Workforce Administration Solution (Dev)

Introduction

The **Workforce Administration Solution** is a comprehensive software application designed to optimize and automate the management of employee involvement in projects and asset assignment within an organization. The platform centralizes critical organizational processes, such as tracking employee data, monitoring project assignments, assessing employee performance, and managing asset allocation. By integrating these elements into a single system, the solution aims to improve operational efficiency, enhance resource utilization, and ensure that both employees and assets are effectively managed.

Project Overview of salesforce:

The **Workforce Administration Solution** is an integrated software application designed to improve the management of employees working on multiple projects and handling asset assignments within an organization. This platform will centralize and automate processes such as employee data management, project tracking, performance monitoring, and asset assignment, ultimately enhancing operational efficiency and productivity.

Hardware Required: System with advance configuration

Software Required: Salesforce Platform

System Required: Good Configuration

Key features supporting the project

1.Employee Data Management:

- Store and manage detailed profiles of employees, including personal information, job roles, department, and contact details.
- Track employee status, such as active, on leave, or retired.

- Maintain a history of roles and responsibilities within the organization.

2. Project Assignment Tracking:

- Track which projects employees are working on, including project timelines, milestones, and status updates.
- Provide managers with visibility into employee workloads, project priorities, and task allocation.
- Support tracking of multiple employees across different projects, ensuring that no individual is overburdened.

3. Performance Monitoring:

- Enable performance evaluation through the system, allowing managers to assess employee contributions to specific projects.
- Track key performance indicators (KPIs) and other metrics relevant to project success.
- Maintain historical performance data to inform future decisions and development planning.

4. Asset Assignment and Management:

- Record and track assets assigned to employees, such as laptops, tools, or other equipment.
- Generate alerts when assets need to be returned or require maintenance.
- Ensure accountability and transparency in asset management, providing insights into asset utilization.

5. Reporting and Analytics:

- Generate reports on employee performance, asset usage, and project progress.
- Provide dashboards with key insights and real-time data to support decision-making.
- Enable customizable report generation for specific use cases, such as budgeting, forecasting, or team assessments.

6. Automated Notifications and Alerts:

- Notify employees of asset assignments, project deadlines, performance reviews, or any other relevant information.

- Send reminders for overdue tasks or assignments, project milestones, and asset return dates.
- Allow management to set thresholds for alerts, such as project completion timelines or performance issues.

7. Integration with Other Systems:

- Support integration with existing enterprise software systems such as HR management systems, payroll, and project management tools to ensure seamless data flow across the organization.
- Enable data synchronization between the Workforce Administration Solution and other platforms in use, reducing manual input and errors.

8. Security and Access Control:

- Role-based access control (RBAC) to ensure that only authorized personnel can access sensitive employee and asset data.
- Implement secure data encryption both in transit and at rest to protect privacy and confidentiality.

9. Mobile Access:

- Provide mobile applications or a responsive design for managers and employees to access the system remotely.
- Allow employees to update their project status, view assignments, and communicate with team members from their mobile devices.

Benefits:

1. **Efficiency Gains:** By automating workflows and consolidating all employee, project, and asset data into one platform, the system will help reduce manual processes and enhance operational efficiency.
2. **Better Resource Management:** Managers can easily assess employee workloads and optimize project assignments, improving overall team performance.
3. **Improved Accountability:** The ability to track asset assignments and project participation ensures accountability at every level of the organization.
4. **Data-Driven Decisions:** Access to comprehensive reports and analytics will empower leadership to make informed, data-

drivendecisions on employee assignments, performance evaluations, and resource allocation.

5. **Scalability:** The solution is designed to scale with the growing needs of the organization, supporting an increasing number of employees and projects.

Goals for the Project:

Target Audience:

- **HR Departments:** For managing employee data, performance reviews, and resource allocation.
- **Project Managers:** For tracking employee involvement across multiple projects and ensuring balanced workload distribution.
- **IT Asset Managers:** For overseeing asset assignments and ensuring the availability and maintenance of essential equipment.
- **C-Suite Executives:** For reporting and making strategic decisions based on workforce productivity and project progress.

Technologies:

- **Backend:** Node.js, Python, or Java with a RESTful API for integration and data management.
- **Frontend:** React or Angular for the user interface, ensuring a responsive and intuitive design.
- **Database:** MySQL, PostgreSQL, or NoSQL (MongoDB) for employee, project, and asset data storage.
- **Mobile Application:** Native iOS and Android apps or a progressive web app (PWA) for mobile access.
- **Security:** OAuth2 or JWT for authentication and role-based access control.
- **Cloud Infrastructure:** AWS, Microsoft Azure, or Google Cloud for scalability, security, and data storage.

Implementation Phases:

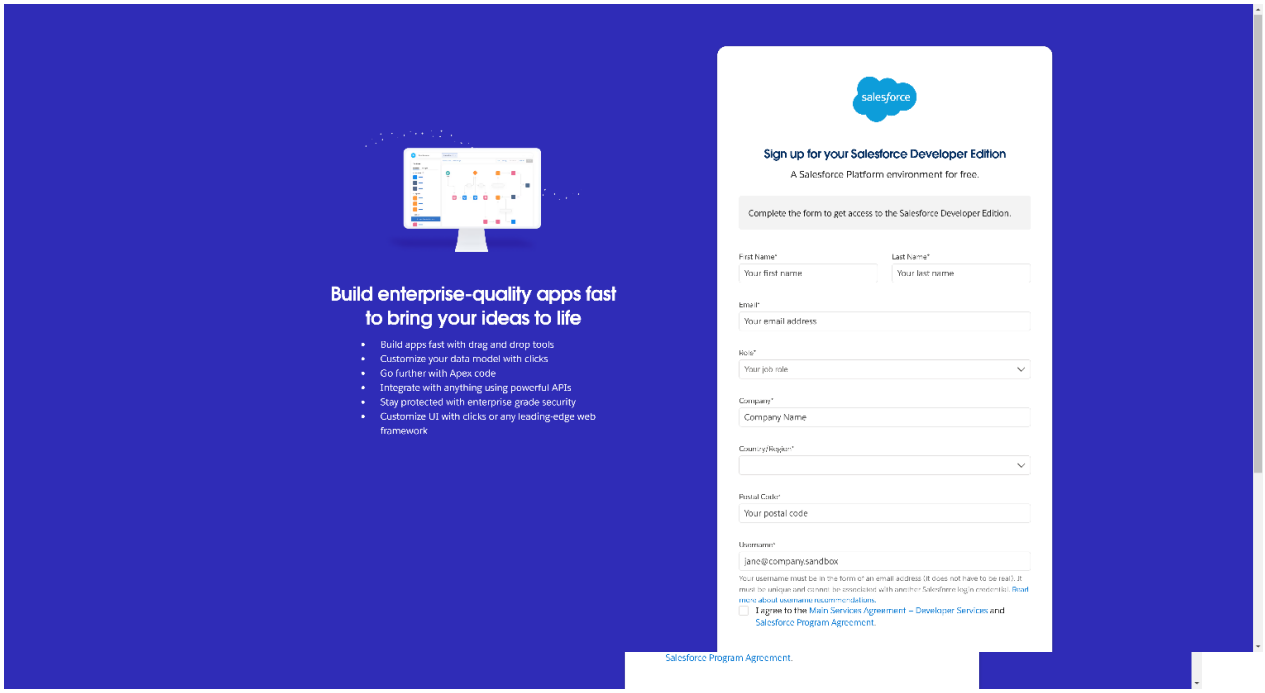
1. **Requirement Gathering & Analysis:**
    - Collaborate with stakeholders to identify and document specific requirements.
    - Analyze current systems and workflows for integration and improvement opportunities.

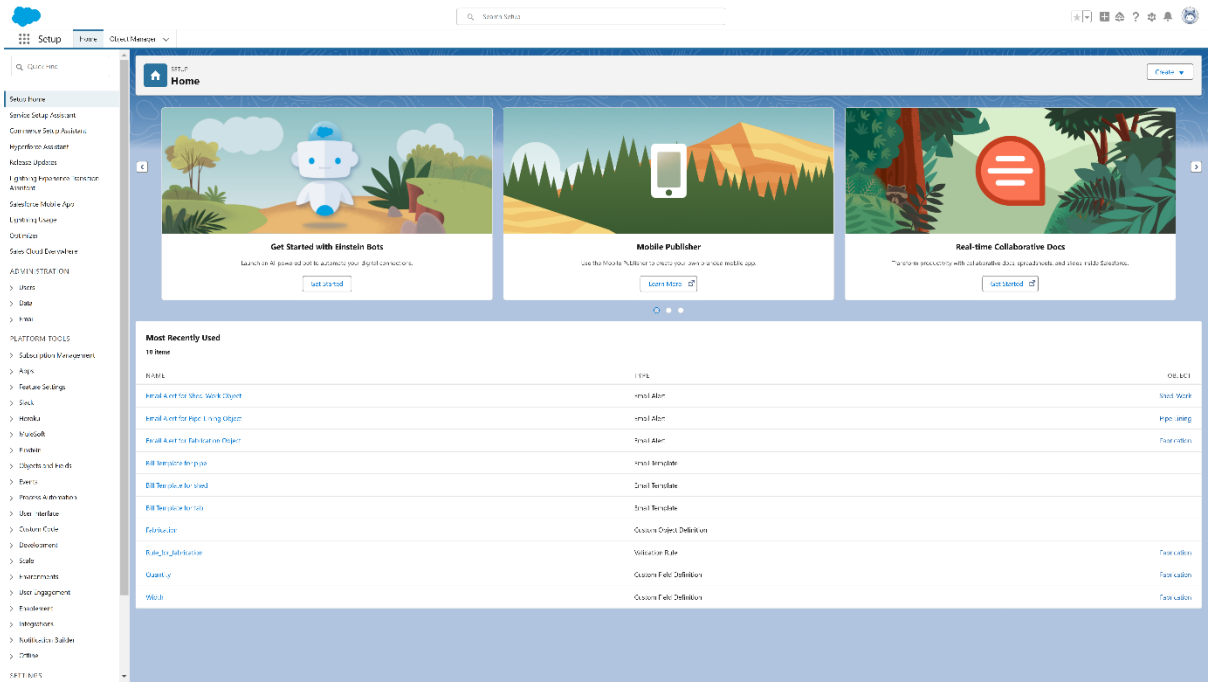
2. **System Design:**
    - Design the system architecture, database schema, and user interface.
    - Create wireframes and prototypes for the user interface.
3. **Development:**
    - Begin developing backend services, APIs, and database integration.
    - Implement frontend UI/UX design and ensure mobile compatibility.
    - Integrate the system with existing enterprise tools and software.
4. **Testing & Quality Assurance:**
    - Conduct functional and security testing to ensure system reliability and compliance.
    - Perform load testing to evaluate scalability and performance under high traffic.
5. **Deployment:**
    - Deploy the application in a staging environment for final testing and feedback.
    - Move to production deployment after successful testing and validation.
6. **Training & Support:**
    - Provide training for administrators, managers, and employees on using the system.
    - Offer on going support and maintenance for troubleshooting and updates.

Salesforce Developer Account Creation

- To sign up for a salesforce account
- To login to your salesforce account

- Account activation





Salesforce:

Activity 1: Create Employee Object:

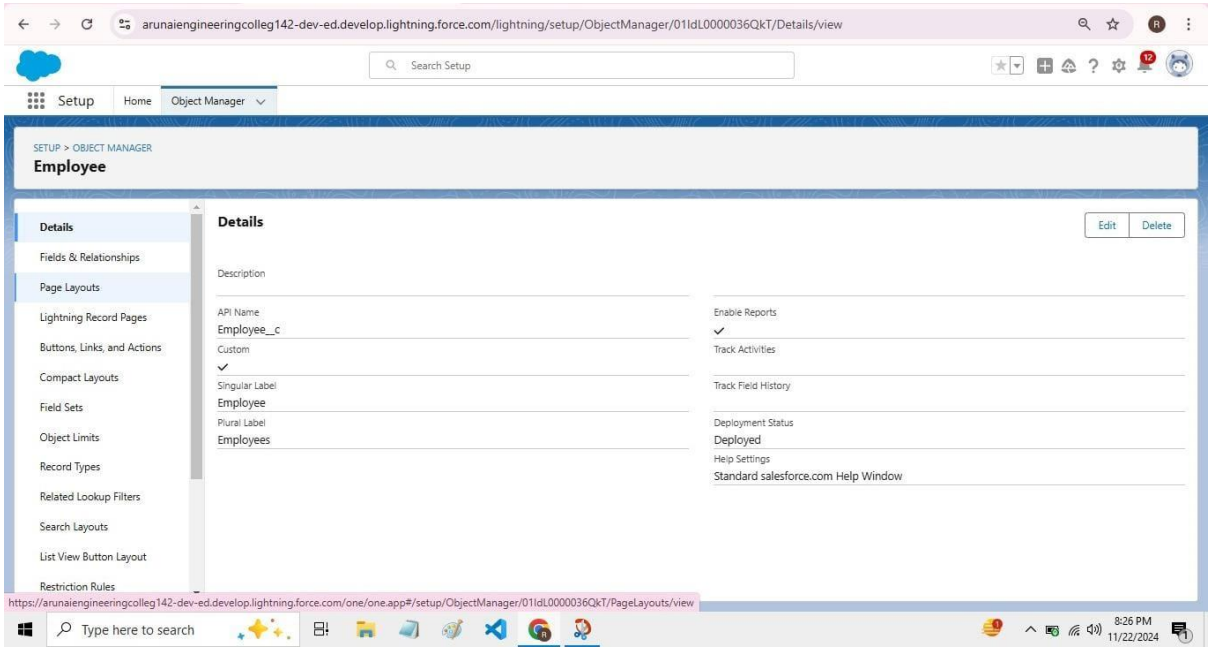
The purpose of creating an Employee custom object is to keep track the employee's activities and their individual and as well as team progress.

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: Employee
    2) Plural label name: Employees
    3) Enter Record Name Label and Format
        - Record Name : Employee ID
        - Data Type : Auto Number
        - Display Format : EMS-{0000}
        - Starting Number : 1

2. Click on Allow reports,
3. Allow search --> Save.



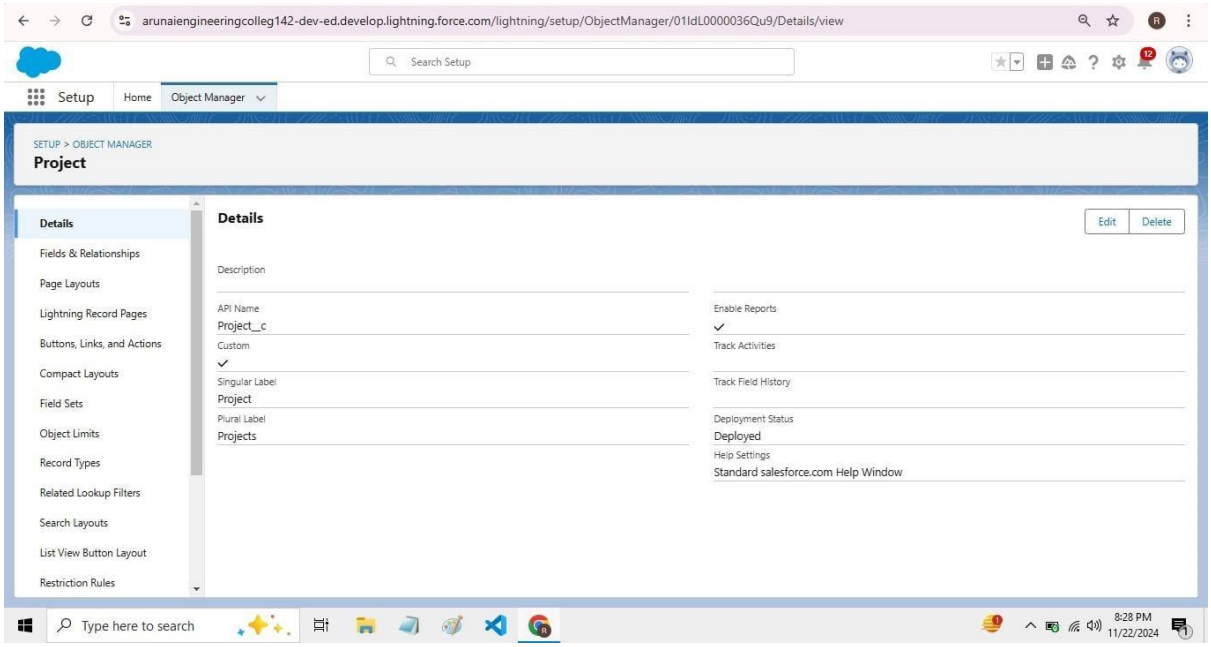
Activity 2: Account Activation:

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

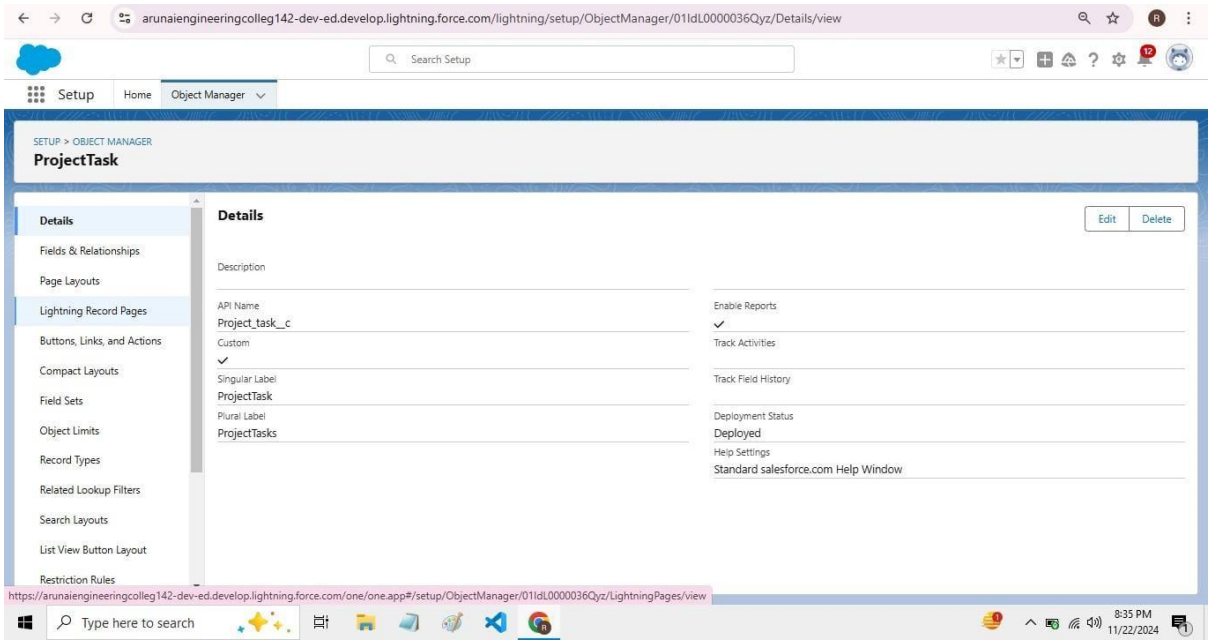
3. Give a password and answer a security question and click on change password.

4. Then you will redirect to your salesforce setup page.



Activity 3: Create 3 more objects with label names as ProjectTask, Asset, Asset Service:

Note: use “Text” as a data type and label Record Name as “Project Task Name”.

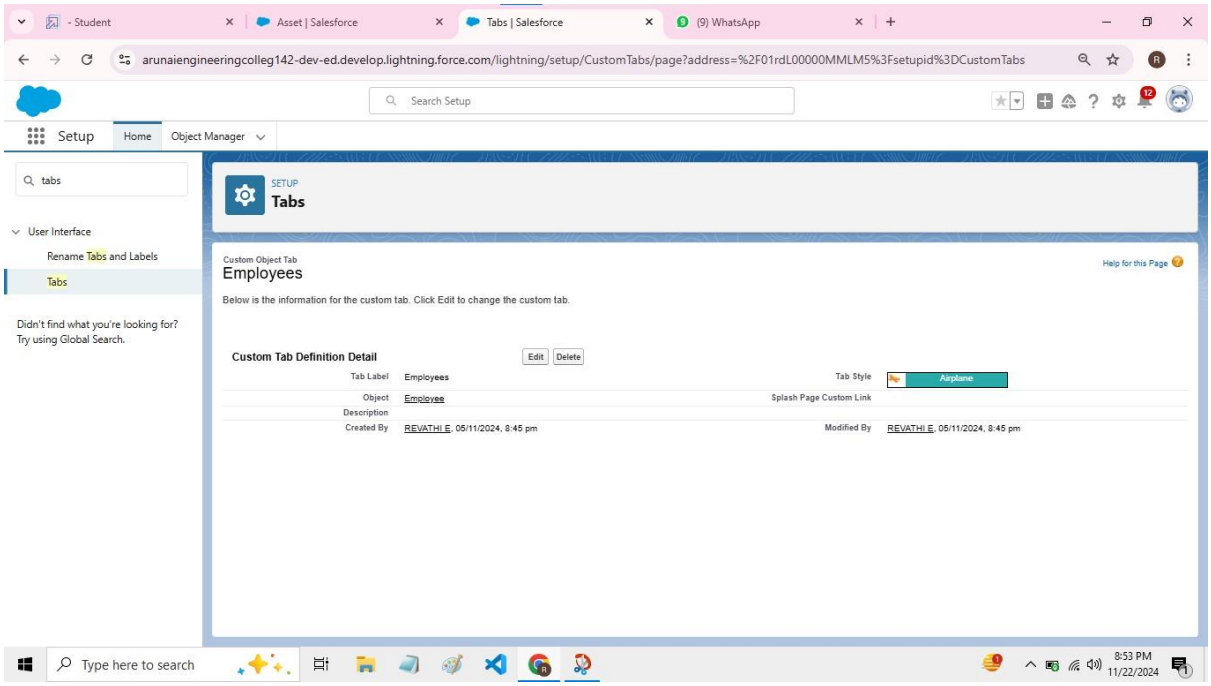


TABS:

Activity 1: Creating a Custom Tab (Employee)

To create a Tab:(Employee)

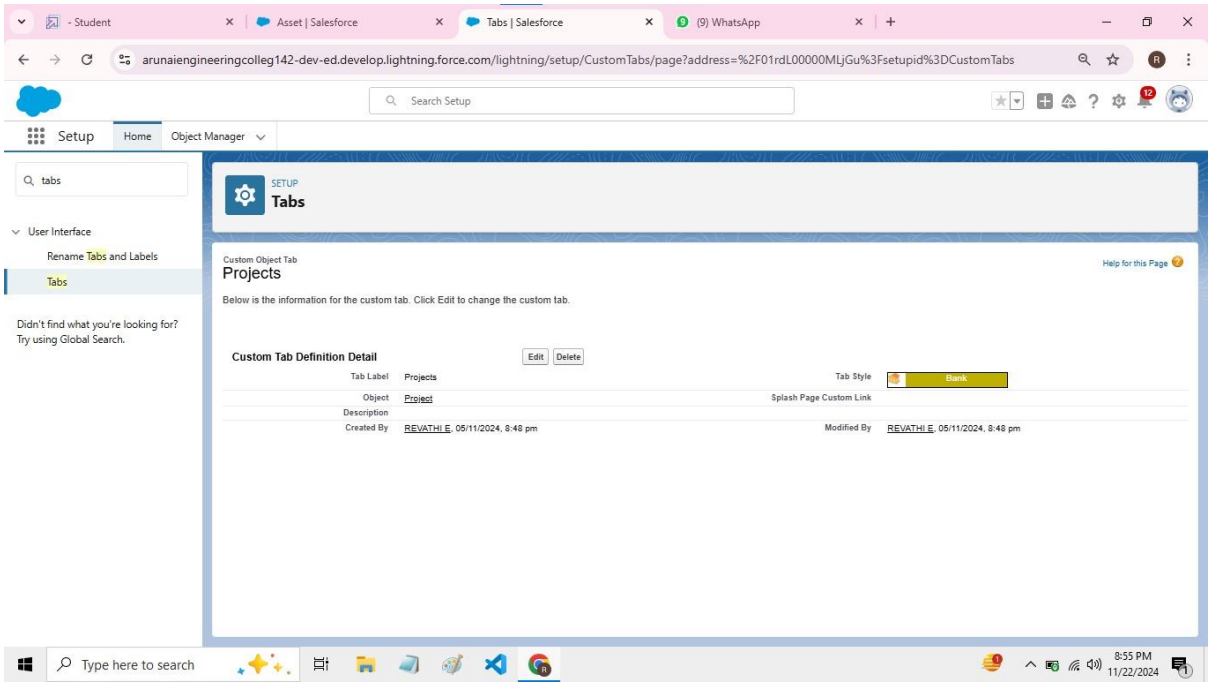
1. Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object tab)
2. Select Object(Employee) --> Select any tab style --> Next (Add to profiles page) keep it as default --> Next (Add to Custom App) keep it as default --> Save.



Activity 2: Creating a Custom Tab (Project)

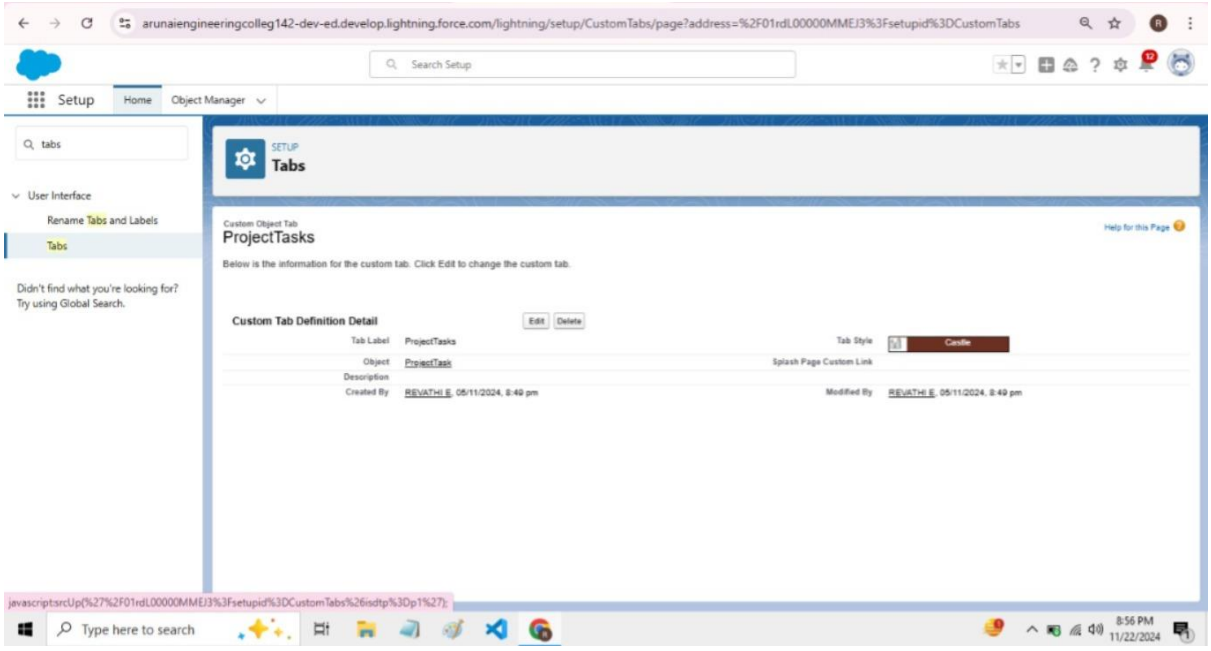
1. Go to setup page --> type Tabs in Quick Find bar --> click on tabs --> New (under custom object tab)

2. Select Object(Project) --> Select the tab style ?--> Next (Add to profiles page) keep it as default --> Next (Add to Custom App) keep it as default --> Save.



Activity 3: Creating tabs for remaining objects

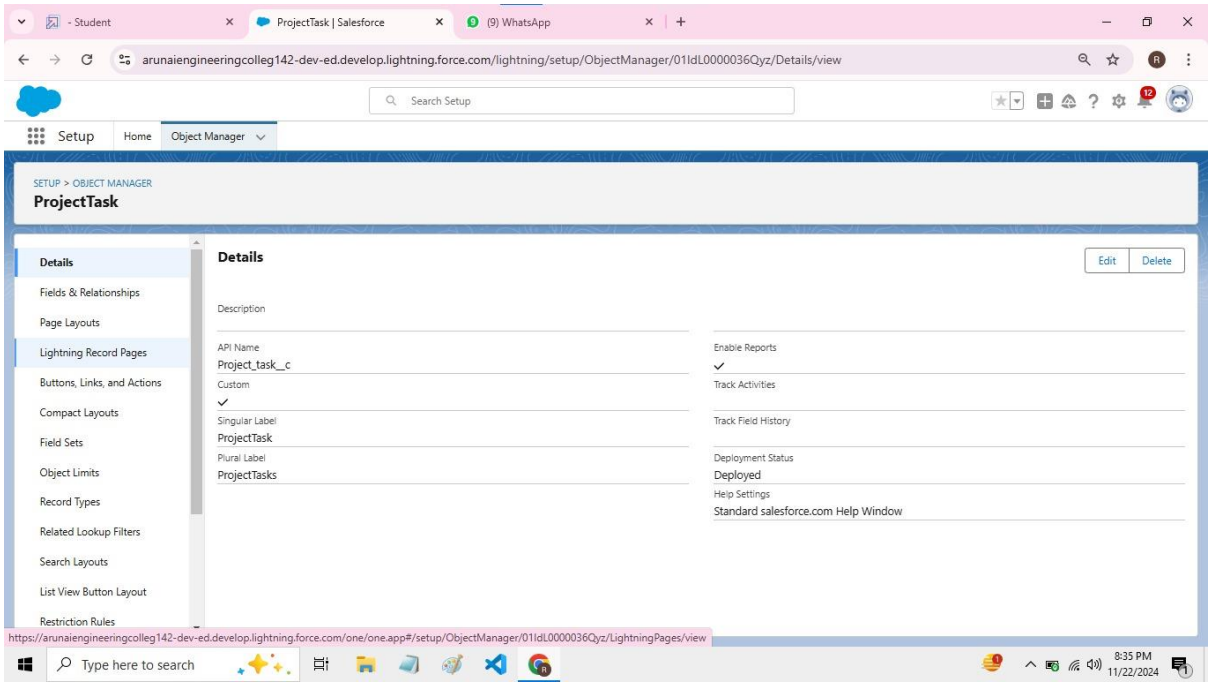
Now create tabs for Project Task, Asset, Asset Service objects.



The Lightning App:

Activity 1: Create a Lightning App

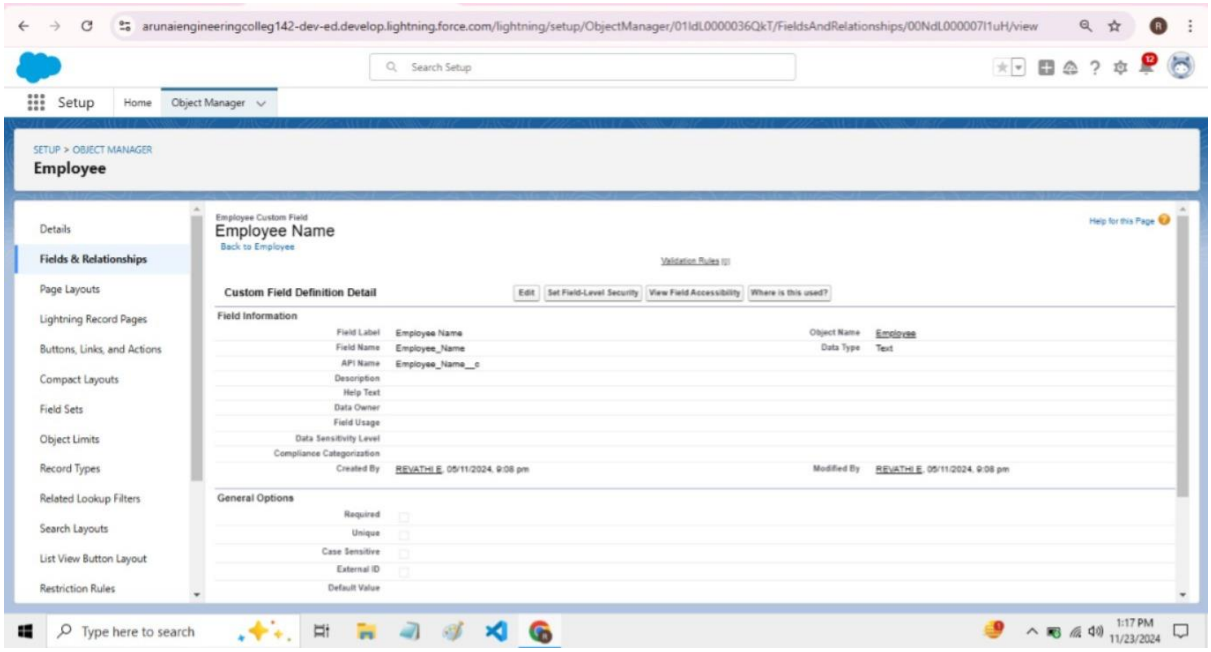
1. To create a lightning app page
2. Fill the app name in app details and branding as follow
   App Name : Workforce Administrator Solution
   Developer Name : this will auto populated
   Description : Give a meaningful description
   Image : optional (if you want to give any image you can otherwise not mandatory)
   Primary color hex value : keep this default
3. Then click Next --> (App option page) keep it as default --> Next --> (Utility Items) keep it as default --> Next.
4. To Add Navigation Items
5. To Add User Profiles.



Fields & Relationships:

Activity 1 : Creating Text Field in Employee Object

1. To create fields in an object:
2. Go to setup --> click on Object Manager --> type object name(Employee) in quick find bar --> click on the object.
3. Now click on “Fields & Relationships” --> New.
4. Select Data type as “Text”.
5. Click on Next
6. Fill the above as following:
    - Field Label: Employee Name
    - Length : 18
    - Field Name : gets auto generated
    - Click on Next --> Next --> Save and new.



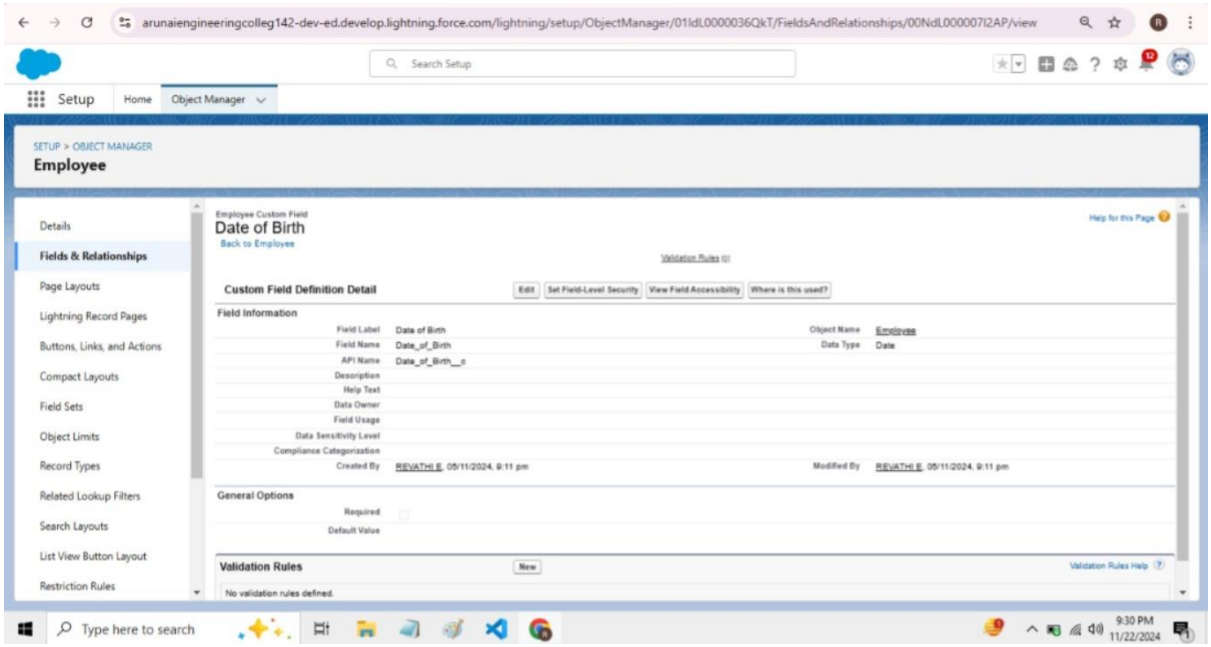
Activity 2 : Creating Date of Birth Field in Employee Object

1. Repeat step 1 and 2 mentioned in activity 1
2. Select Data type as “Date” and click Next.
3. Click on Next.
4. Fill the above as following:

a. Field Label: Date of Birth.

b. Field Name : gets auto generated.

c. Click on Next --> Next --> Save and new.



Activity 3 : Creating Formula Field in Employee Object

1. Repeat step 1 and 2 mentioned in activity 1

2. Select Data type as “Formula” and click Next.

3. Give Field Label and Field Name as “Age” and select formula return type as “Number” and click next.

4. Under Advanced Formula write down the formula and click “Check Syntax” and Next --> Next --> Save & New.

Activity 4 : Creating Picklist Field in Employee Object

1. Repeat step 1 and 2 mentioned in activity 1

2. Select Data type as “Picklist” and click Next.

3. Enter Field Label as “Gender”, under values select “Enter values, with each value separated by a new line" and enter values as shown below.

4. Click Next --> Next --> Next --> Save & New.

Activity 5 : Creating Self-Relationship Field in Employee Object

1. Repeat step 1 and 2 mentioned in activity 1
2. Select Data type as “Lookup Relationship” and click Next.
3. Select Employee from the drop down related to the field and click Next.
4. Give Field Label as “Reports to” and click Next.
5. Next --> Next --> Save & New.

Activity 6 :Creating Master-Detail Relationship between Employee & Asset Object

To Create a Master-Detail relationship

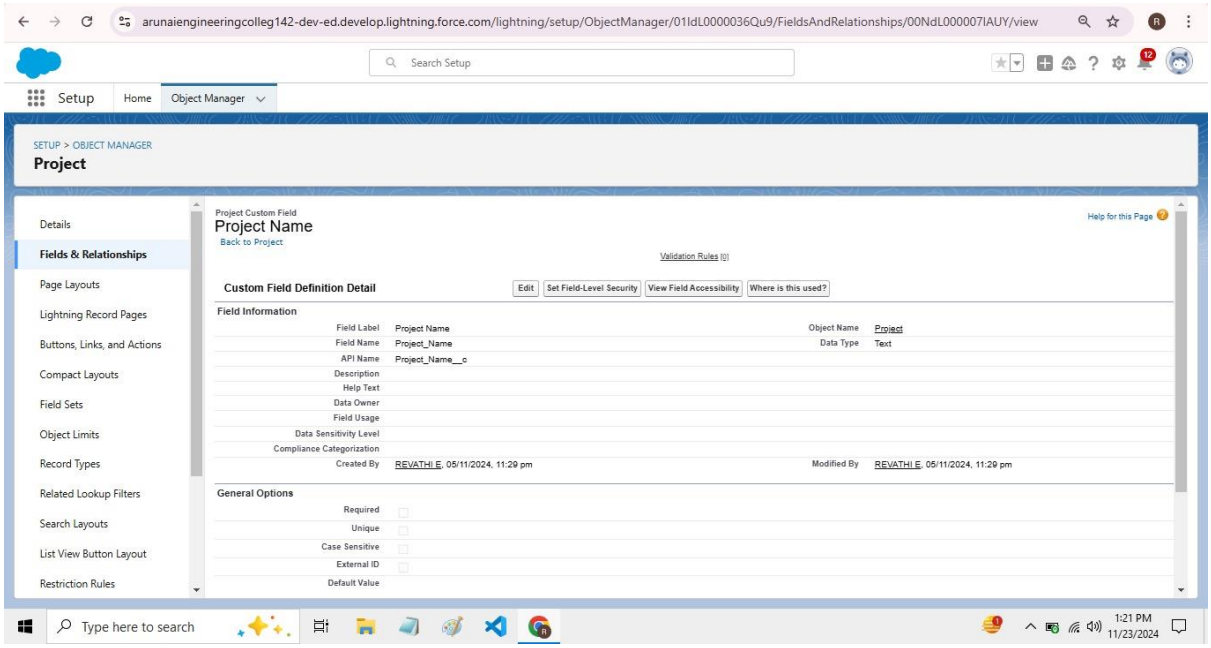
1. Go to the setup page --> click on object manager --> type object name(ProjectTask) in the quick find bar --> click on the object.
2. Click on fields & relationship --> click on New.
3. Select “Master-Detail relationship” as data type and click Next.
4. For field label related to: select “Employee” object and click Next.
5. Give Field Label as “Employee Name” and click Next.
6. Next --> Next --> Save & New.

Activity 7 : Creating Remaining Fields in Employee Object

Now create the remaining fields using the data types mentioned in the table.

- Employee
- Project
- project task

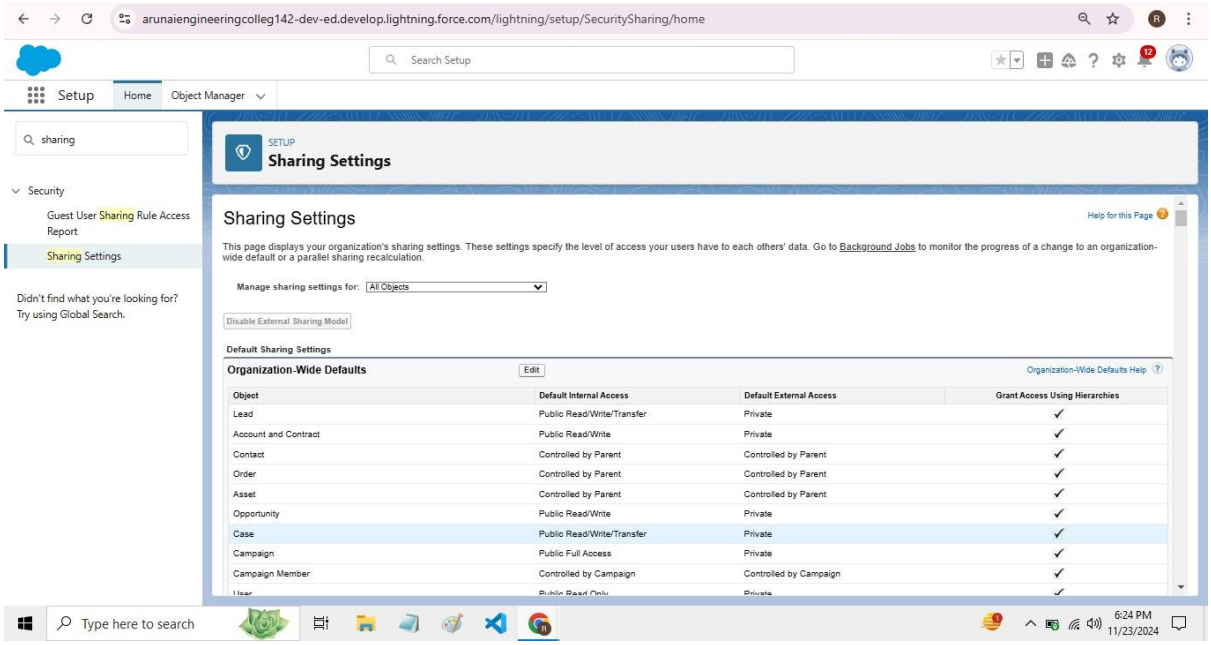
- Asset Service
- Asset.



Setting OWD:

Activity 1: Create OWD Setting

1. Go to Set Up --> in the Quick Find box type "Sharing Settings" --> click on it.
2. Click Edit in the Organization-Wide Defaults area.
3. Search for the Employee object.
4. Under default internal access and default external access change the options to “Private” and under grant access using hierarchies select the check box.
5. Click on save.
6. This Setting is for all the Users Which have been Created.



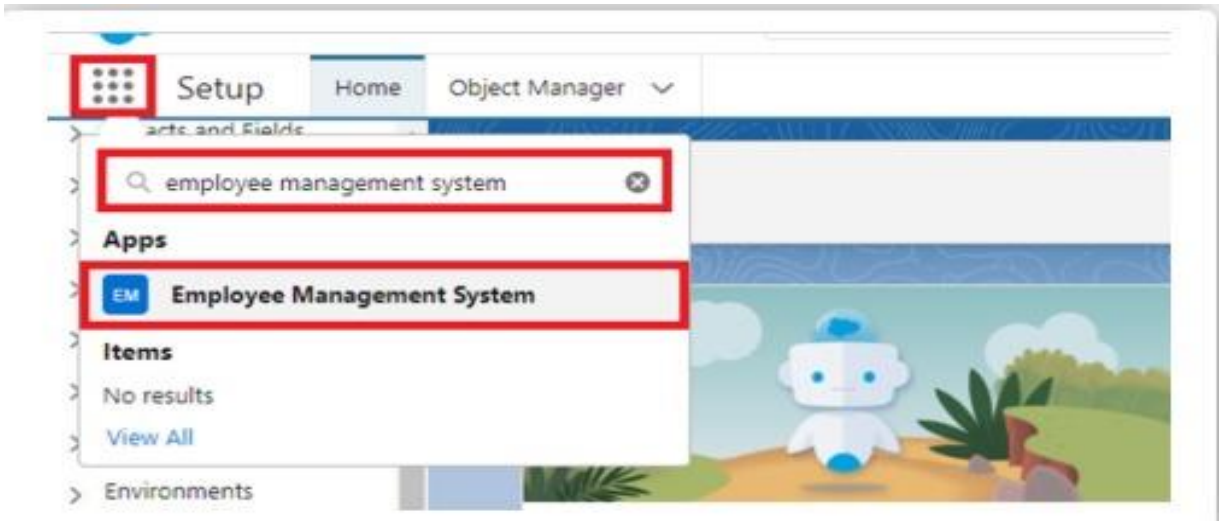
Activity – 2

Set OWD as Private for Project and Asset Service objects.

User Adoption:

Activity 1: Create a Record (Employee)

1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.
3. Click on the Employee tab.
4. Click New
5. Fill the Details and click on Save.



Activity 2: View a Record (Employee)

1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.
3. Click on the Employee Tab.
4. Click on any record name. you can see the details of the Employee.

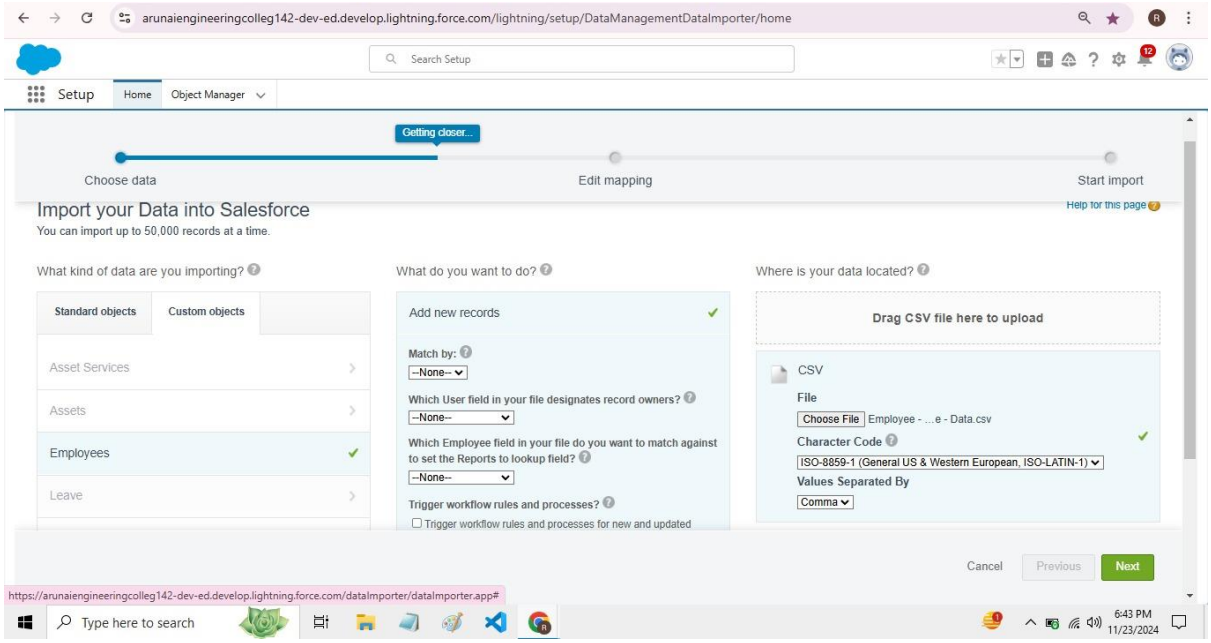
Activity 3: Delete a Record (Employee)

1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.
3. Click on the Employee Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete.

Import Data:

Activity-1: Importing data using Data Wizard

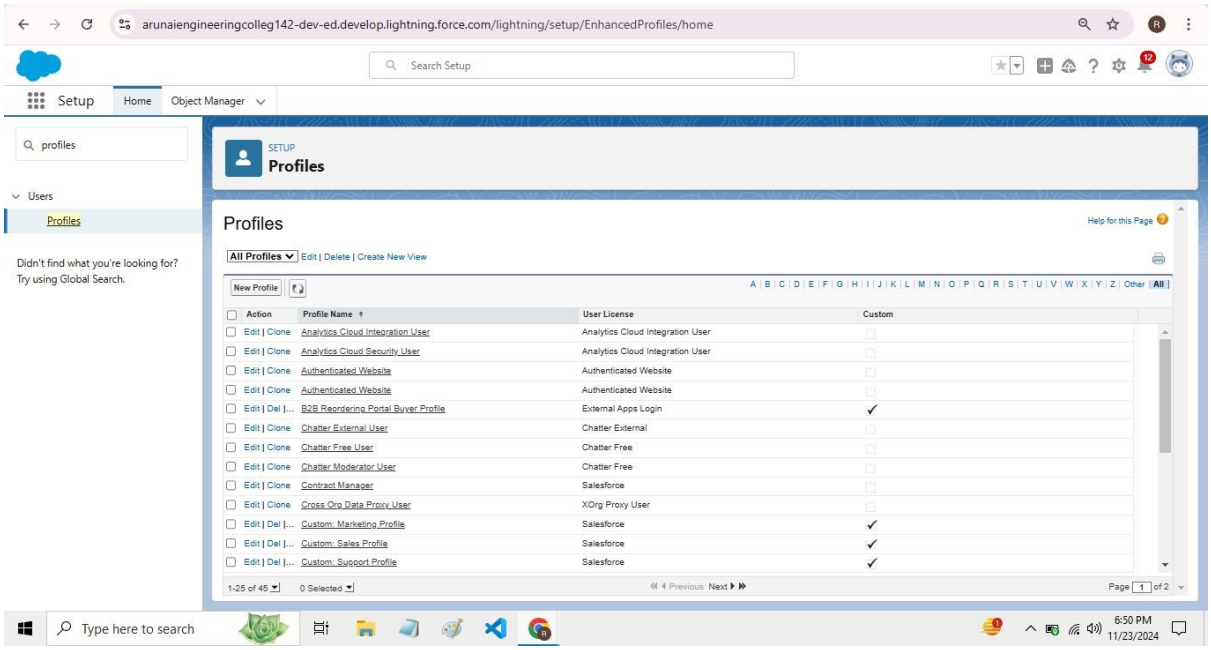
1. From Setup, click the Home tab.
2. In the Quick Find box, enter Data Import and select Data Import Wizard.
3. Click Launch Wizard!
4. Click the Custom Objects tab and select the Employee object.
5. Select Add new records.
6. Click CSV and choose file Employee_CSV which we made earlier. Click Next.
7. Since the field names in the CSV file (CSV Header) are the same as the field names in your object (Mapped Salesforce Object), the fields are automatically mapped. Click Next.
8. The next screen gives you a summary of your data import. Click Start Import.
9. Click OK on the popup.
10. Scroll down the page and verify that your data has been imported under batches.
11. Make sure you have 0 records under the records failed column.



Profiles:

Activity 1: Create a Record (Employee)

1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.
3. Click on the Employee tab.
4. Click New.
5. Fill the Details and click on Save.



Activity 2: View a Record (Employee)

1. Click on App Launcher on the left side of the screen.
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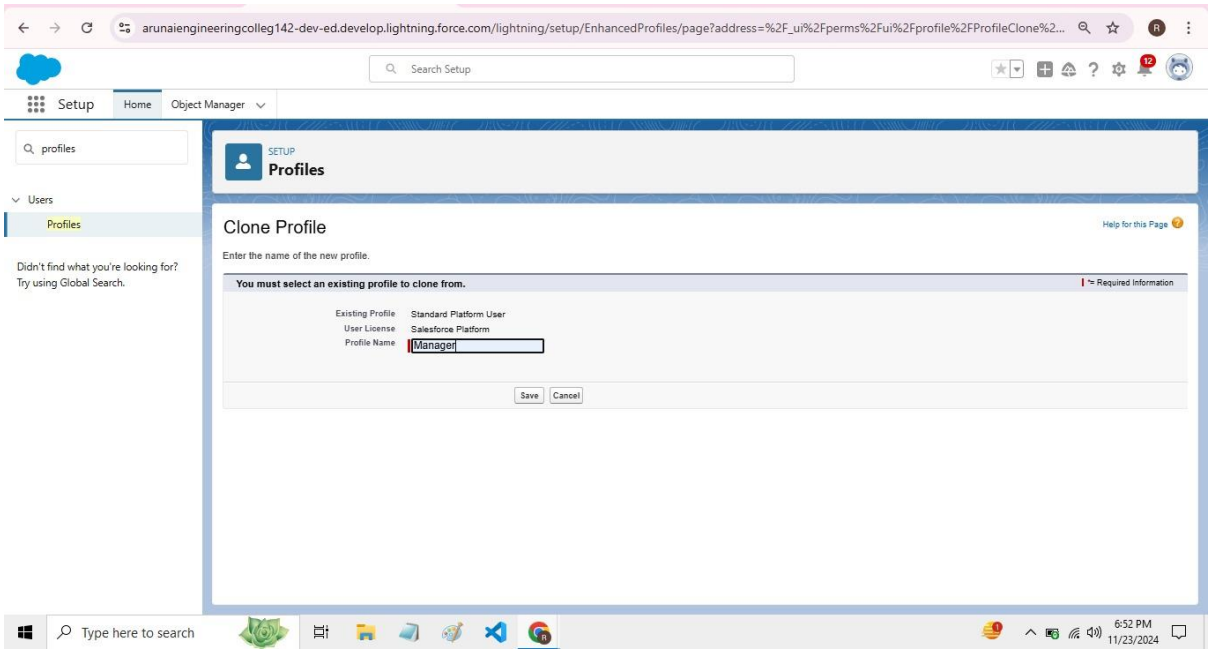


Activity 3: Delete a Record (Employee)

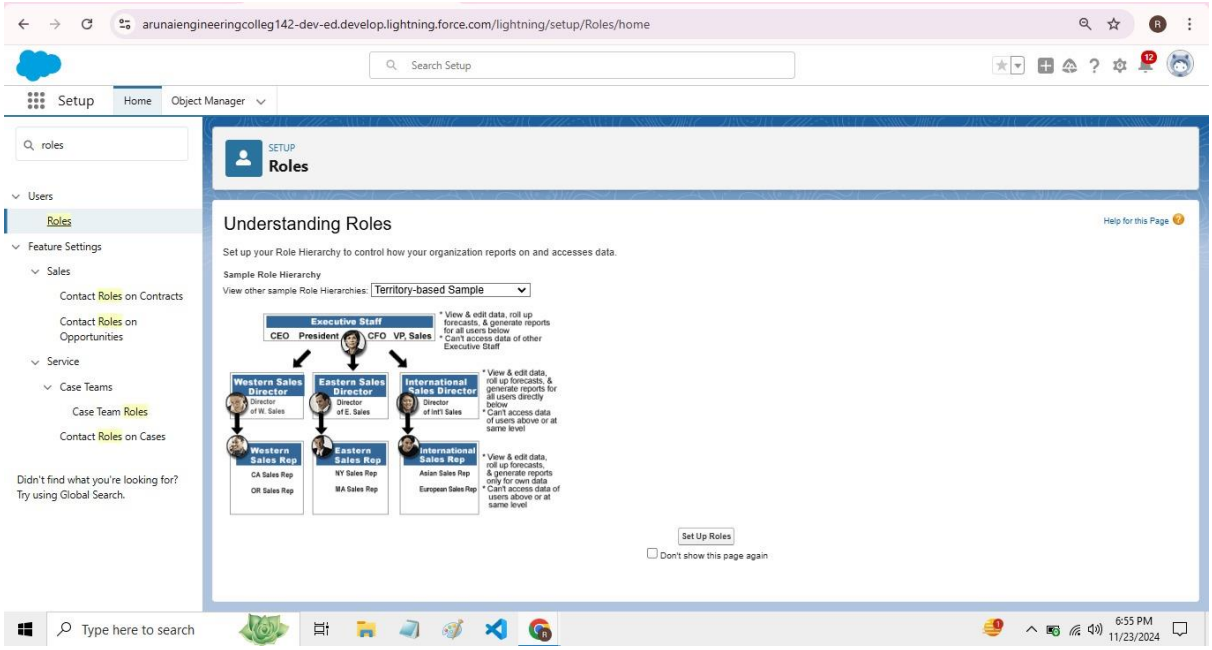
1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.
3. Click on the Employee Tab.
4. Click on Arrow at right hand side on that Particular record.
5. Click delete.

Role:

Activity 1: Creating HR Role

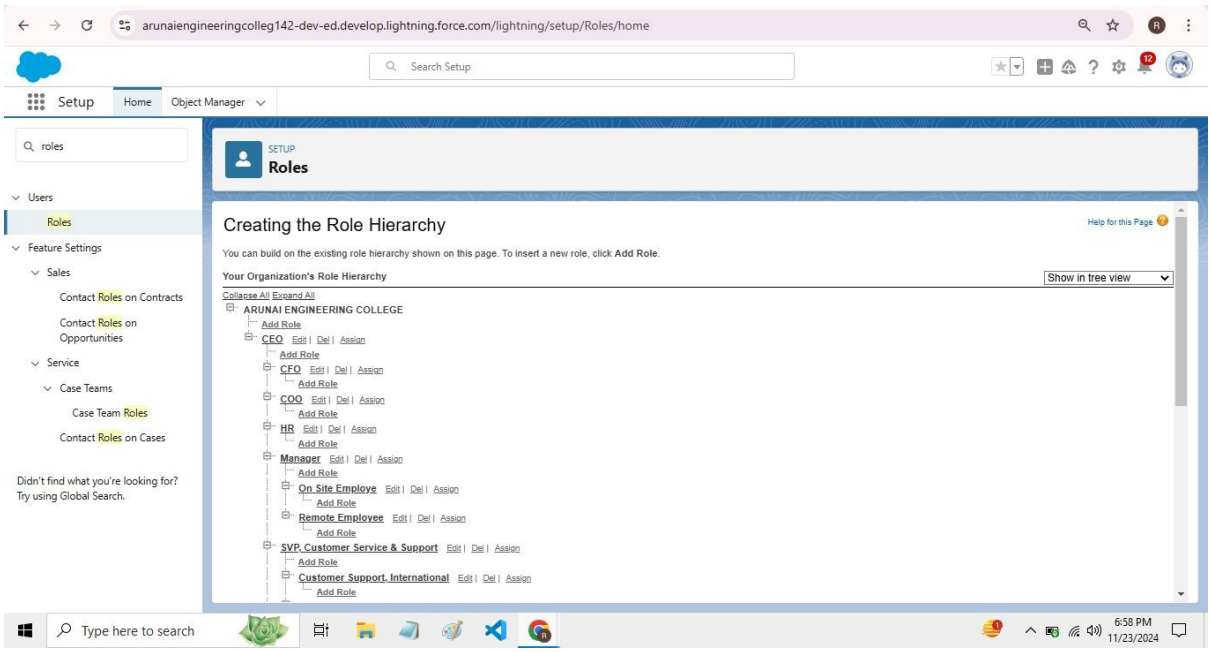
1. Go to quick find --> Search for Roles --> click on set up roles.
2. Click on Expand All and click on add role under whom this role works.
3. Give Label as “HR” and Role name gets auto populated. Check to whom this role (HR) reports. Then click on Save.

4. Refer the below diagram to understand which role reports to which role.



Activity 2: Creating more roles

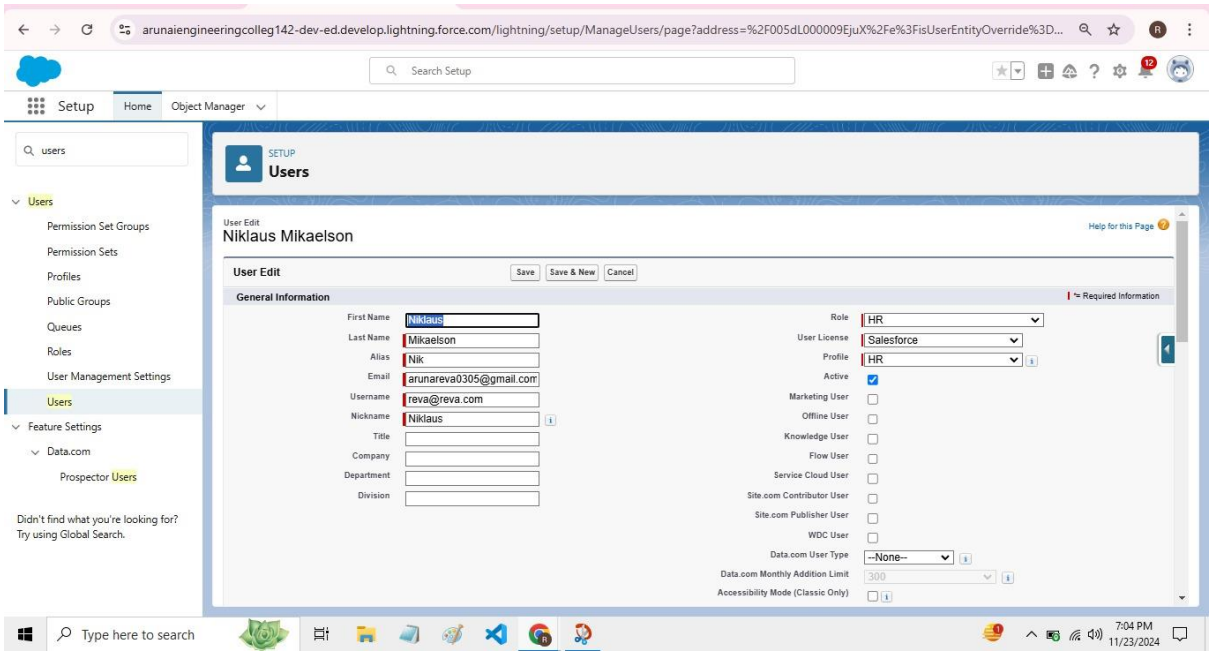
Create three more roles for Manager, On Site Employee, Remote Employee.



Users:

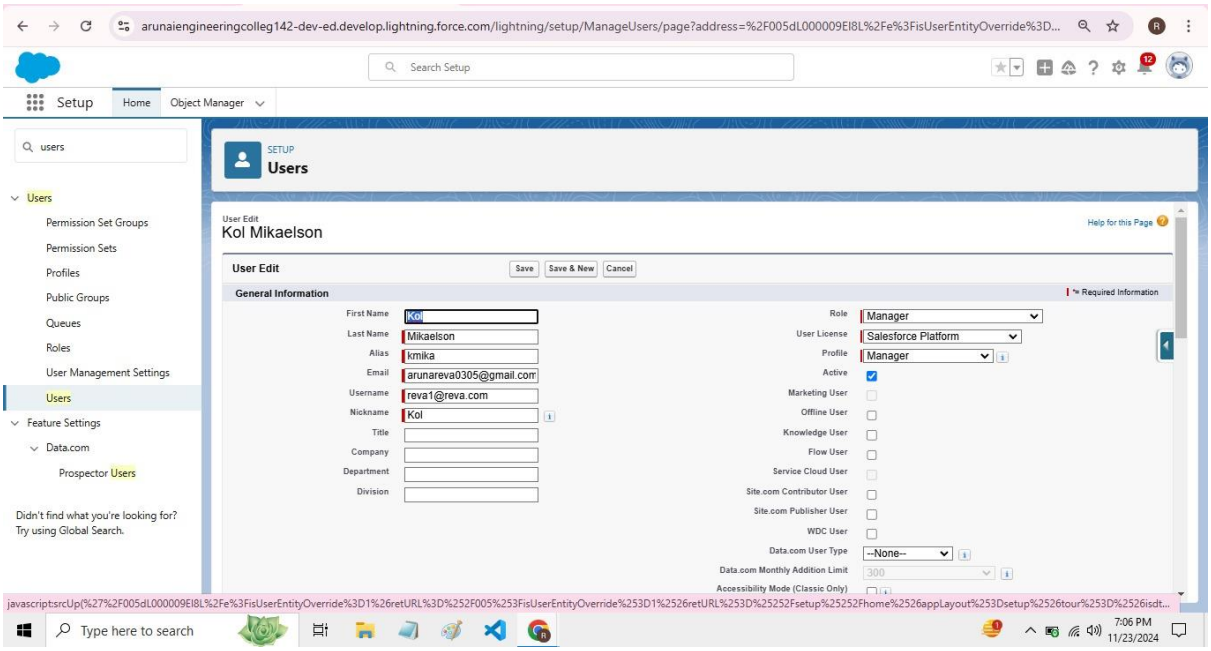
Activity 1: Create User

1. Go to setup --> type users in quick find box --> select users --> click New user.
2. Fill in the fields
3. Save.



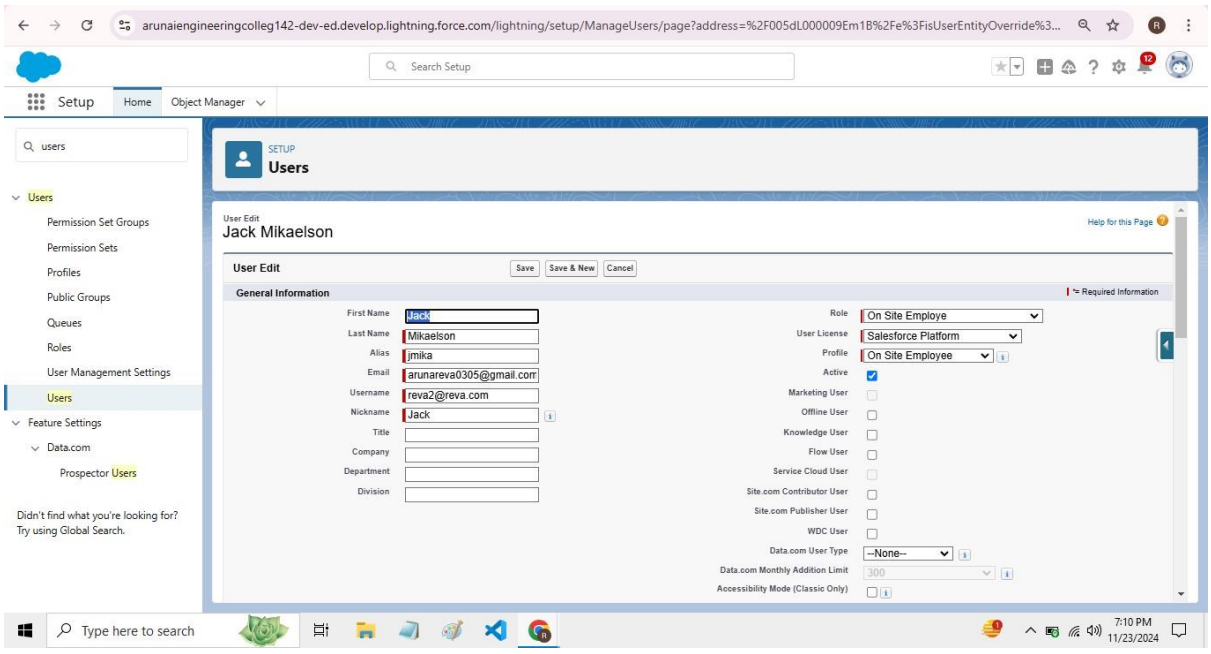
Activity 2: Creating another user

1. Go to setup --> type users in quick find box --> select users --> click New user.
2. Fill in the fields
3. Save.



Activity 3: Creating more users

Create two more users as we created in activity 2.

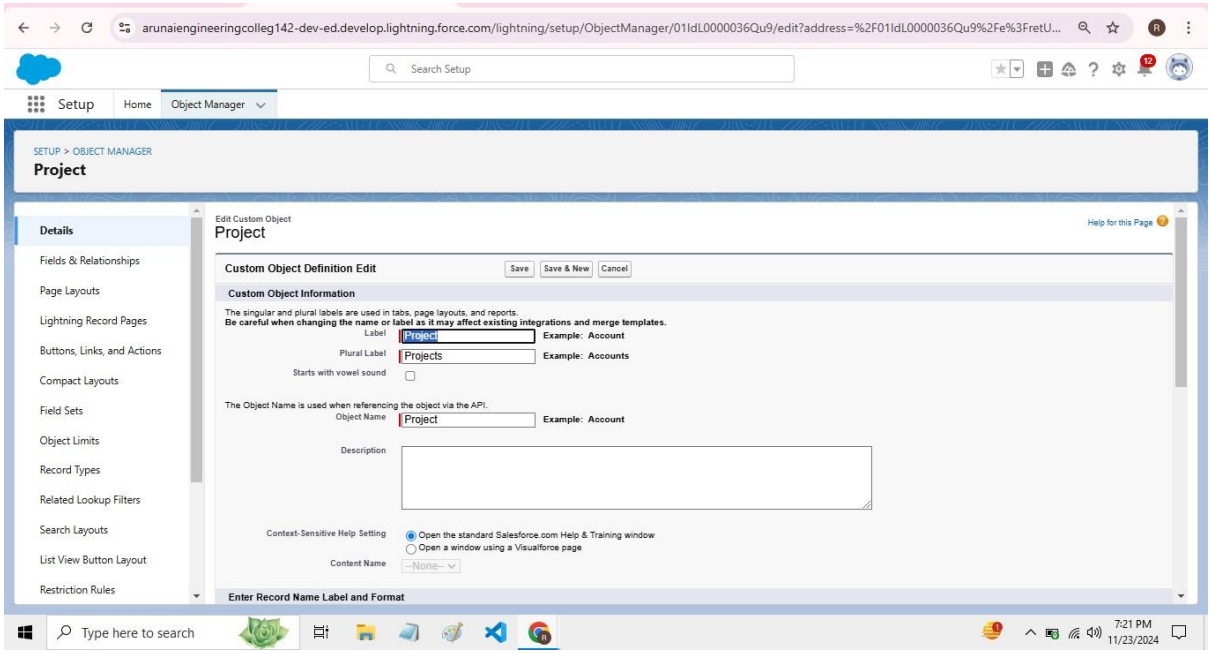


Page layouts:

Activity 1 : creating a page layout for Employee object

To Create a Page layout:

1. Go to Setup --> Click on Object Manager --> Search for the object (Employee) --> From drop down click on Edit.
2. Click on Page layout --> Click on New.
3. Give Page layout Name as “On Site Employee Layout” and click on Save.
4. Drag and drop the Section from the highlight panel below the Information and name it as “Personal Information” and click Ok.
5. Drag Date of Birth, Address and Age fields from Employee Information to Personal Information section.
6. Similarly perform the above step to create “Allowances” and add allowances fields in it as shown below.
7. Click Save.
8. Make sure your page layout looks like the picture above.



Activity 2 : Creating another page layout

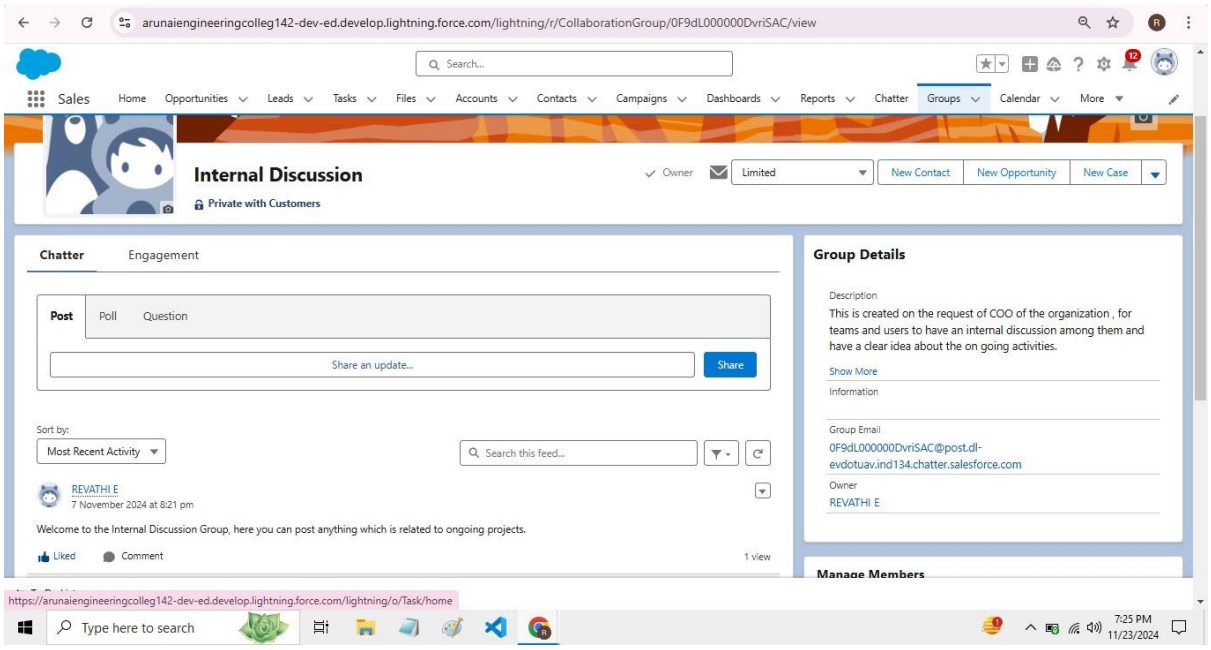
Create another page layout and name it as “Remote Employee Layout”, and in the allowances section use only Wifi Allowance and Wifi Allowances Amount fields.

Chatter group:

Activity 1 : Creating a chatter group for your organization.

To Create a chatter group:

1. Click the App Launcher.
2. Enter Groups in the Search apps and items... box and select Groups.
3. Click New.
4. Fill in the new group information with these details.
5. Click Save & Next. Skip the Upload Picture section and click Next.
6. On the Manage Members screen, click Add next to users you created in the previous activity.
7. Click Done.
8. This is how your group interface looks like.
9. Where it says Share an update, post this message to the group: Welcome to the Internal Discussion Group, here you can post anything which is related to ongoing projects.Click Share.



Record types:

Activity 1: Creating On Site Employee Record Type

To create a Record Type:

1. Go to Setup --> click on Object Manager --> Search for the object (Employee) --> from drop down click Edit.

2. From the left panel click Record Types --> New.

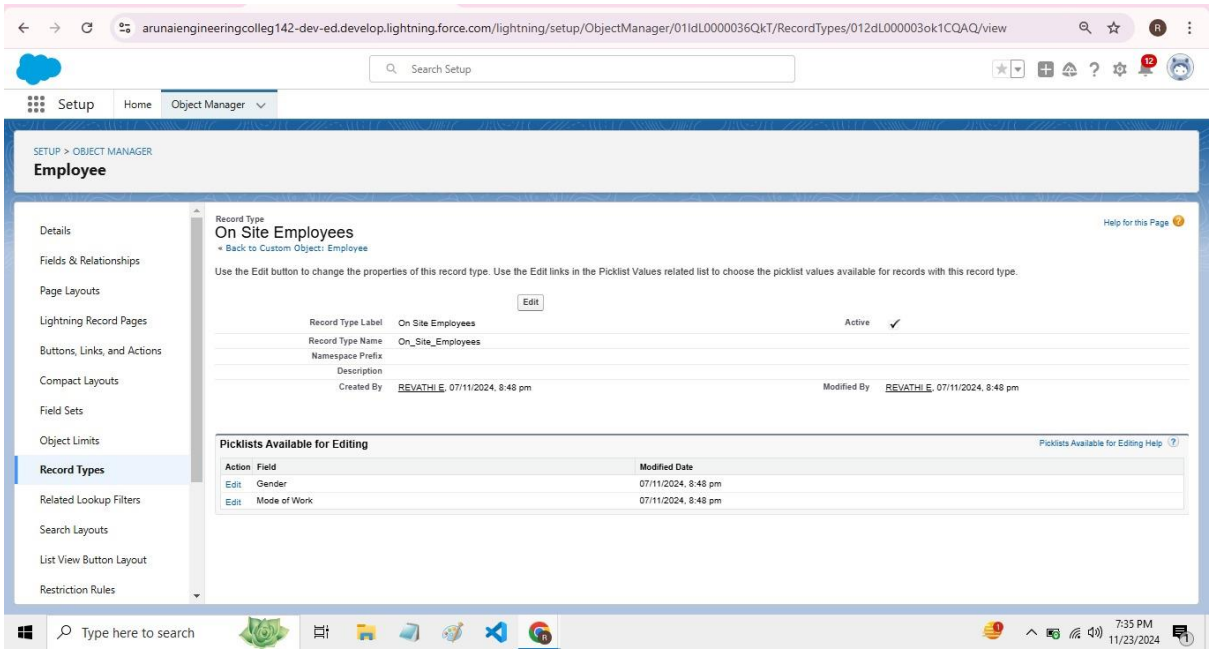
3. Give Record Type Label as “On Site Employee” and make it active.

4. Uncheck for “Make Available”.

5. Scroll down and check for the Manager & System Administrator profile and click on Next.

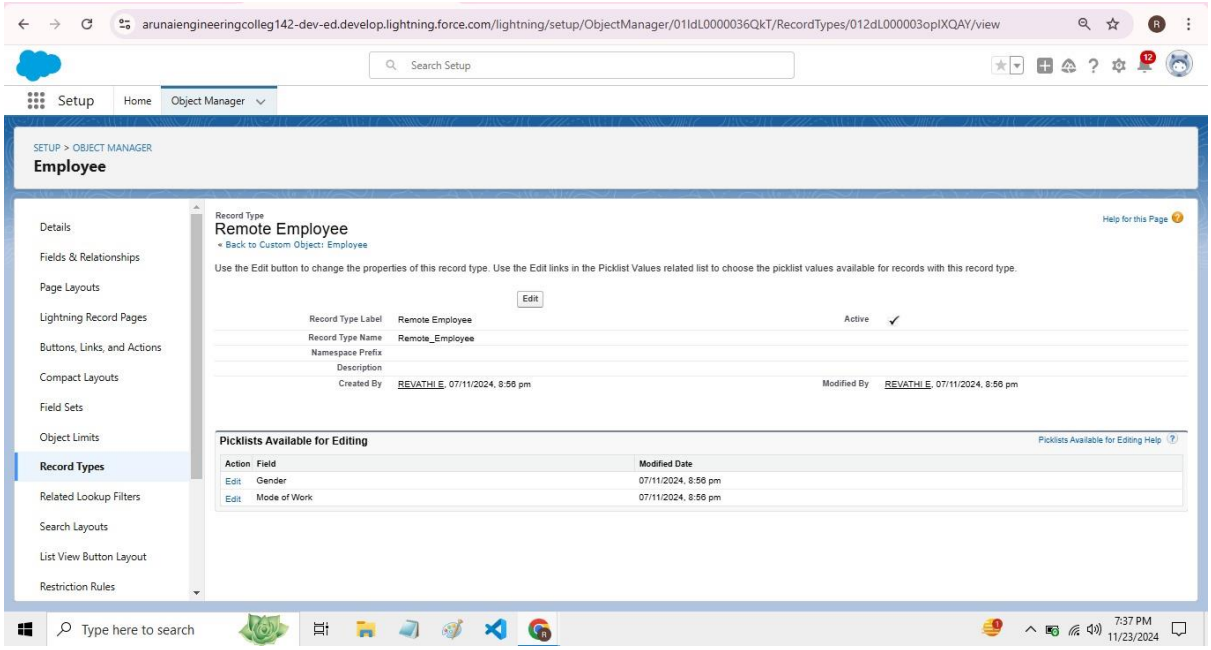
6. Select “Apply a different layout for each profile”, and change page layout to On Site Employee Layout for manager profile and System Administrator.

7. click Save.



Activity 2: Creating "Remote Employee" Record Type

Create another Record Type with name “Remote Employee” following the step from activity 1.



Permission sets:

Activity 1: Creating a permission set

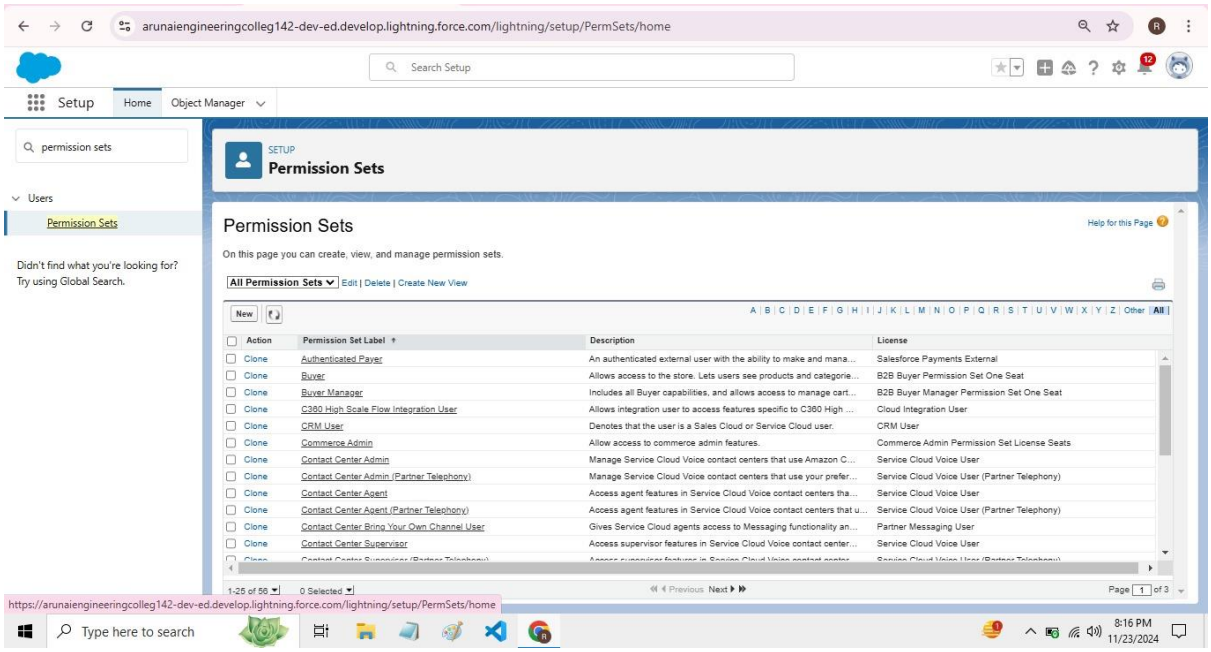
To Create a Permission Set:

1. Go to setup --> type “permission sets” in quick search --> select permission sets --> New.
2. Enter the label name as “Per to Emp” --> Save.
3. Under Apps Select object settings.
4. Click on Employee object --> click on Edit --> under object permission check for read and create.
5. Click on Save.
6. After saving the permission click on the Manage assignment
7. Now click on the Manage Assignment.
8. Click on Add Assignment.

9. Now select the users(any one user with the profile “On Site Employee”) and click on Next.

10. Click on Assign

11. Click on Done.



Reports:

Activity 1: Create Report

To Create a Report:

1. Go to the app --> click on the reports tab

2. Click New Report.

3. Select report type from category or from report type panel or from search panel --> click on start report.

4. Customize your report--> Add fields from left pane as shown below

5. Save or run it.

Activity 2: Create 2 more Report

1. Create a report with report type: “Employees with ProjectTasks and Projects”.

2. Create a report with report type: “Employees with Assets”.

Dashboards:

Activity 1: Create Dashboard

To Create a 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 and click on select.
5. Click Add then click on Save and then click on Done.

Activity 2:

Create another Dashboard as we discussed in activity 1.

Approval Process:

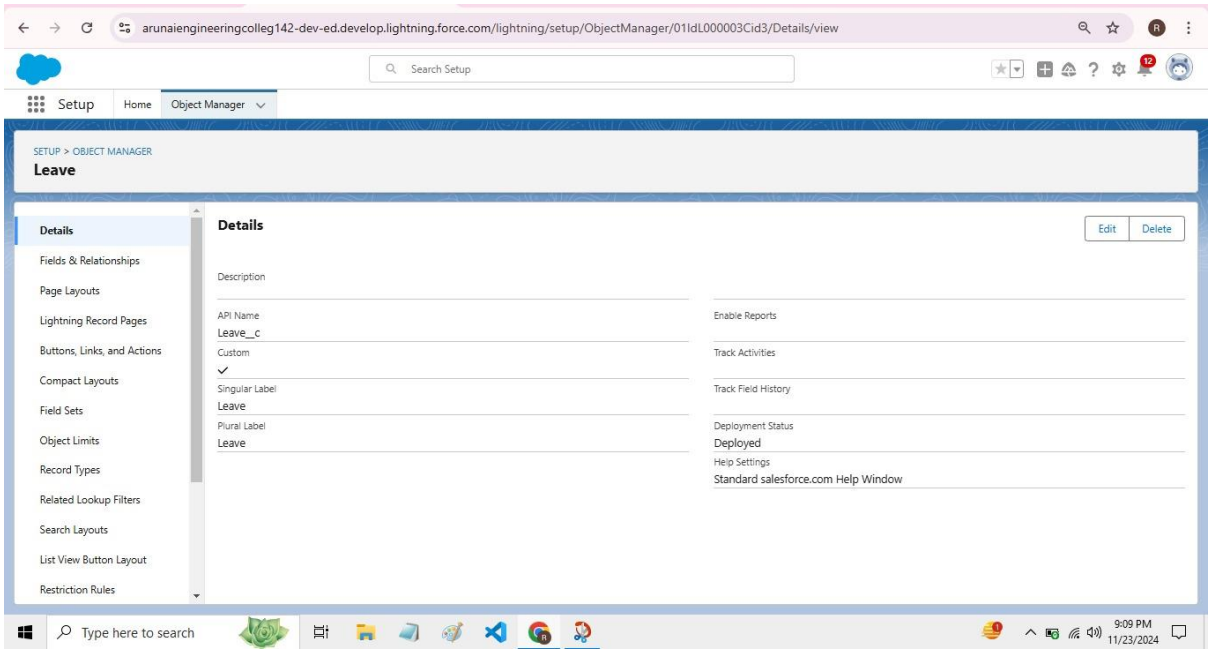
Activity - 1

Prerequisites:

1. Create the leave object with the following fields.

Object	Fields	Datatype
Leave	Employee Name No. of Days Subject Description Status	Lookup with Employee object Number Text Text Area(Rich) Picklist: values as follows Submitted Approved Rejected Note: Make sure the Status field is read only for everyone. (Give read only permission in step 3 while creating the field)

2. Create the tab for the leave object.



Activity - 2

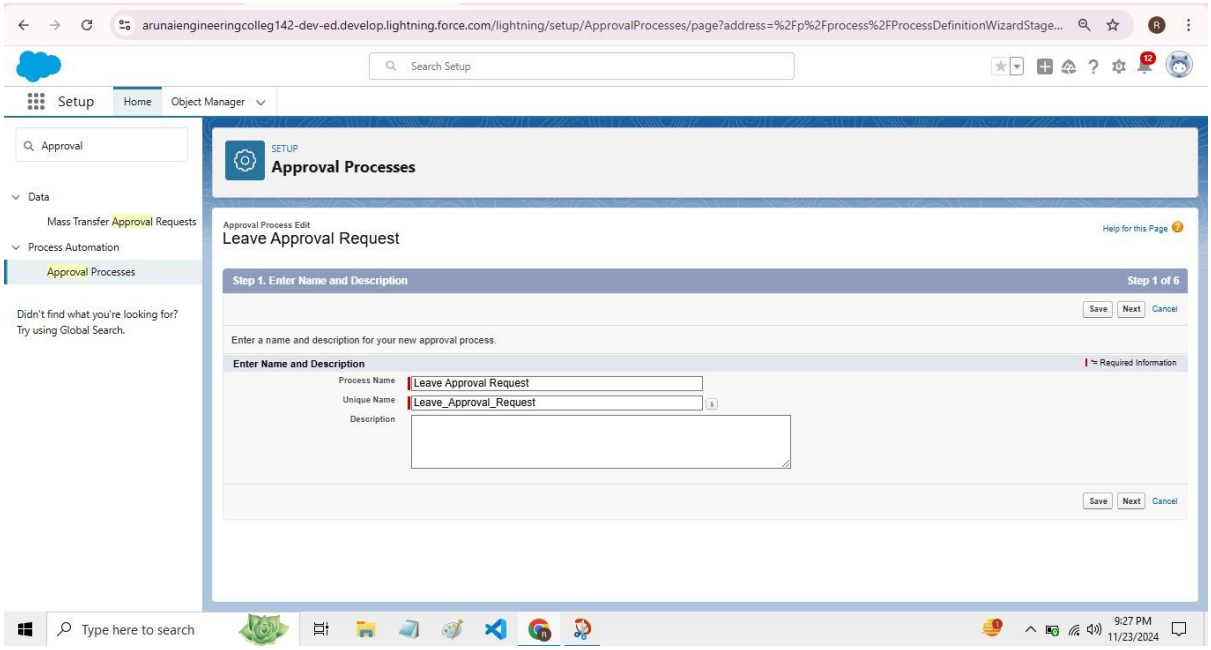
Create an Approval Process for Leave object.

1. Go to Setup --> type Approval Processes in quick find --> click on Approval Processes.
2. In the Manage Approval Processes For list, select Leave.
3. Click Create New Approval Process and select Use Jump Start Wizard.
4. Enter the following parameters:

Parameter	Value
Name	Leave Approval Request
Unique Name	Leave_Approval_Request(This automatically gets sent when you tab out of the Name field)
Approval Assignment Email Template	Leave blank
Add the Submit for Approval button and Approval History related list to all Travel Approval page layouts	Leave this selected/checked
Use Approver Field of Leave Owner	Leave unselected/unchecked.

Select Approver	select Automatically assign to approver(s) and for users select the name of the user with the Manager role.

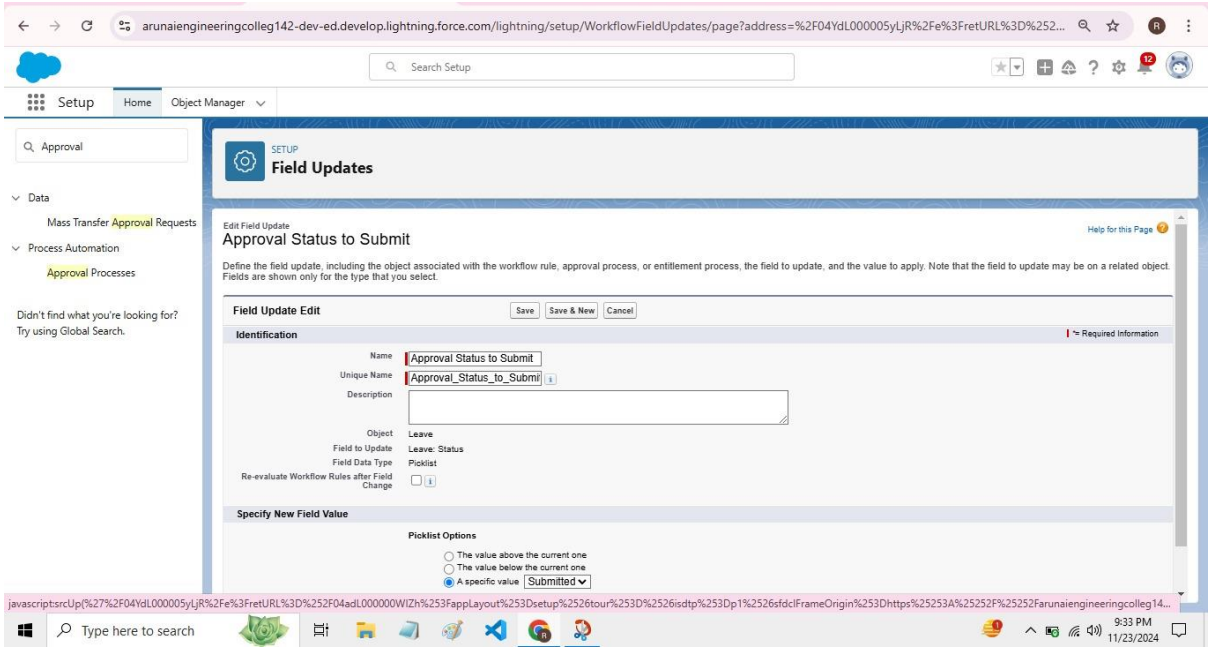
5. Click Save.
6. Click View Approval Process Detail Page.



Activity - 3

Initial Submission Action:

1. Under initial submission action click on add new and then select field update.
2. Give name as “Approval Status to Submitted”.
   Select Status for the field to update.
   Under specify new field value select “A specific value” and select submitted and click Save.



Activity - 4

Approval Steps:

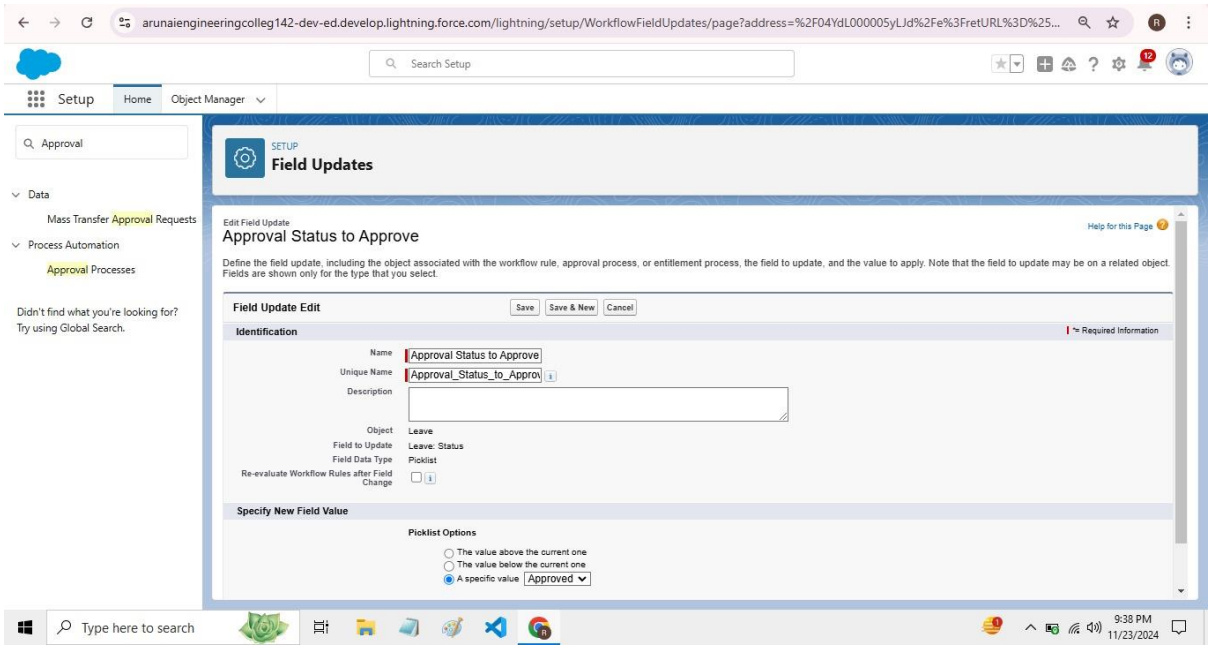
1. While you are still on Leave Approval Request detail page,
   Under approval steps click the new approval step.
2. Give the name as “Approval from HR” and click on next.
3. Under specify step criteria select “Enter this step if the following (Criteria are met)”,
   Select field : “Leave: No. of Days”,
   Operator : equals
   Value : 5
4. Click next.
5. Under select approver : select Automatically assign to approver(s) and for users select the name of the user with the HR role.
6. Click on Save.
7. No, I'll do this later. Take me to the approval process detail page to review what I've just created and click Go.

Activity - 5

Final Approval Action:

1. Under initial submission action click on add new and then select field update.

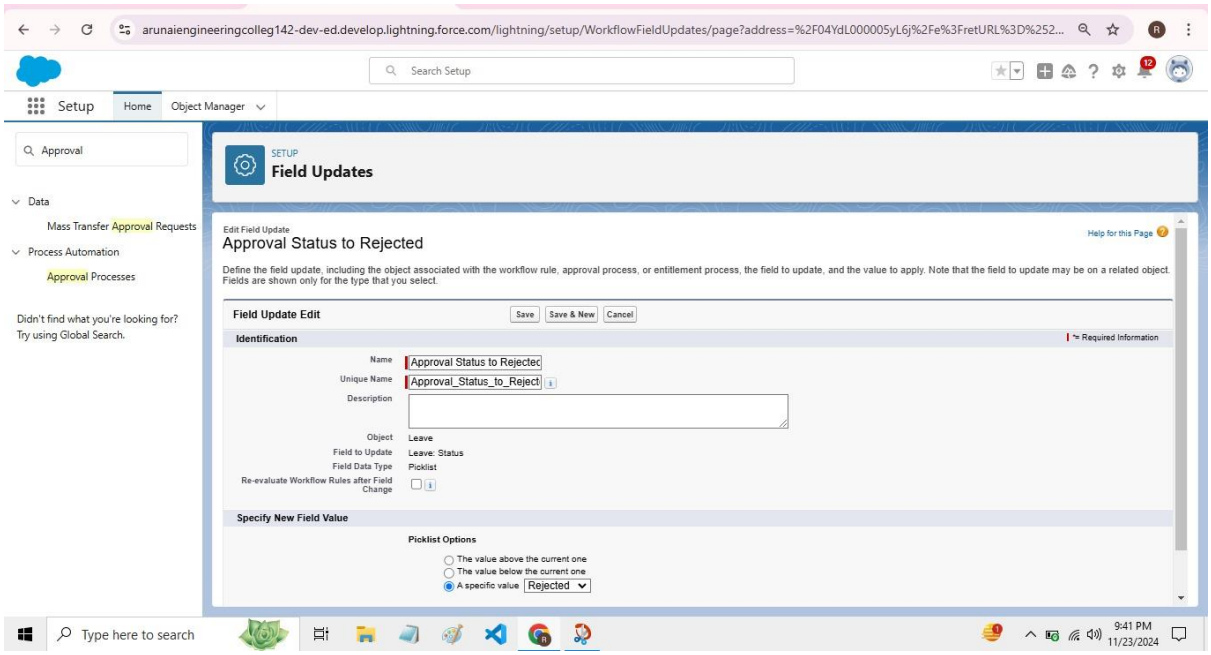
2. Give name as “Approval Status to Approved”.
   Select Status for the field to update.
   Under specify new field value select “A specific value” and select Approved and click Save.



Activity - 6

Final Rejection Action:

1. Under initial submission action click on add new and then select field update.
2. Give name as “Approval Status to Rejected”.
   Select Status for the field to update.
   Under specify new field value select “A specific value” and select Rejected and click Save.

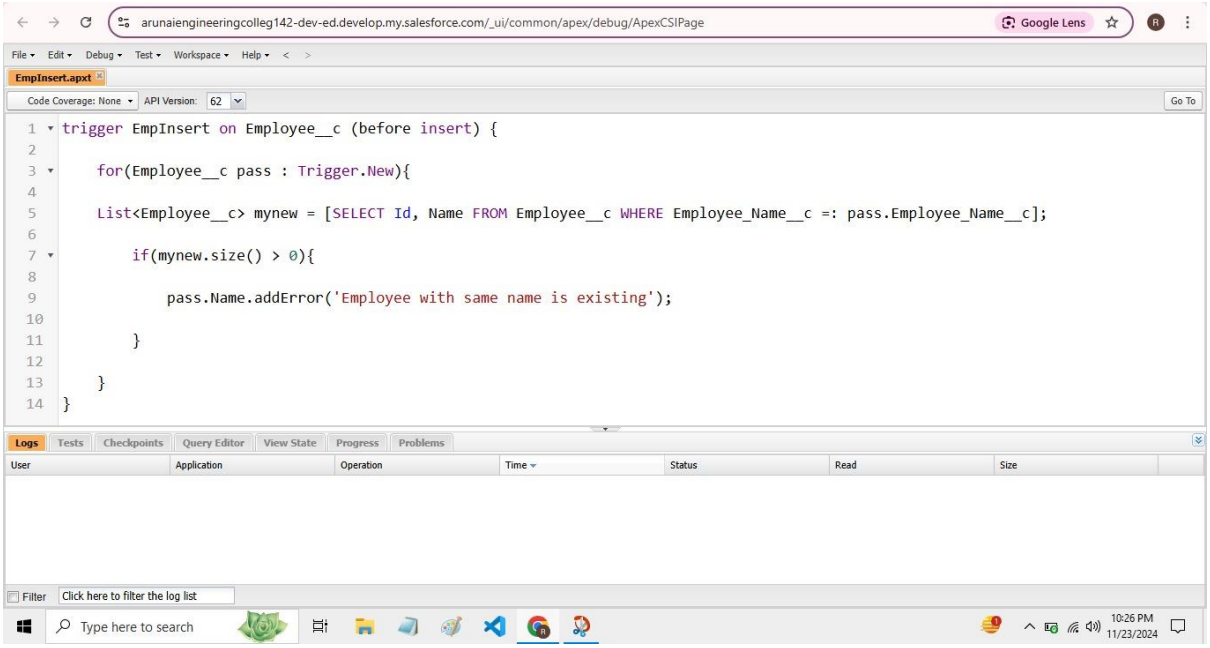


Apex Trigger:

Activity 1 : Create an Apex Trigger

Create an Apex Trigger

1. To create a new Apex Class follow the below steps:
   Click on the file --> New --> Apex Class.
2. Give the Apex Trigger name as “EmpInsert”, and select “Employee__c” from the dropdown for sObject.
3. Click Submit.
4. Now write the code logic here
5. Save the code.(click on file --> Save).



Activity 2 : Testing the Trigger

Follow the steps which are mentioned in Milestone 7, Activity 1 and try to create a record with the existing Employee Name say “Jackie Chan” you’ll face the error while saving the record saying “Employee with same name is existing”.

Conclusion :

The **Workforce Administration Solution** successfully addresses the critical need for centralized and efficient management of employee workflows, project assignments, and asset tracking. By integrating automation, real-time monitoring, and comprehensive reporting capabilities, the system streamlines administrative tasks, enhances transparency, and boosts overall productivity.

This project empowers organizations to manage their workforce and resources more effectively, ensuring that employees are optimally utilized and assets are securely tracked. The solution also reduces manual errors, saves time, and supports data-driven decision-making.

Ultimately, the **Workforce Administration Solution** represents a significant step toward modernizing workforce management processes, paving the way for scalable and future-ready organizational operations.