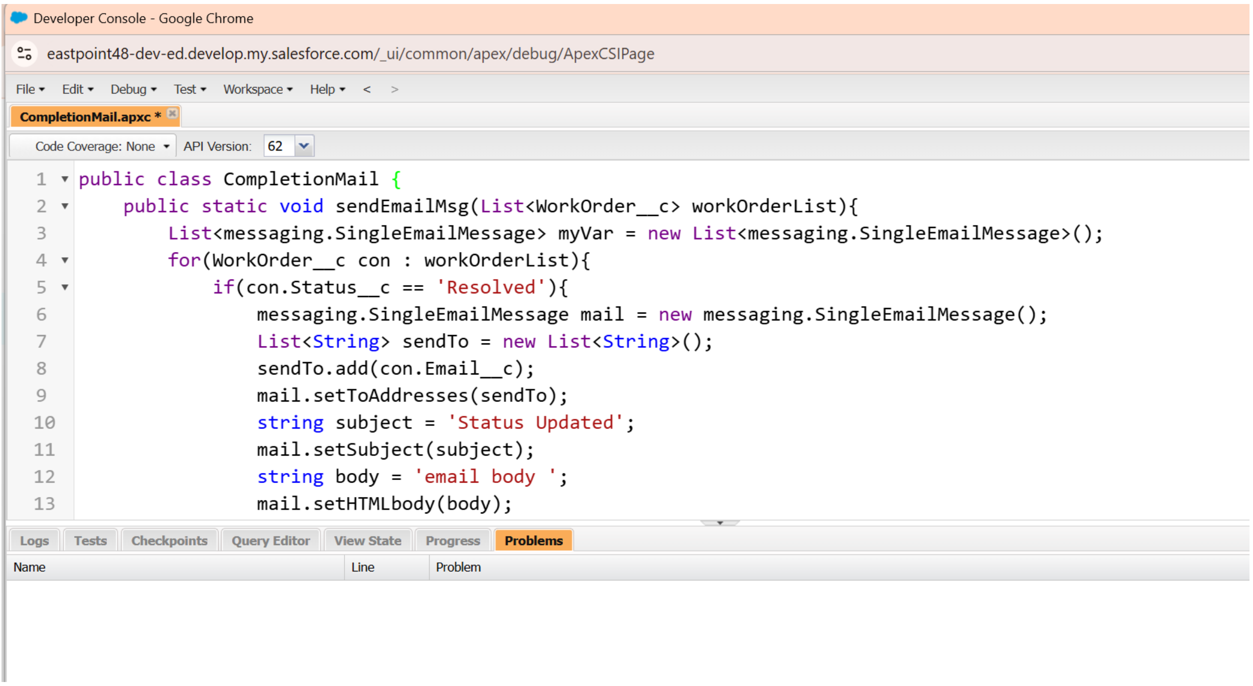


FIG 8.3 Completion Apex Class Code

Create an Asynchronous Apex Class : To create a new Apex Class in Salesforce, go to Setup, click the gear icon, and select "Developer Console." The Developer Console will open in a new window. Click on "File," then "New," and select "Apex Class." Name the class "Record Deletion" and click "OK."

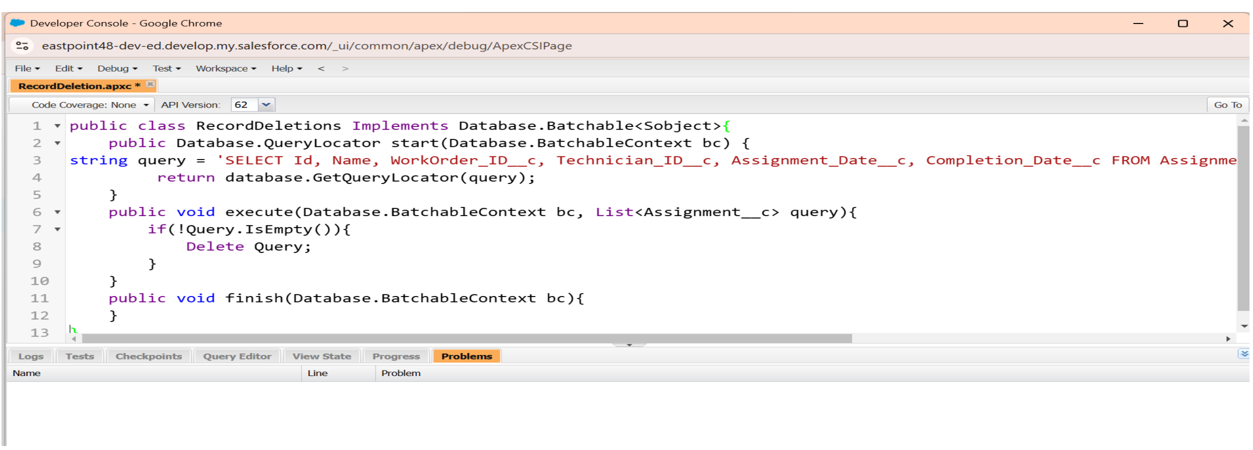
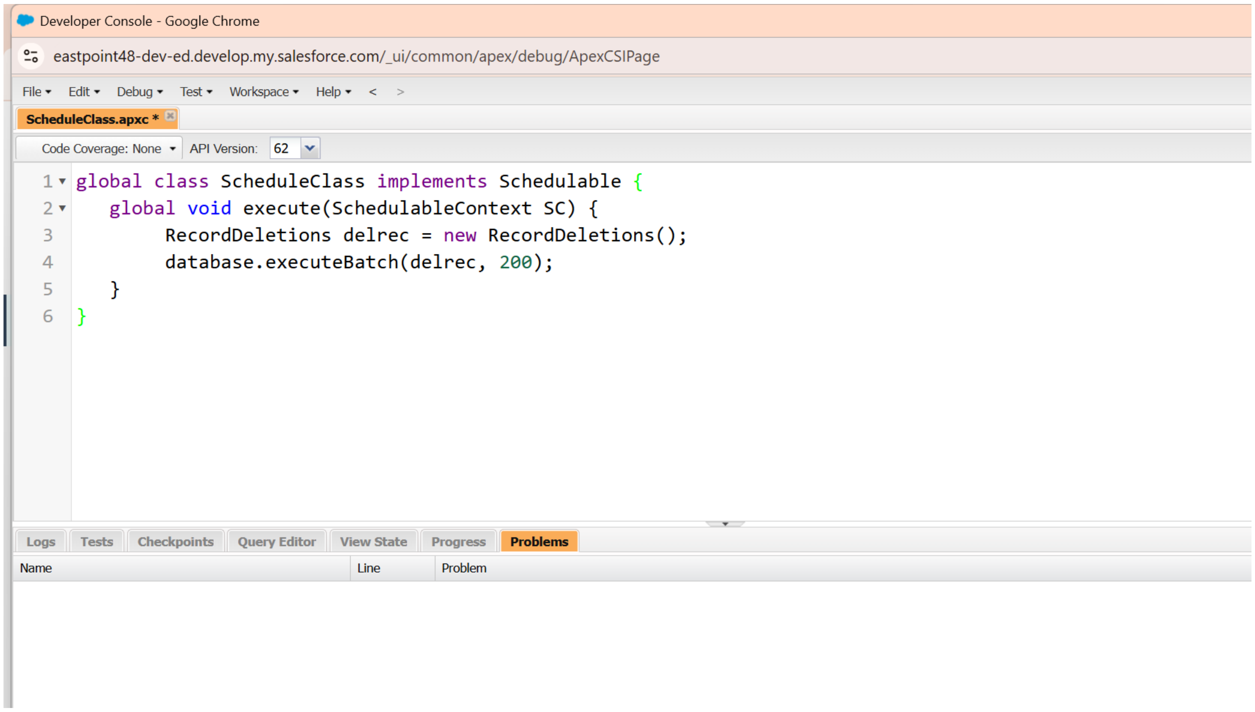


FIG 8.4 RECORD DELETION APEX CLASS CODE

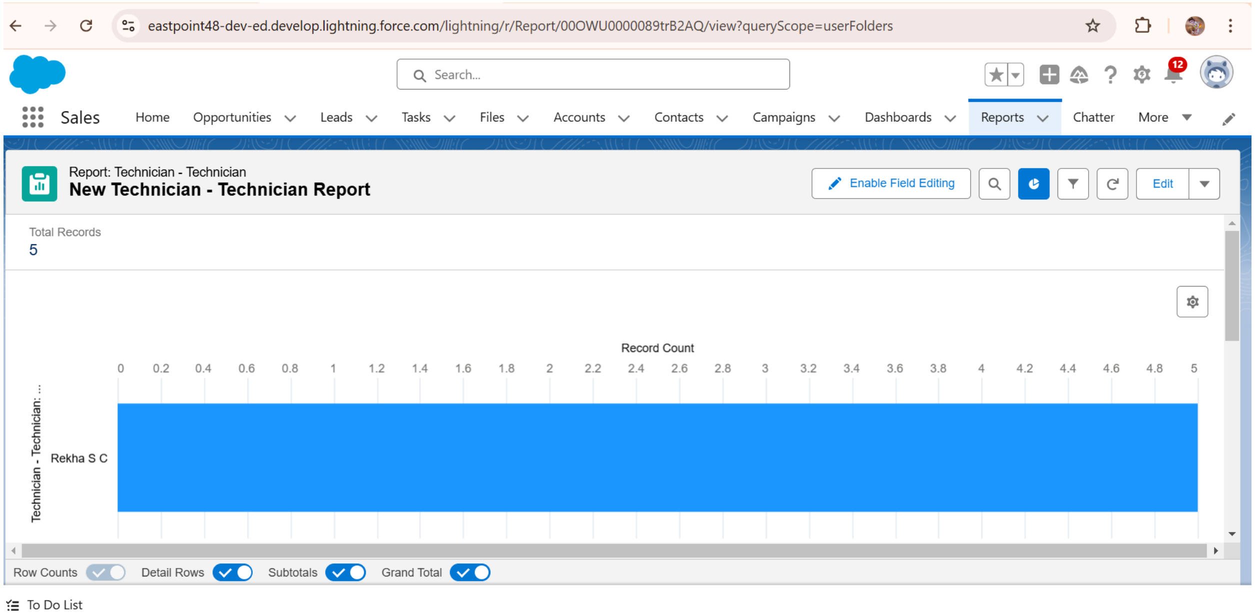
Create an Apex Schedule Class : To create a new Apex Class in Salesforce, go to Setup, click the gear icon, and select "Developer Console." The Developer Console will open in a new window. Click on "File," then "New," and select "Apex Class." Name the class "Schedule" and click "OK."



Create A Schedule Apex : To schedule an Apex class in Salesforce, go to Setup and search for “Apex Classes” in the Quick Find box. Click on “Schedule Apex.” Enter the Job Name as "DeleteAssignmentSchedule," select "ScheduleClass" using the lookup icon for the Apex Class, set the Frequency to "Monthly," and choose a Preferred Start Time. Save the schedule to automate the Apex class execution.

9. Reports & Dashboards

Create Reports : To create a new report in Salesforce, go to the app and click on the Reports tab. Click "New Report." Select the report type from the category, report type panel, or search panel, then click "Start Report." Customize your report by adding fields from the left pane. Group the report by Work Order ID for better organization. Save and run the report to view the results.



Create Dashboards : To create a dashboard in Salesforce, go to the app and click on the Dashboards tab. Click "New Dashboard," give it a name, and click "Create." Select "Add Component," choose the report you created previously, and click "Select." Click "Add," then "Save," and finally, click "Done" to complete the dashboard setup.

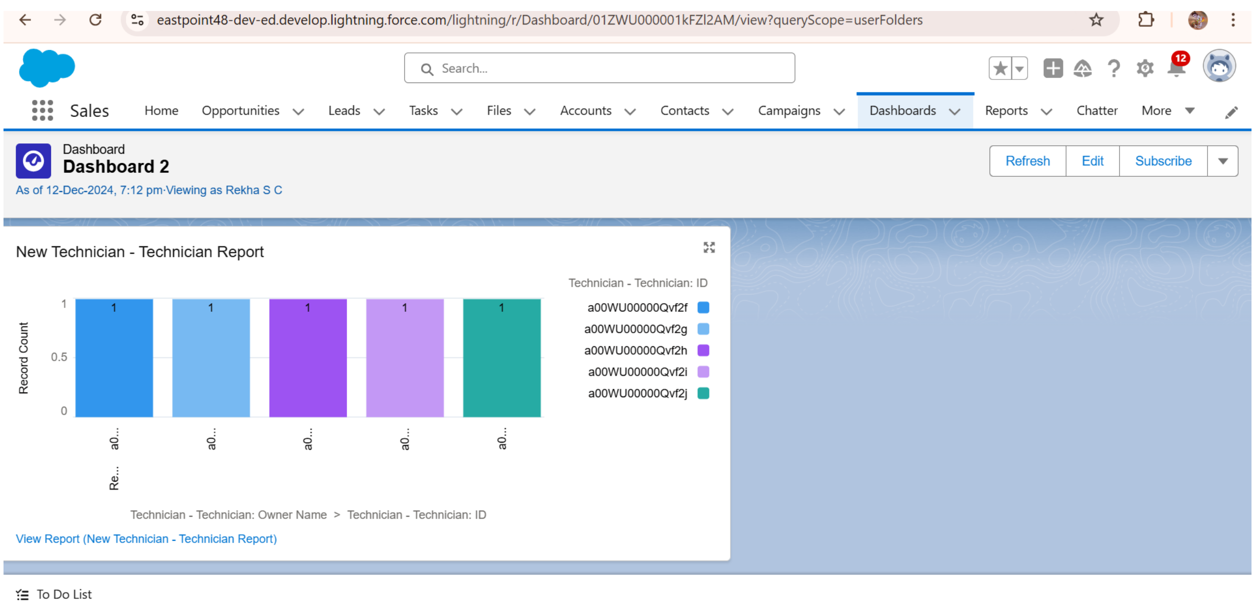


FIG 9.1 Technician and Assignment Details Report Dashboard