NAAN MUDHALVAN-SALESFORCE REPORT

WORKFORCE ADMINISTRATION SOLUTION (DEV)

PROJECT CREATED BY

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PROGRESS THROUGH KNOWLEDGE

COLLEGE CODE – 4224

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Table of content

WORKFORCE ADMINISTRATION SOLUTION (DEV)

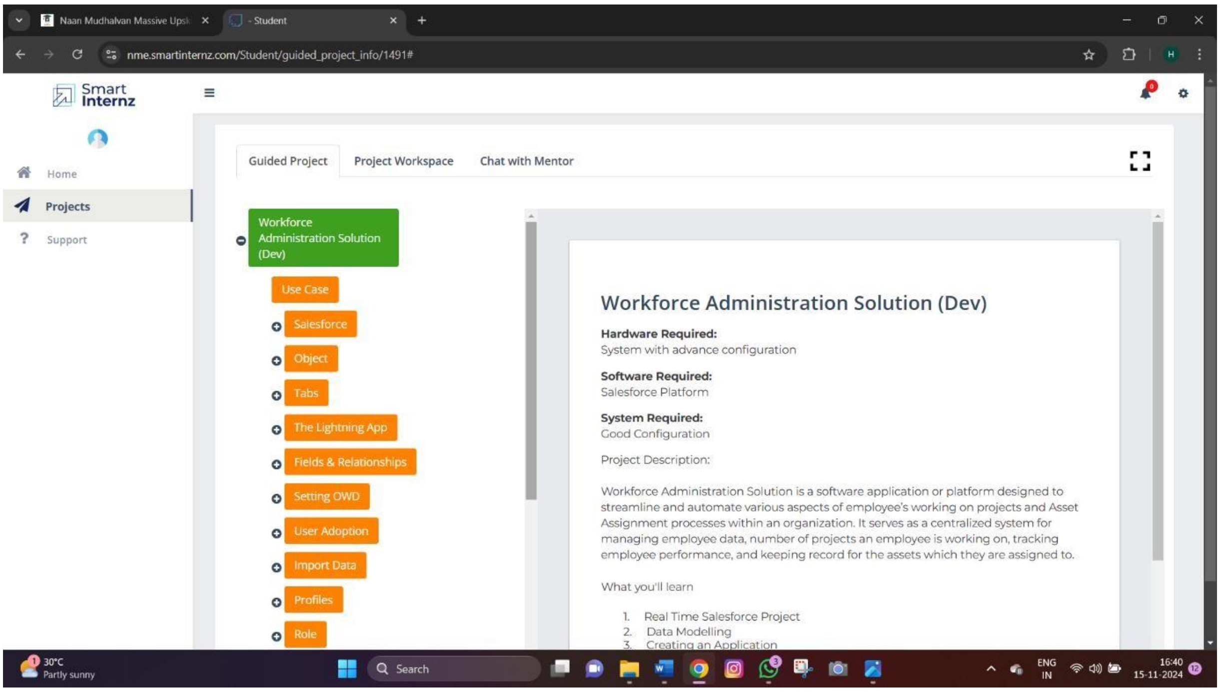
1. Project Overview

- The project involves implementing a Workforce Administration Solution using Salesforce to streamline employee management, time tracking, scheduling, and payroll integration. The solution aims to improve workforce efficiency, ensure compliance with labor laws, and optimize the overall administrative process.

2. Project Objectives

- Enhance employee data management.
- Streamline time and attendance tracking.
- Automate scheduling and shift management.
- Integrate payroll processes.
- Ensure compliance with labor regulations.
- Improve reporting and analytics capabilities.
- Increase user satisfaction through better interface and UX.
- Implement a quick, easy approval process to reduce delays and manual work.
- Enforce rules to ensure lease data is entered correctly and consistently.

FIGURE 1:



3. Salesforce Key Features and Concepts Utilized

- Salesforce Lightning Platform: Provides a modern, responsive user interface for managing workforce-related data.
- Salesforce Flow: Automates business processes such as employee onboarding and time-off requests.
- Salesforce Reports & Dashboards: Enables detailed analytics and performance monitoring.
- Apex: Custom code for complex business logic, such as payroll calculations or time tracking rules.
- Salesforce Object Manager: Used to configure and manage custom objects like employee records, shifts, and attendance logs.
- Salesforce Data Integration: Integrates with external systems for payroll and HRMS.

Salesforce

What Is Salesforce?

Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers.

Salesforce has everything you need to run your business from anywhere. Using standard products and features, you can manage relationships with prospects and customers, collaborate and engage with employees and partners, and store your data securely in the cloud.

So what does that really mean? Well, before Salesforce, your contacts, emails, follow-up tasks, and prospective deals might have been organized something like this:

https://youtu.be/r9EX3lGde5k

4.Detailed Steps to Solution Design

- Requirement Gathering: Meet with stakeholders to identify functional and technical requirements.
- Data Model Design: Design custom objects (Employee, Shift, Attendance, etc.) and relationships between them.
- Process Automation: Implement Salesforce Flow for automating attendance, scheduling, and approvals.
- User Interface Design: Customize Lightning pages to create an intuitive UI for HR admins and employees.
- Integration: Connect Salesforce with external payroll and HR systems via APIs or middleware.
- Security Configuration: Set up profiles, permissions, and data access levels for different user roles.
- Testing: Prepare test cases for system validation and perform unit, integration, and user acceptance testing.
- Deployment: Deploy the solution to production using change sets or Salesforce DX.

5. Testing and Validation

- Unit Testing: Validate individual components, such as custom Apex code or Flows.
- Integration Testing: Test the integration with external payroll systems to ensure data sync.
- User Acceptance Testing (UAT): HR and employee representatives test the solution to ensure it meets business needs.
- Performance Testing: Ensure the system can handle large data volumes, especially during payroll periods.
- Security Testing: Verify data security controls, such as access restrictions and encryption.

6. Key Scenarios Addressed by Salesforce in This Implementation Process

- Employee Onboarding: Automating the onboarding process through Salesforce Flow.
- Attendance Tracking: Automating clock-in/clock-out processes and integrating with time-off policies.
- Shift Scheduling: Automating the assignment and modification of employee shifts.
- Payroll Integration: Ensuring seamless transfer of attendance data to payroll systems for accurate compensation.
- Compliance Monitoring: Alerts and reporting to ensure compliance with labor laws and company policies.
- Reporting & Analytics: Providing management with real-time workforce insights and trends.

7. Step By Step Process Explanation.

STEP 1:CREATE A OBJECT:

What Is an 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.

Procedure To Create Custom Objects in Salesforce:

1. Navigate to Setup: From the setup page, go to Object Manager.

2. Create Custom Object: Click on Create, then Custom Object.

3. Define Object Details:

a. Label: Enter the object name (e.g., "Customer Details", "Appointment", "Billing Details and Feedback").

b. Plural Label: Enter the plural form (e.g., "Customer Details", "Appointments", "Billing Details and Feedback").

c. Record Name: Define the record name (e.g., "Customer Name", "Appointment Name", "Billing Details Name").

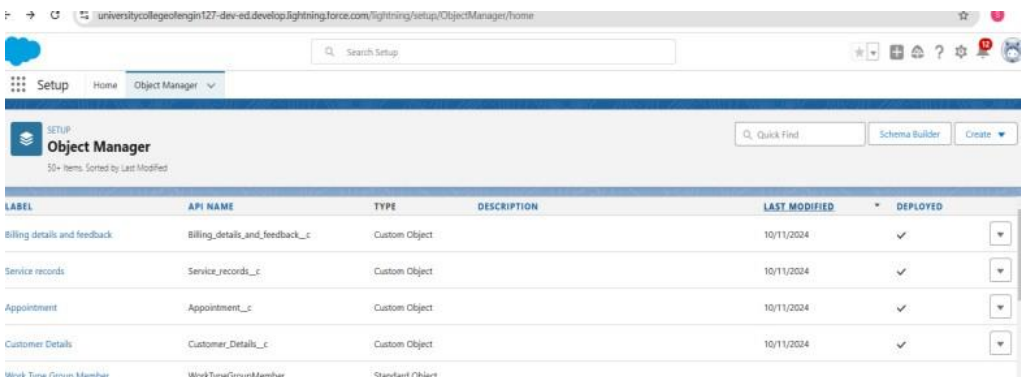
i. Data Type: Choose Text for Customer Details, Auto Number for others.

ii. Auto Number Format: For Auto Number objects, set a display format (e.g., "app-{000}", "bill-{000}") and starting number (e.g., 1).

4. Select Additional Options: Check Allow Reports, Track Field History, and Allow Search.

5. Save: Click Save to create the object.

FIGURE 2:



STEP 2:CREATE A TABS

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

Types of Tabs:

1.Custom Tabs

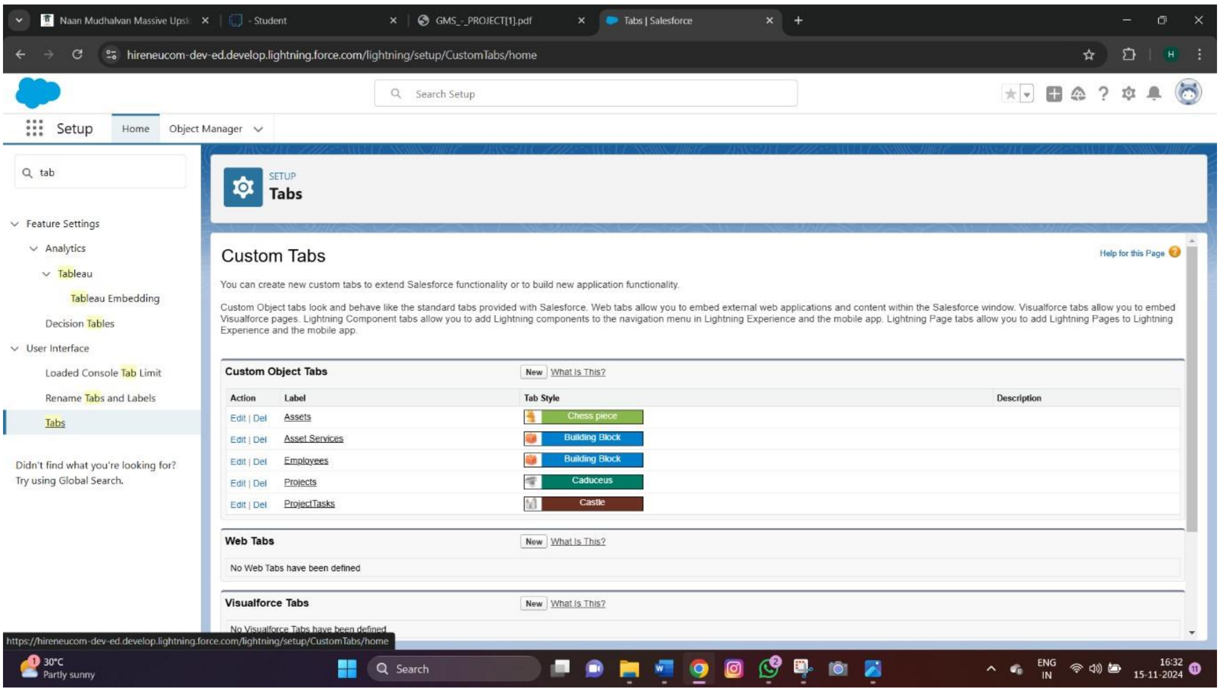
2.Web Tabs

3.Visualforce Tabs

4.Lightning Component Tabs

5.Lightning Page Tabs

FIGURE 3:



STEP 3:CREATE A LIGHTNING APP

The Lightning App

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

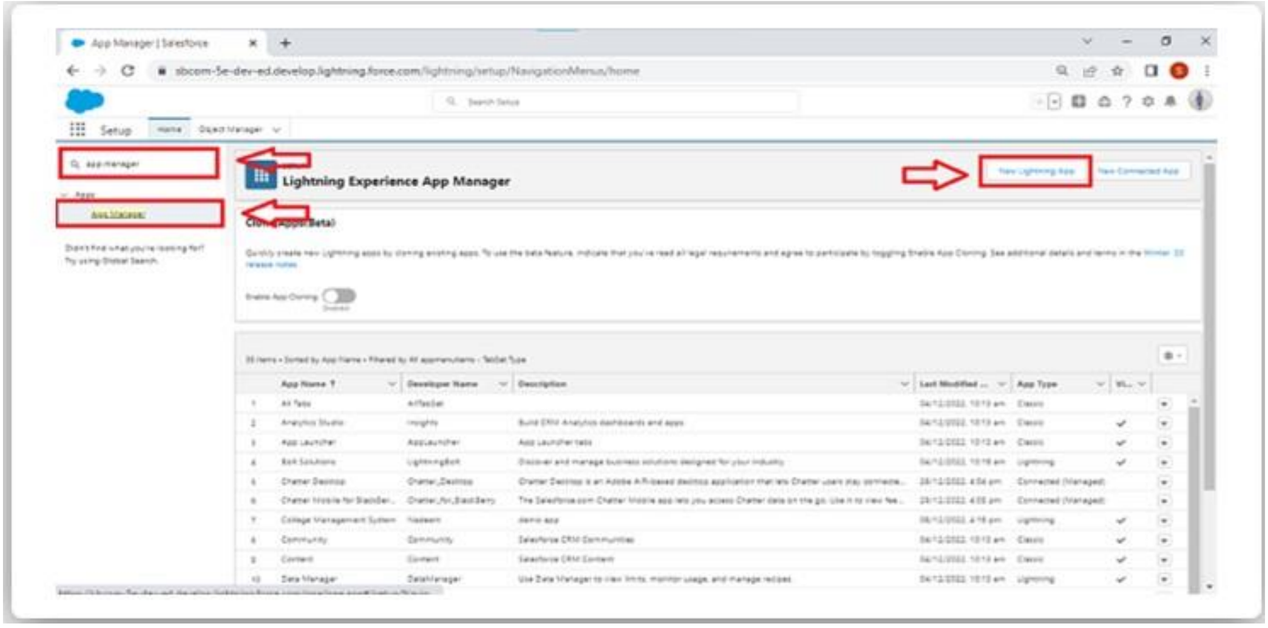
Lightning apps let you brand your apps with a custom color and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.

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.

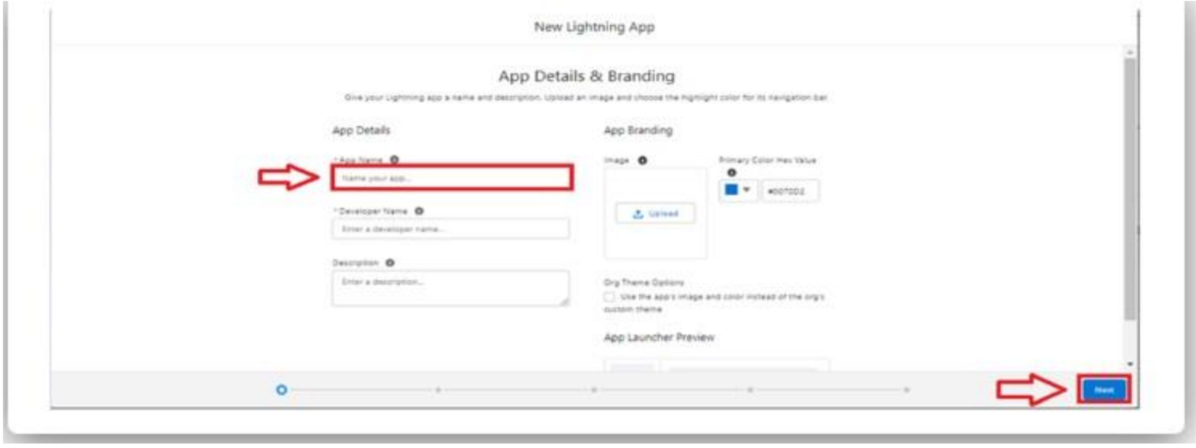
FIGURE 4:



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

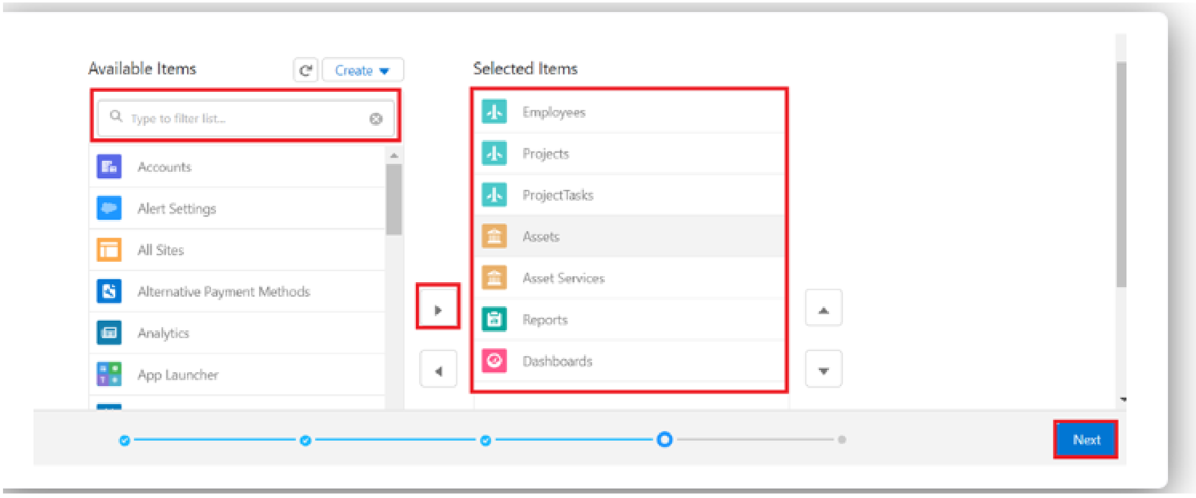
3. Then click Next --> (App option page) keep it as default --> Next --> (Utility Items) keep it as default --> Next.

FIGURE 5:



4. To Add Navigation Items:

FIGURE 6:

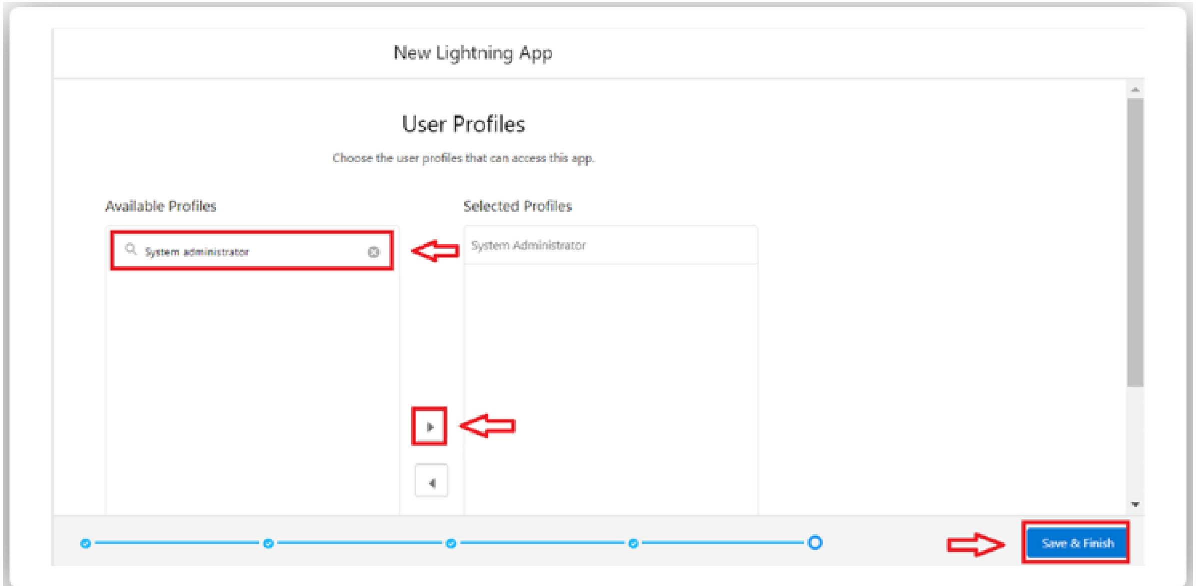


Search the items in the search bar(Employees, Projects, ProjectTask, Assets, Asset Services, Reports, Dashboard) from the search bar and move it using the arrow button --> Next.

Note: select asset the custom object which we have created in the previous activity.

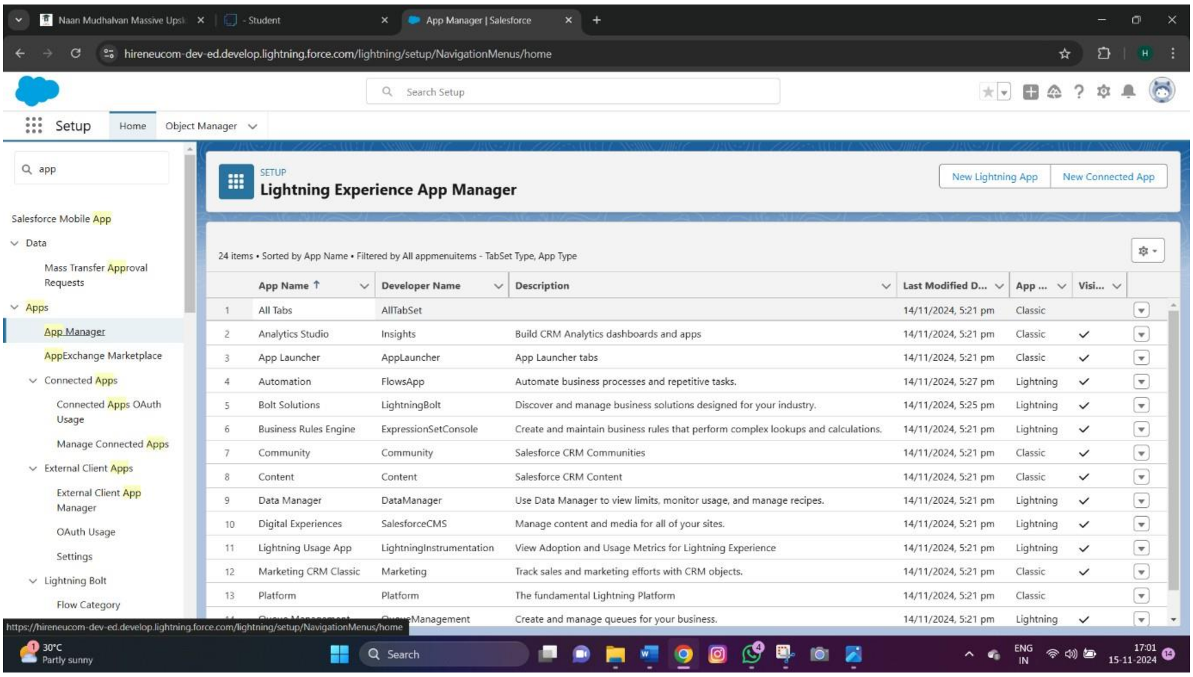
5. To Add User Profiles:

FIGURE 7:



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

FIGURE 8:



STEP 4:CREATE A FIELDS

Fields & Relationships

What is Fields

Fields represent the data stored in the columns of a relational database. It can 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

1. Standard Fields
2. Custom Fields

Standard Fields:

As the name suggests, the Standard Fields are the predefined fields in Salesforce that perform a standard task. The main point is that you can’t simply delete a Standard Field until it is a non-required standard field. Otherwise, users have the option to delete them at any point from the application freely. Moreover, we have some fields that you will find common in every Salesforce application. They are,

1 Created By

2 Owner

3 Last Modified

4 Field Made During object Creation

Custom Fields:

On the other side of the coin, Custom Fields are highly flexible, and users can change them according to requirements. Moreover, each organizer or company can use them if necessary. It means you need not always include them in the records, unlike Standard fields. Hence, the final decision depends on the user, and he can add/remove Custom Fields of any given form.

FIGURE 9:

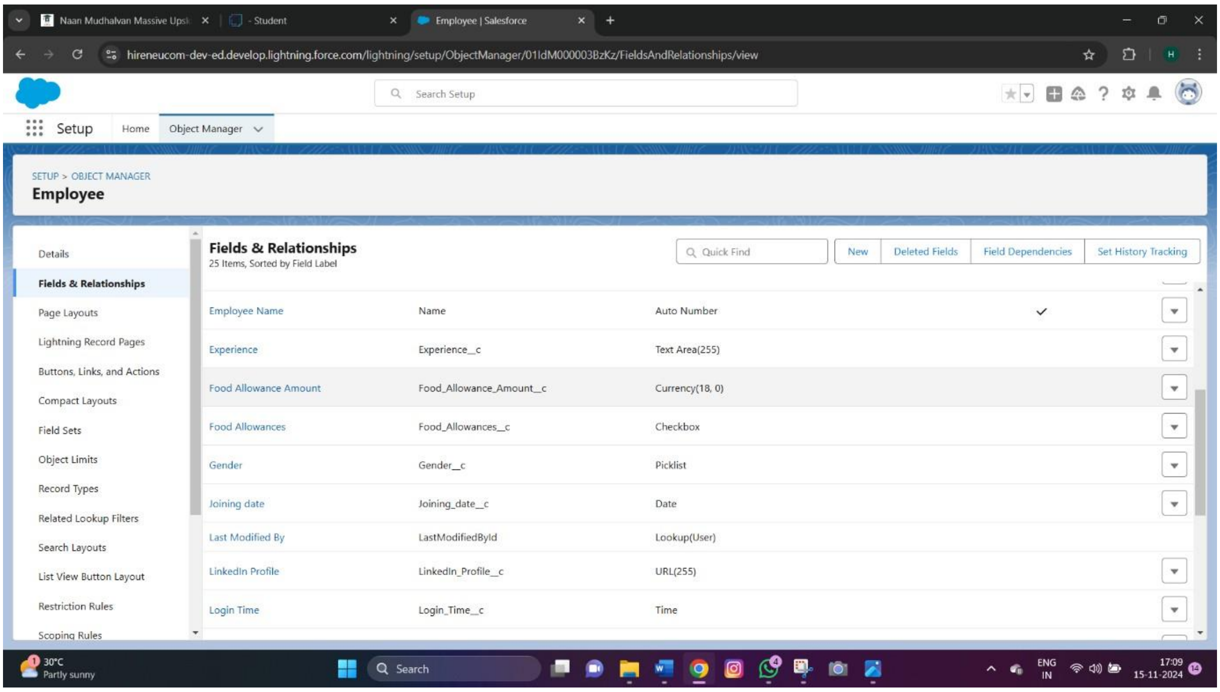
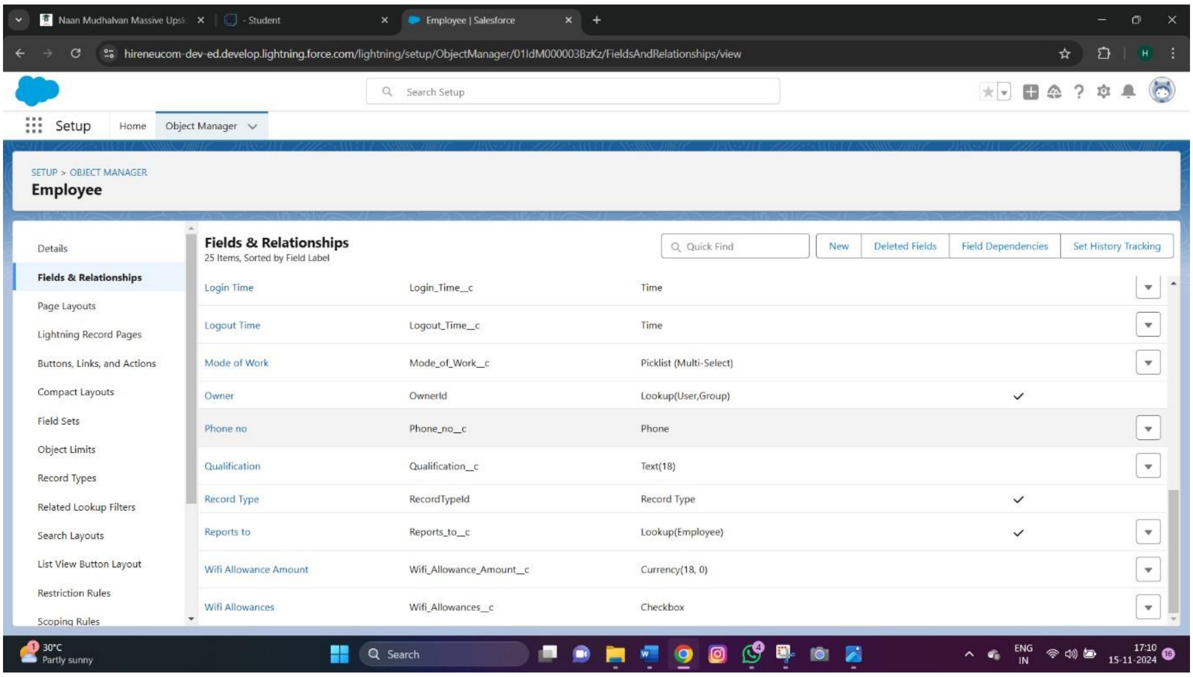


FIGURE 10:



STEP 5 :SETTING OWD

Organization-Wide Defaults, or OWDs, are the pattern security rules that you can follow for your Salesforce instance. Organization Wide Defaults are utilized to confine who can access what information in your CRM. You can award access through different methods that we will discuss later (sharing principles, Role Hierarchy, Sales Teams, and Account groups, manual sharing, and so forth).

Primarily, there are four levels of access that can be set in Salesforce OWD and they are-

1 Public Read/Write/Transfer

2 Public Read/Write

3 Public Read/Only

4 Private

PROCEDURE TO 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.

FIGURE 11:

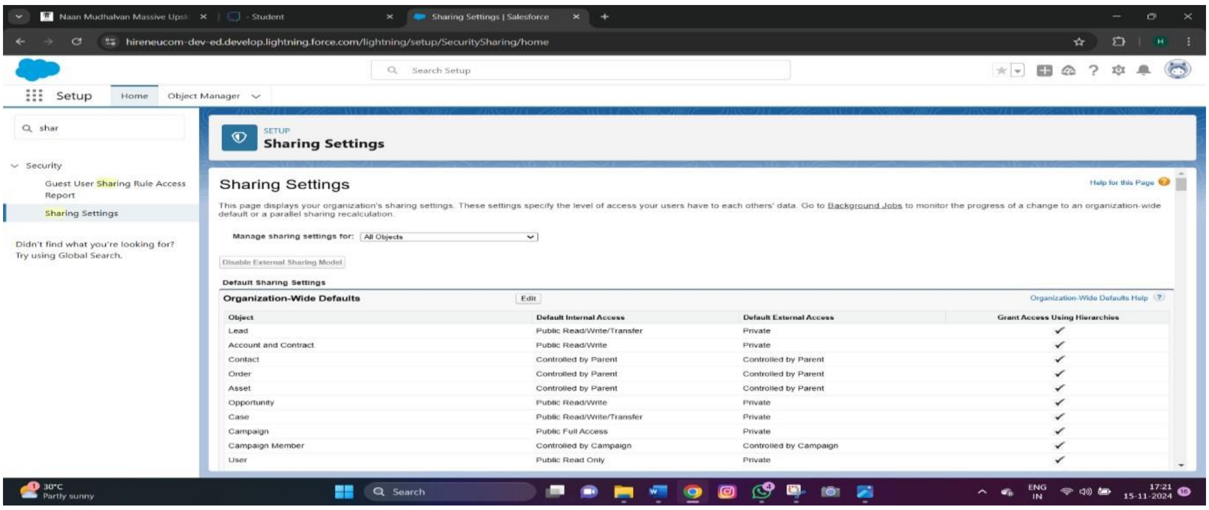
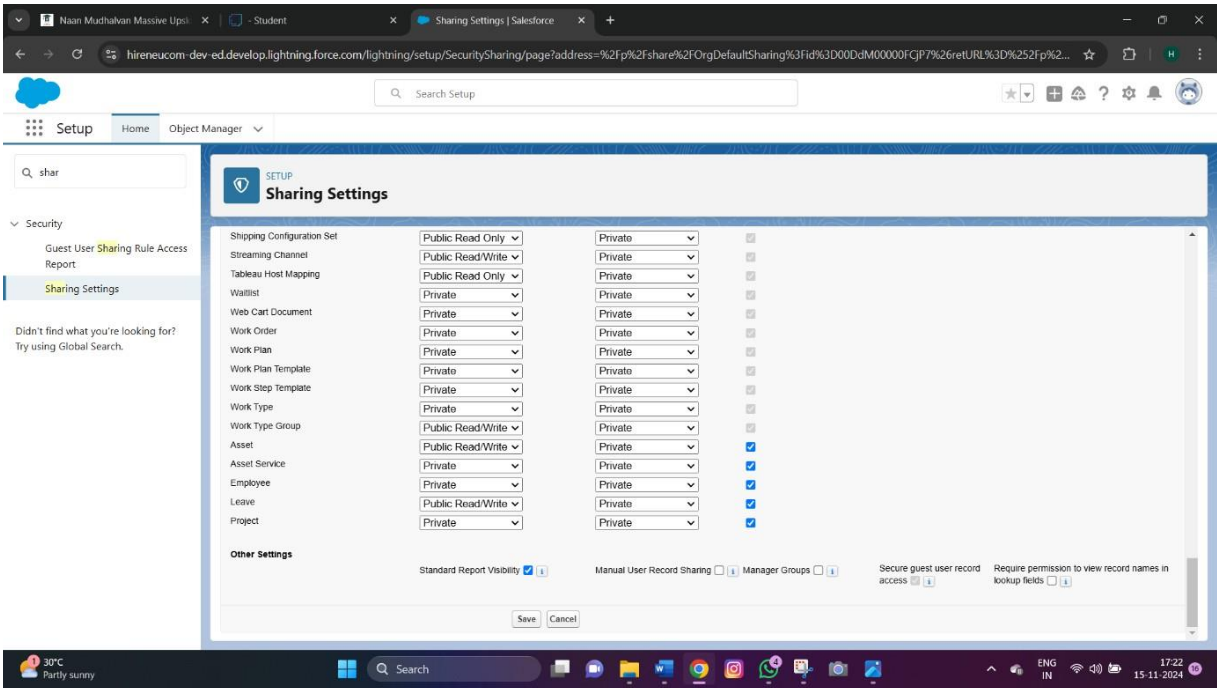


FIGURE 12:



STEP 6: USER ADOPATION

Use Case:

As a new Administrator, you perform user management tasks like creating and editing users, resetting passwords, granting permissions, configuring data access, and much more. In this unit, you will learn about users and how you add users to your Salesforce org.

Activity 1: Create a Record (Employee)

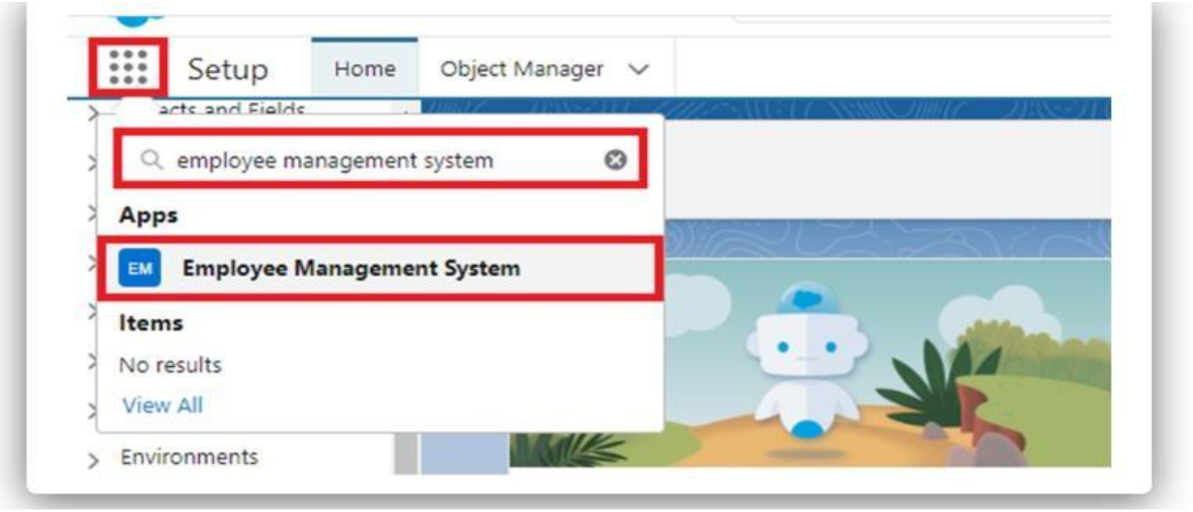
1. Click on App Launcher on the left side of the screen.
2. Search Employee Management System & click on it.

3.Click on the Employee tab.

4.Click New.

5.Fill the Details and click on Save.

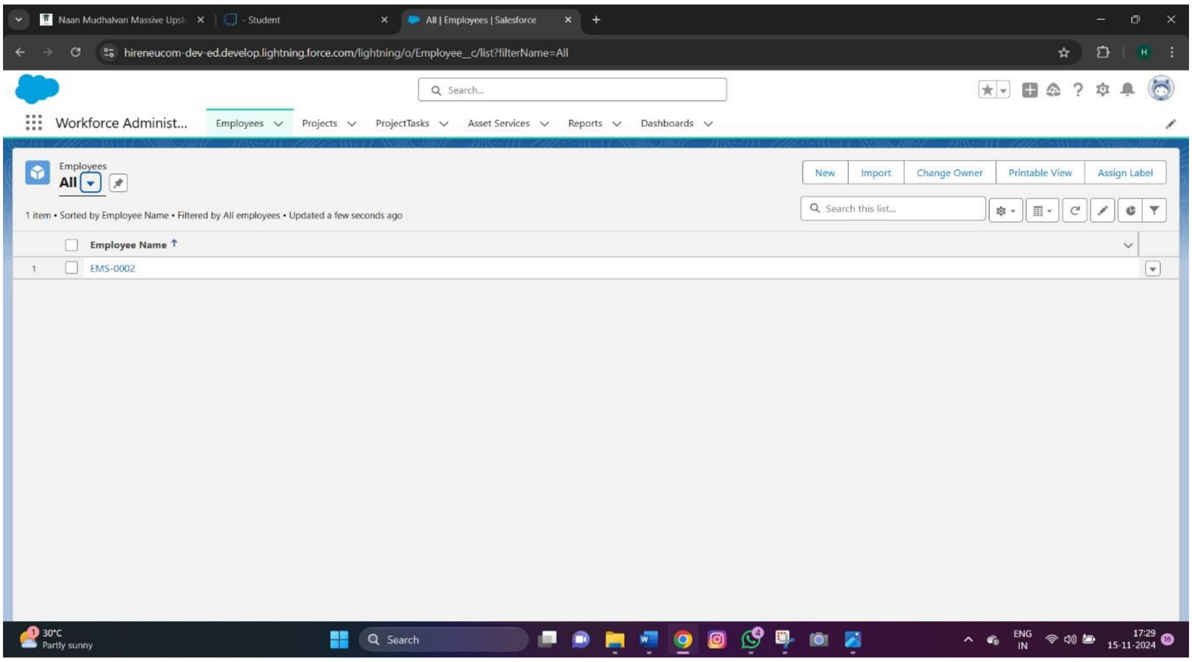
FIGURE 13:



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

FIGURE 14:



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.

STEP 7:IMPORT DATA

Import Data

NOTE- Before creating the application download this file from the URL given below and save the file in CSV.
https://tinyurl.com/SF-Employee-Data

Data Import lets you upload data from external sources and combine it with data you collect via Analytics. You can then use Analytics to organize and analyze all of your data in ways that better reflect your business.

The Data Import Wizard is a Tool makes it easy to import data for many standard Salesforce objects, including accounts, contacts, leads, solutions, campaign members, and person accounts. You can also import data for custom objects.

In order to complete this milestone, you need to create CSV files and give them data given in the picture below. After that from these CSV files we will import data for the Employee object.

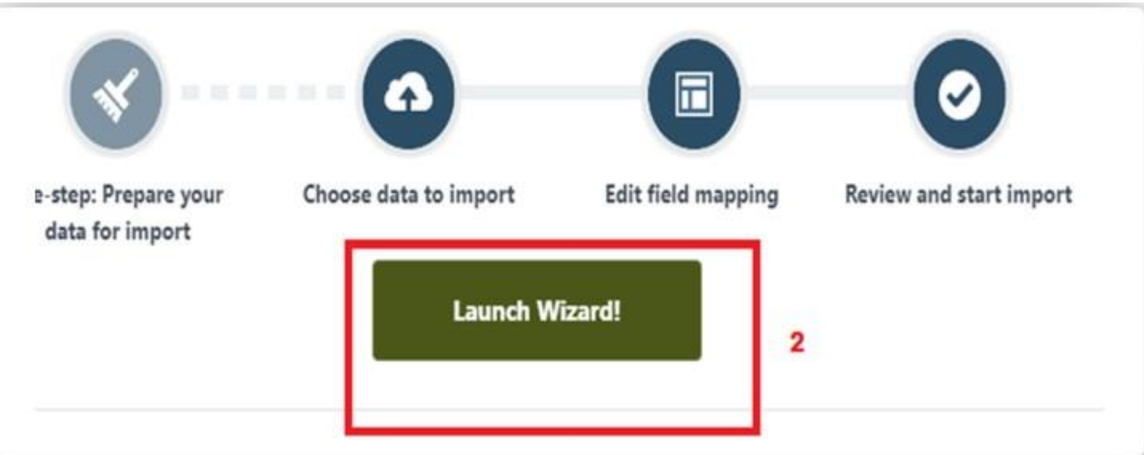
Activity-1: Importing data using Data Wizard

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!

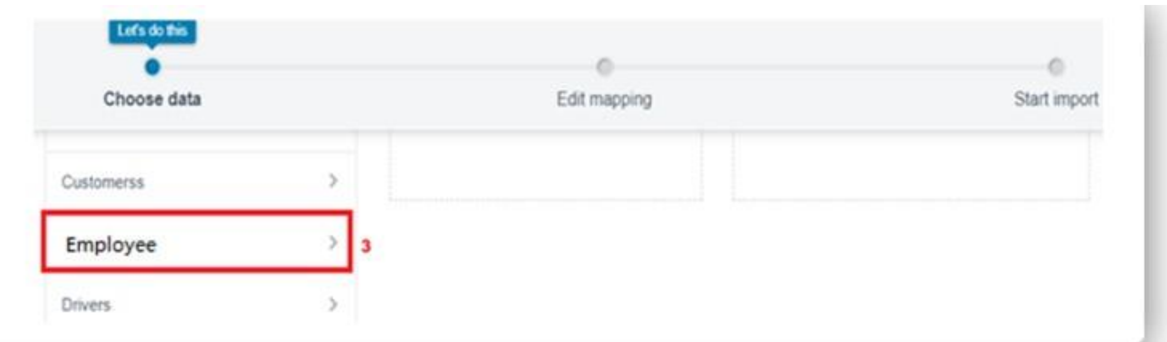
FIGURE 15:

FIGURE 16:



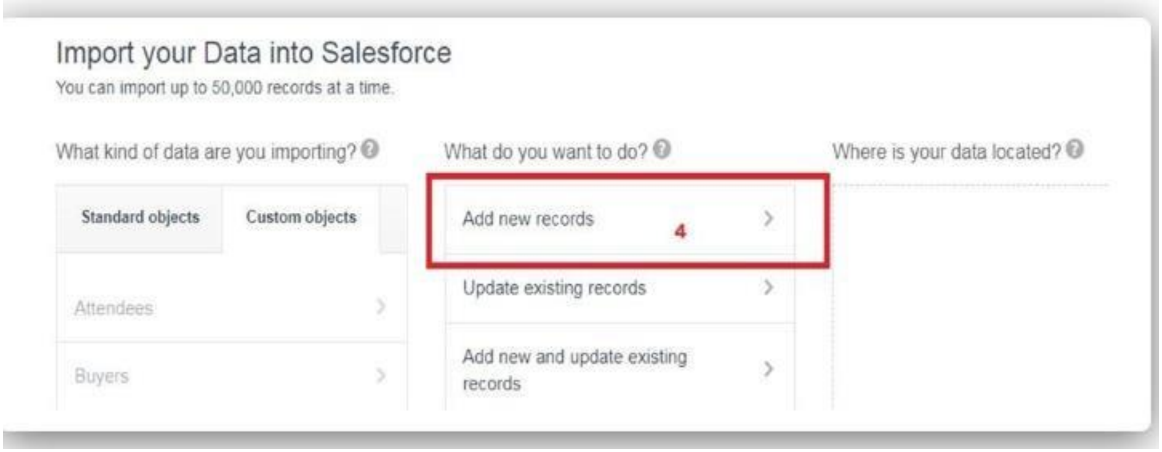
4. Click the Custom Objects tab and select the Employee object.

FIGURE 17:



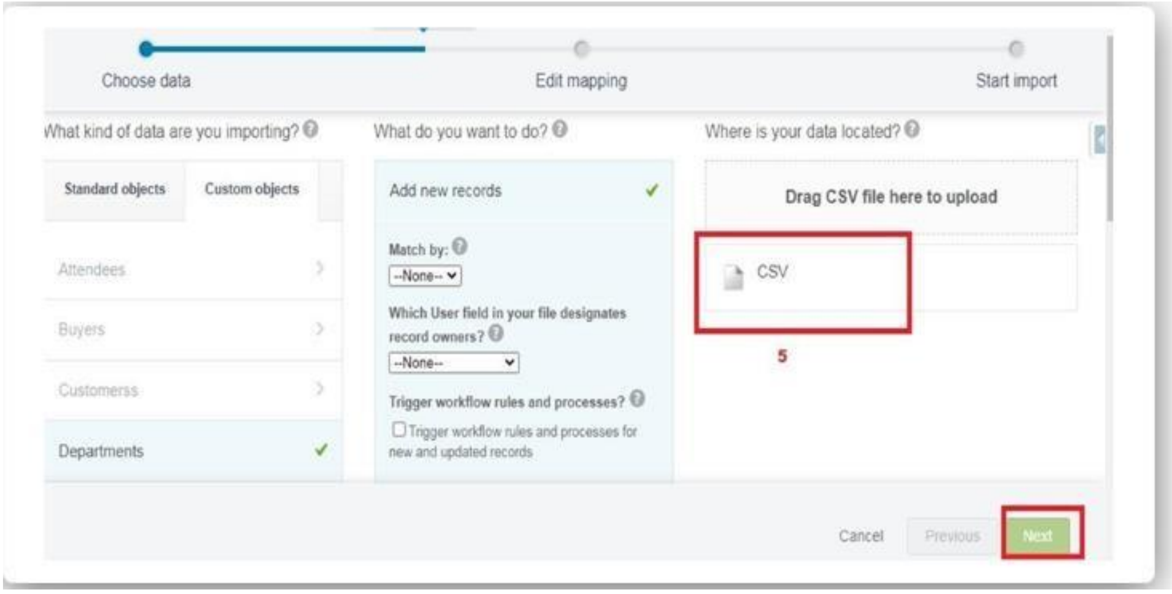
5. Select Add new records.

FIGURE 18:



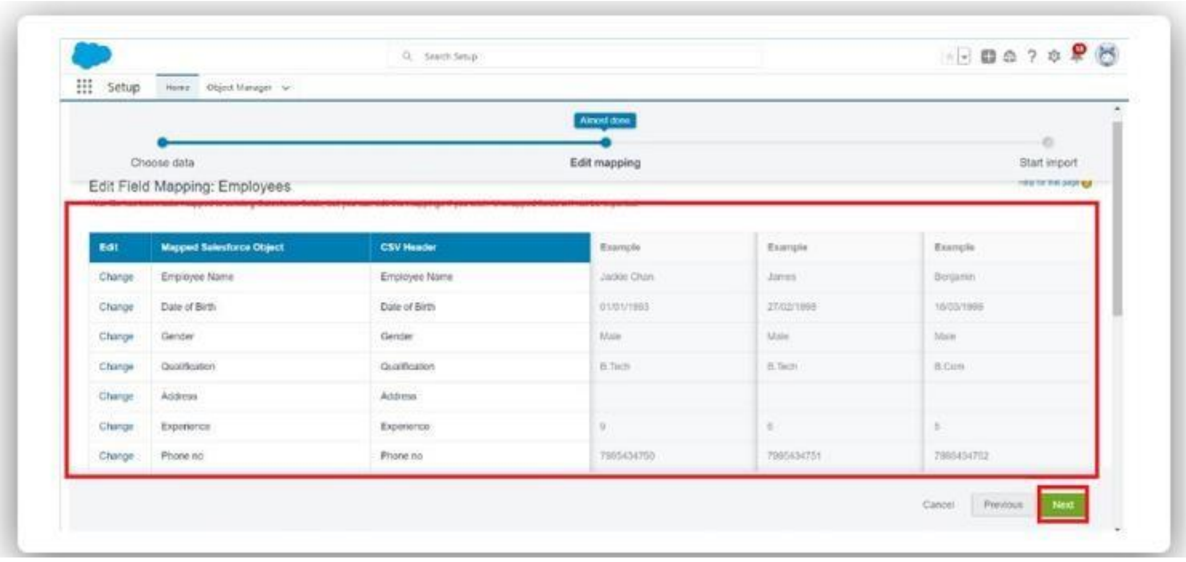
6.Click CSV and choose file Employee_CSV which we made earlier. Click Next.

FIGURE 19:



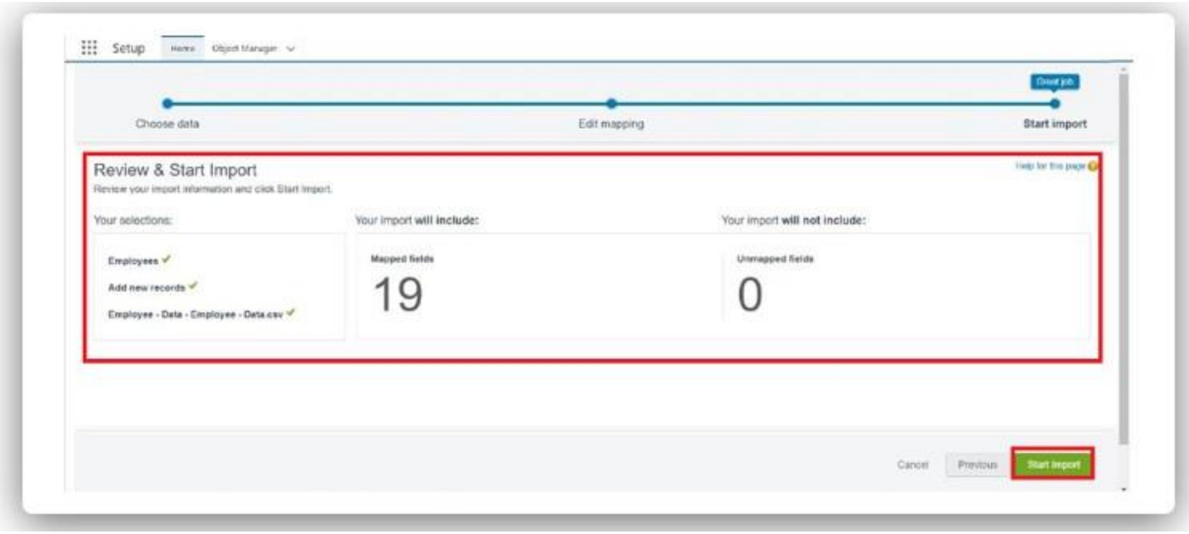
7. Since the field names in the CSV file (CSV Header) are the same as the field names in your object (Mapped Salesforce Object), the fields are automatically mapped. Click Next.

FIGURE 20:



8. The next screen gives you a summary of your data import. Click Start Import.

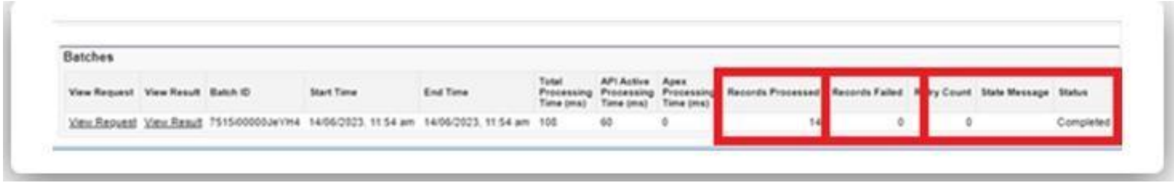
FIGURE 21:



9. Click OK on the popup.

10. Scroll down the page and verify that your data has been imported under batches.

FIGURE 22:



11. Make sure you have 0 records under the records failed column**.**

STEP 8:PROFILES

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.

Types of profiles in salesforce

1. Standard profiles:

By default salesforce provides below standard profiles.

1. Contract Manager
2. Read Only
3. Marketing User
4. Solutions Manager
5. Standard User
6. System Administrator.

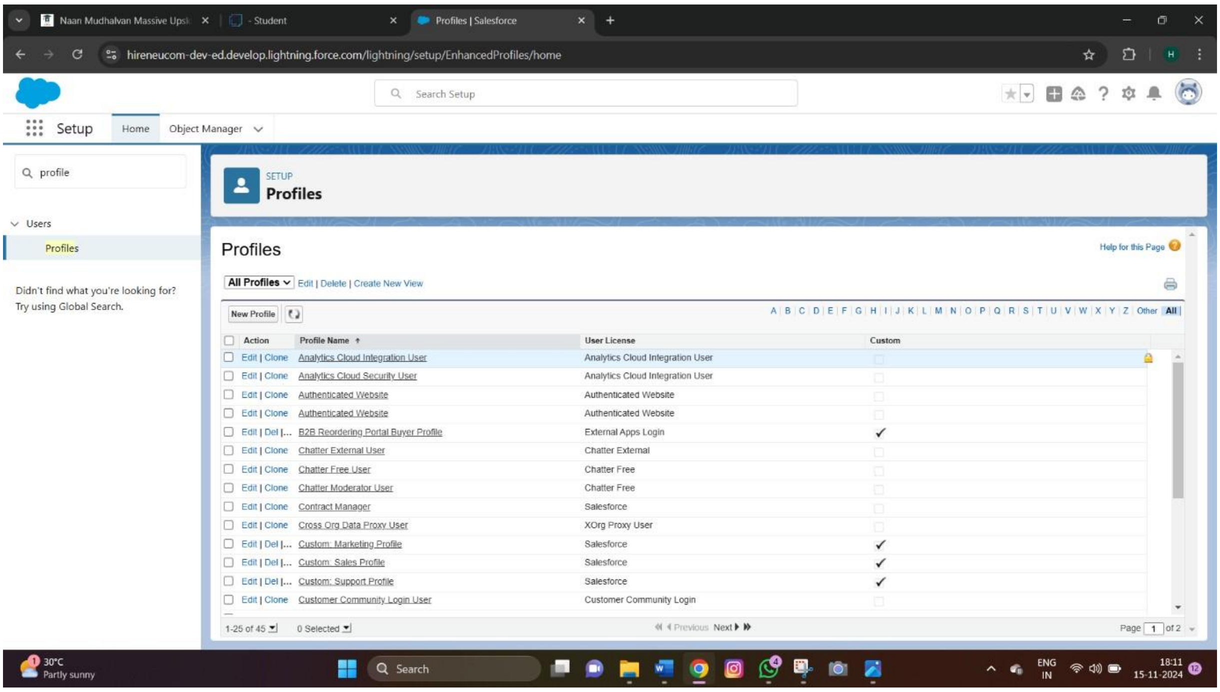
We cannot deleted standard ones Each of these standard ones includes a default set of permissions for all of the standard objects available on the platform.

2. Custom Profiles:

Custom ones defined by us.

They can be deleted if there are no users assigned with that particular one.

FIGURE 23:



STEP 9:ROLES

Role

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.

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.

FIGURE 24:

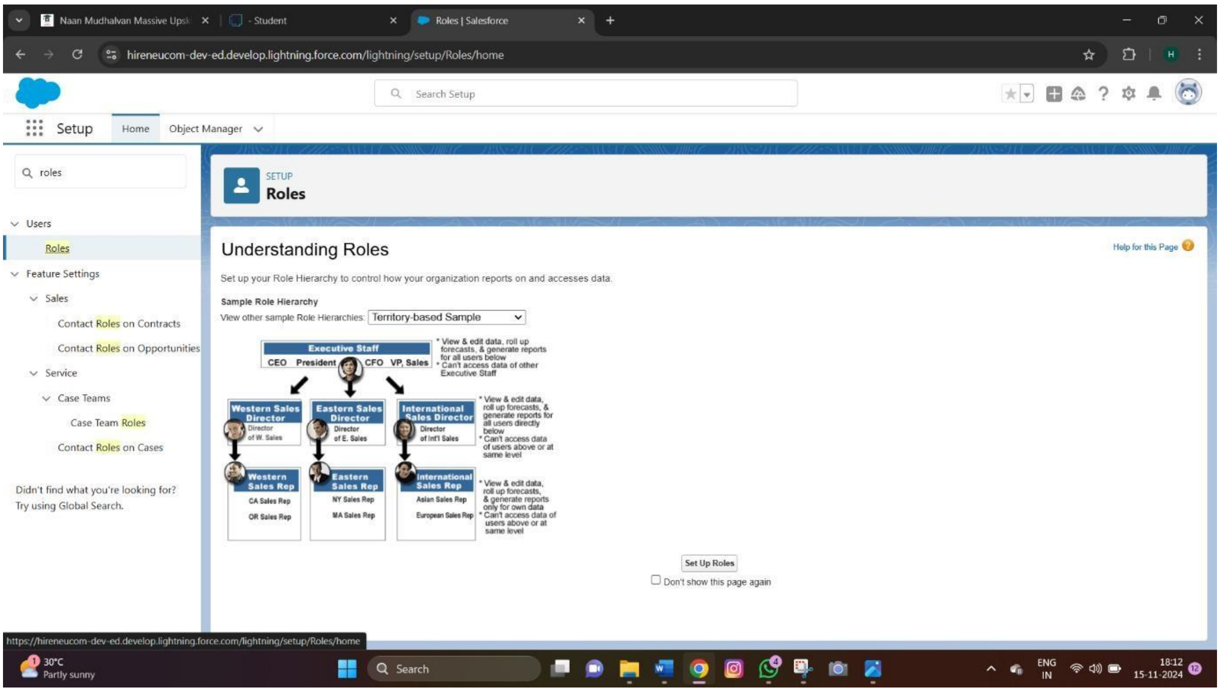
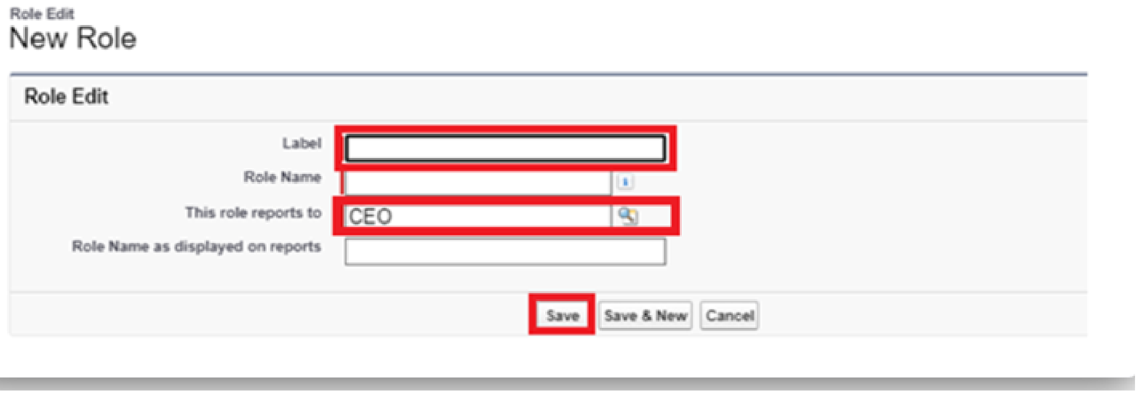


FIGURE 25:

3.Give Label as "HR" and Role name gets auto populated. Check to whom this role (HR) reports. Then click on Save.

FIGURE 26:



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

STEP 10:USERS

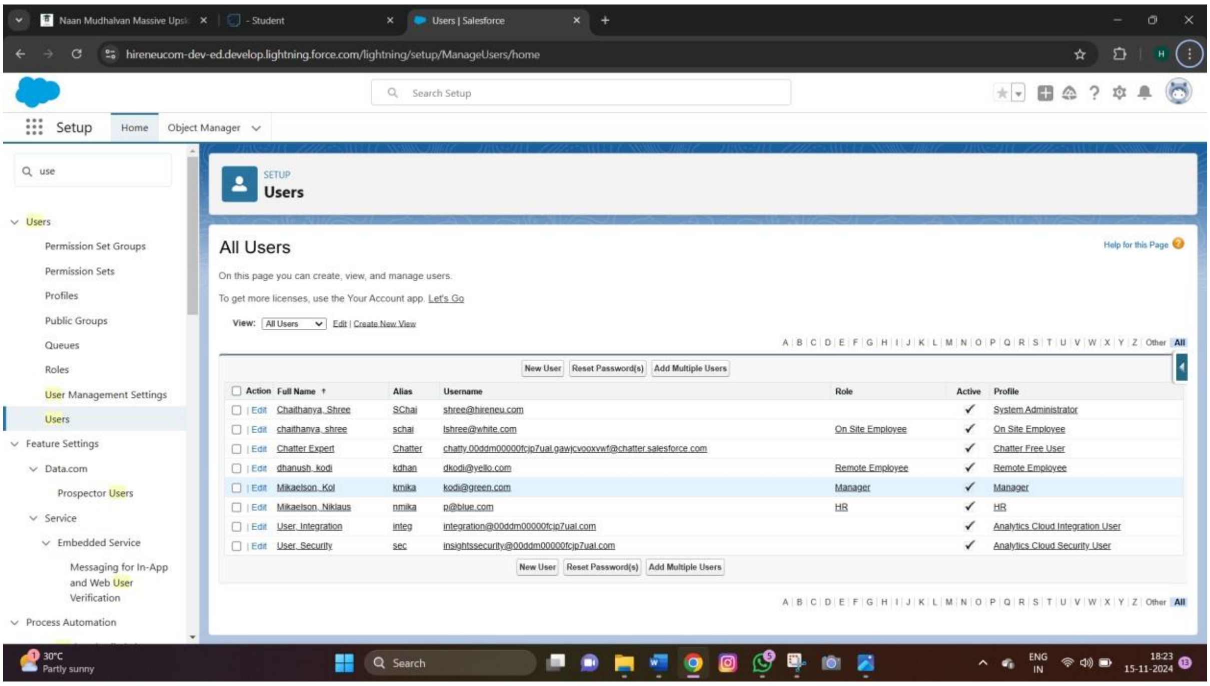
Users

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.

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. Each user account contains at least the following:

1. Username
2. Email Address
3. User's First Name (optional)
4. User's Last Name
5. Alias
6. Nickname
7. License
8. Profile
9. Role(optional)

FIGURE 27:



STEP 11:PAGE LAYOUTS

Page layouts

Page Layout in Salesforce allows us to customize the design and organize detail and edit pages of records in Salesforce. Page layouts can be used to control the appearance of fields, related lists, and custom links on standard and custom objects' detail and edit pages.

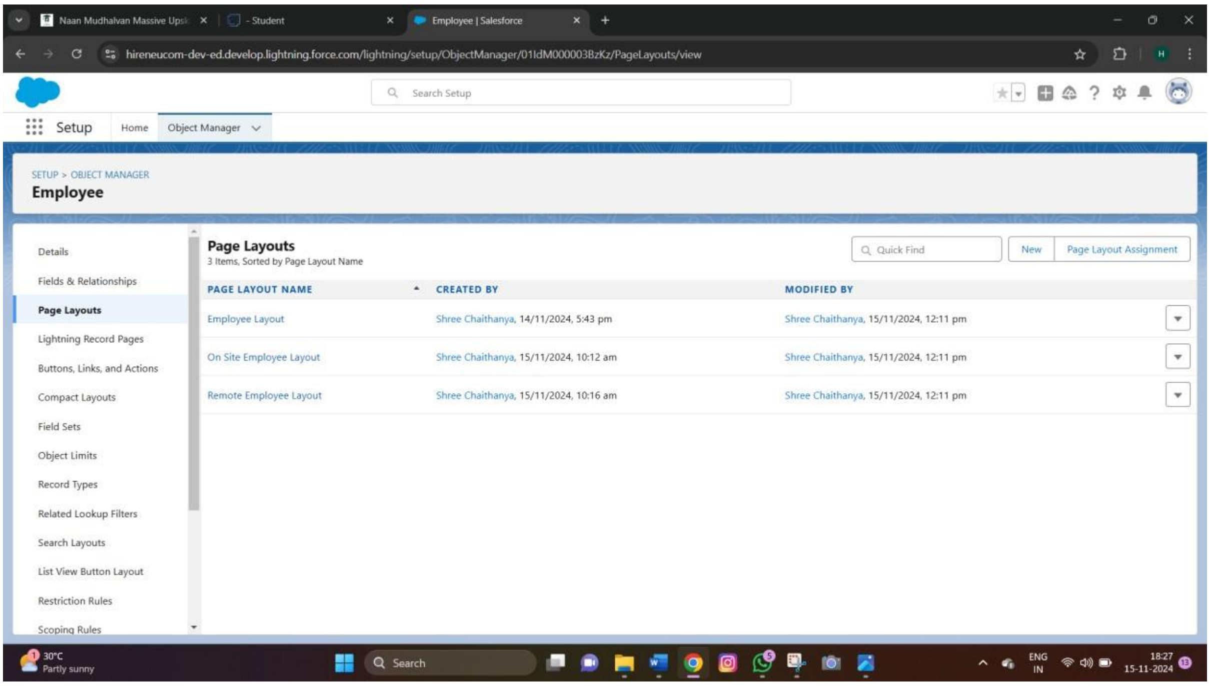
Activity 1 : creating a page layout for Employee object

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.C.
7. Click Save.

FIGURE 28:



STEP:12 CHATTER GROUP

Chatter group

Salesforce Chatter Groups are collaborative spaces within the Salesforce platform that enable teams to communicate, share information, and collaborate on projects. They provide a centralized hub for discussions, file sharing, and updates, allowing users to stay connected, streamline workflows, and enhance productivity.

Activity 1 : Creating a chatter group for your organization.

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:

Field	Value
1. Group Name	Internal Discussion
2. Description	Give a understanding Description on your own
3. Access Type	Private
4. Allow Customers	Checked

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.

FIGURE 29:

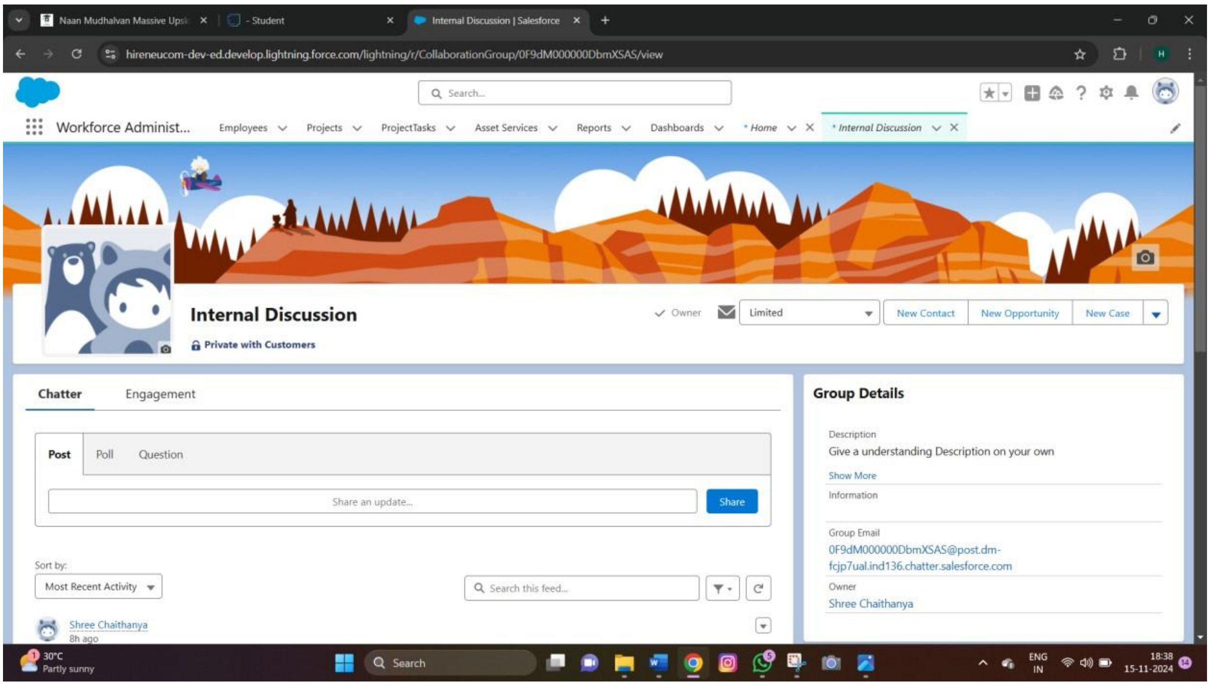
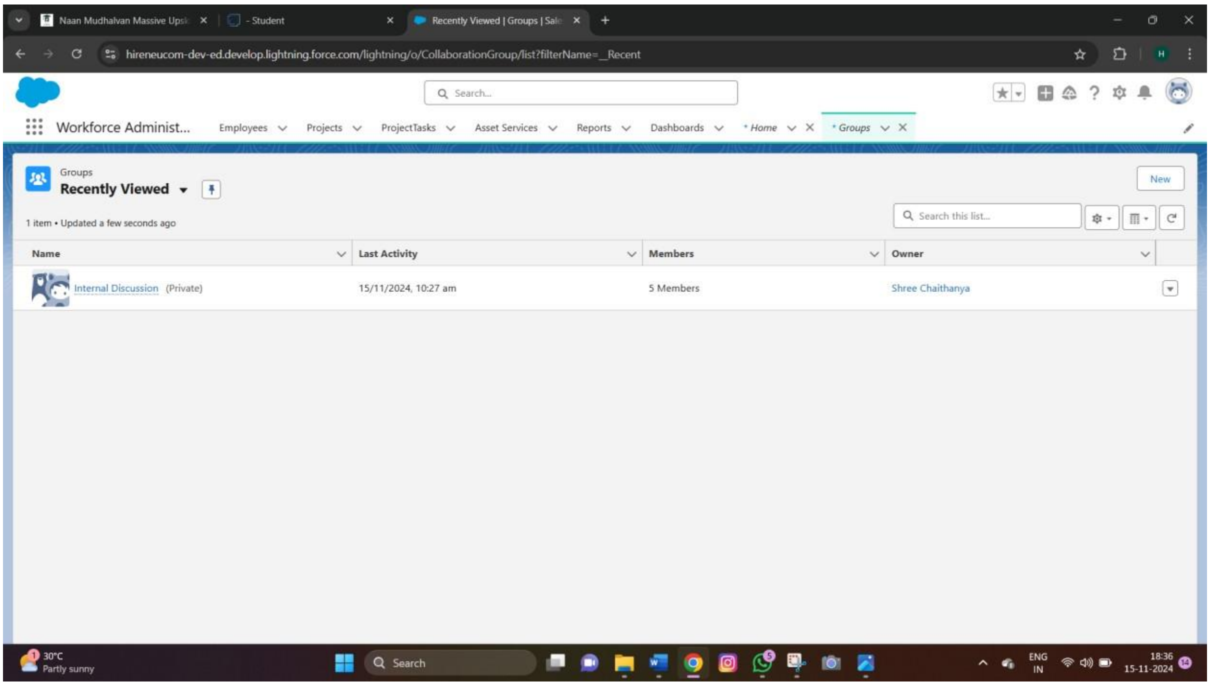


FIGURE 30:



STEP 12: RECORD TYPES

Record types

Record Types are a way of grouping many records of one type for that object. These can be applied to any standard or custom object, and allow you to have a different page layout, fields, required fields, and picklist values. Record types allow administrators to create a different page layout with custom picklist fields and values for the same business process and various business processes.

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.

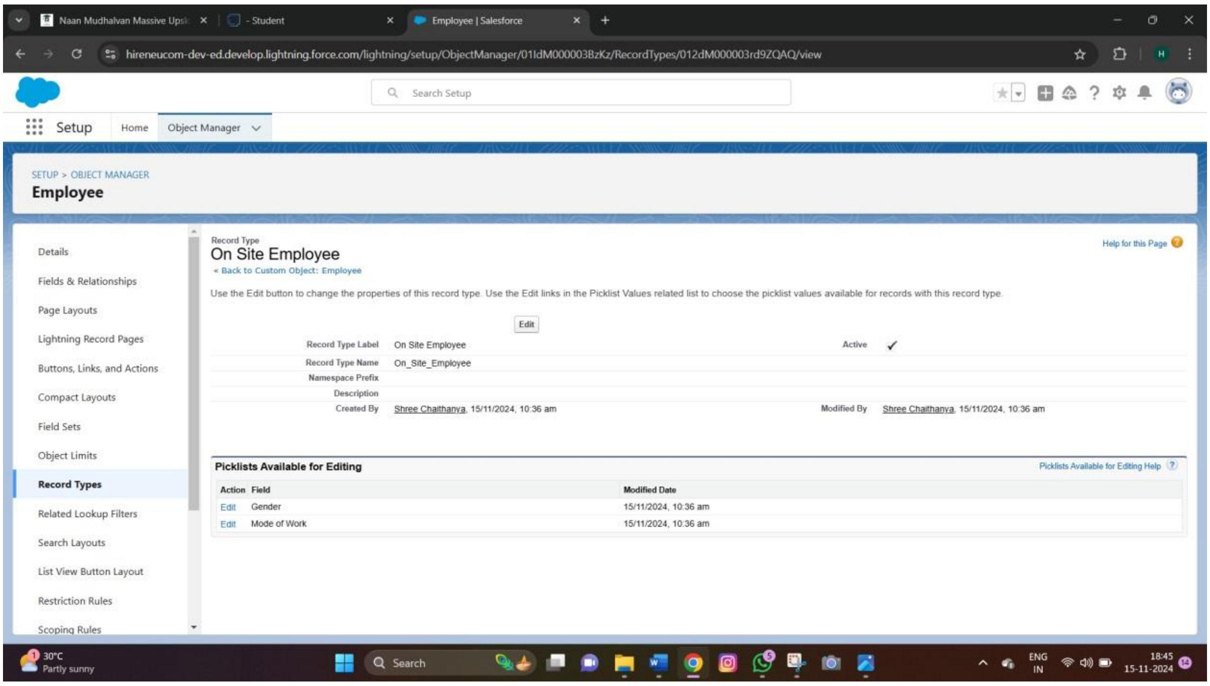
4. Uncheck for “Make Available”.

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.

FIGURE 31 :



Activity 2: Creating "Remote Employee" Record Type

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

FIGURE 32 :

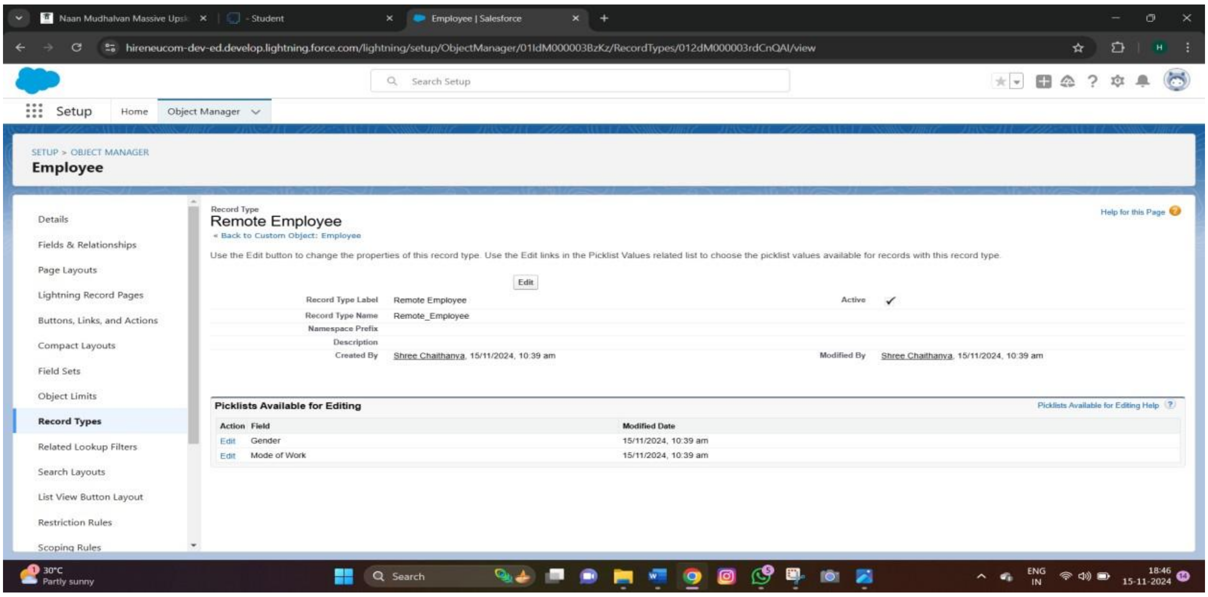
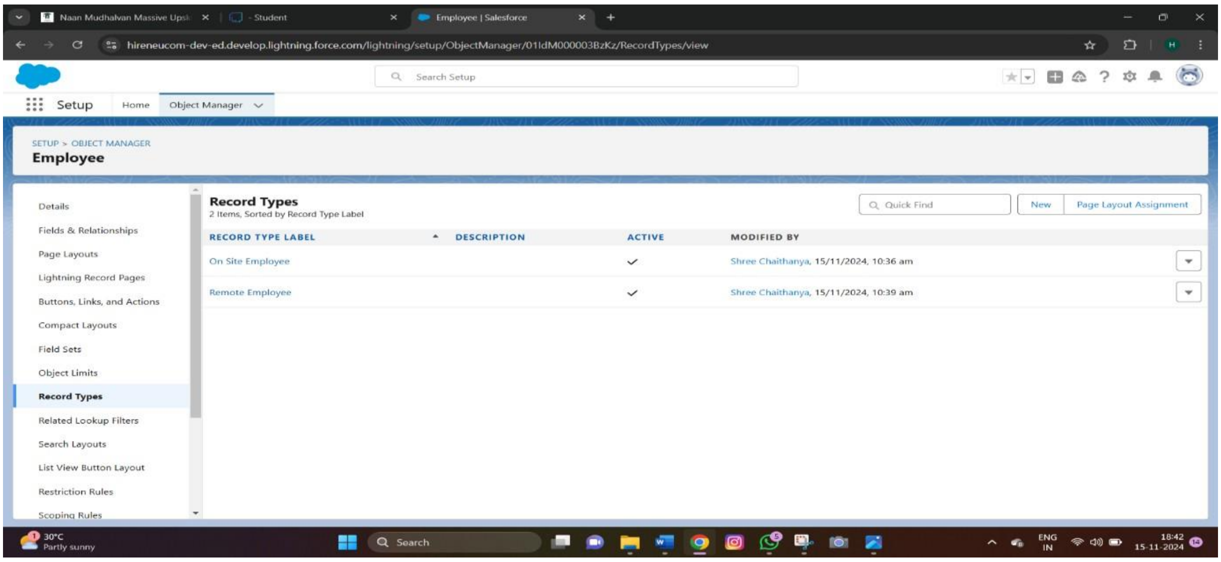


FIGURE 33 :



STEP 13:PERMISSION SETS

Permission sets

A permission set is a collection of settings and permissions that give users access to various tools and functions. Permission sets extend users' functional access without changing their profiles. Users can have only one profile but, depending on the Salesforce edition, they can have multiple permission sets.

FIGURE:34

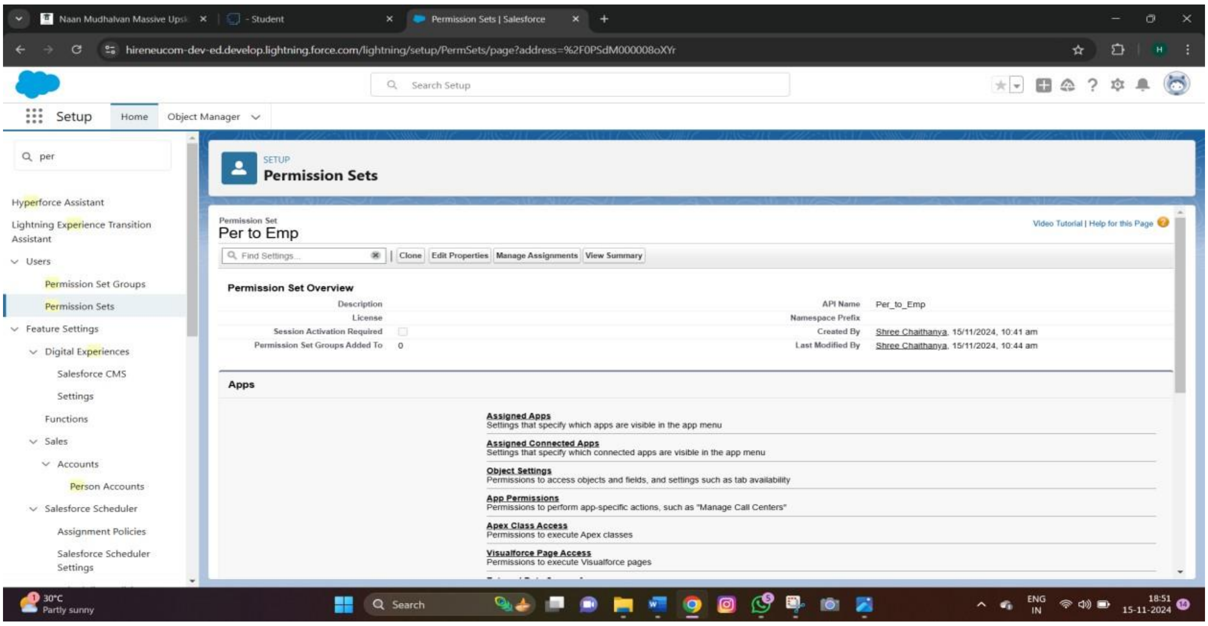
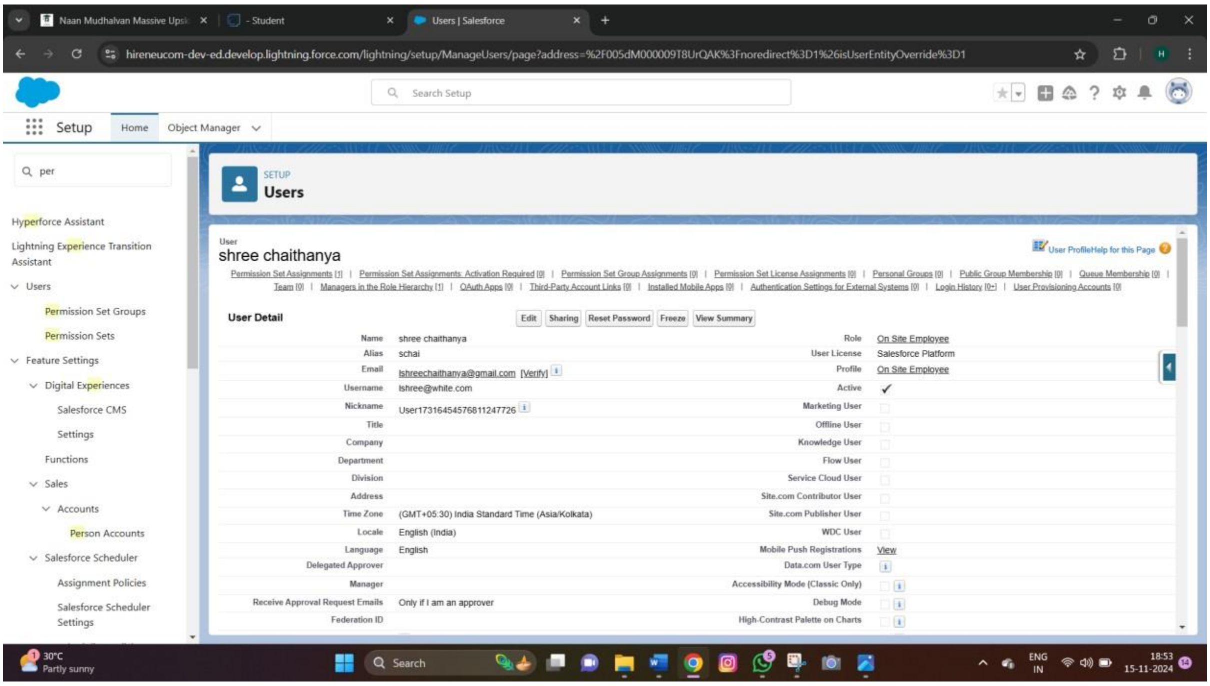


FIGURE 35 :



STEP 14:REPORTS

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.

Types of Reports in Salesforce

1. Tabular
2. Summary
3. Matrix
4. Joined Reports

Activity 1: Create Report

To Create a Report:

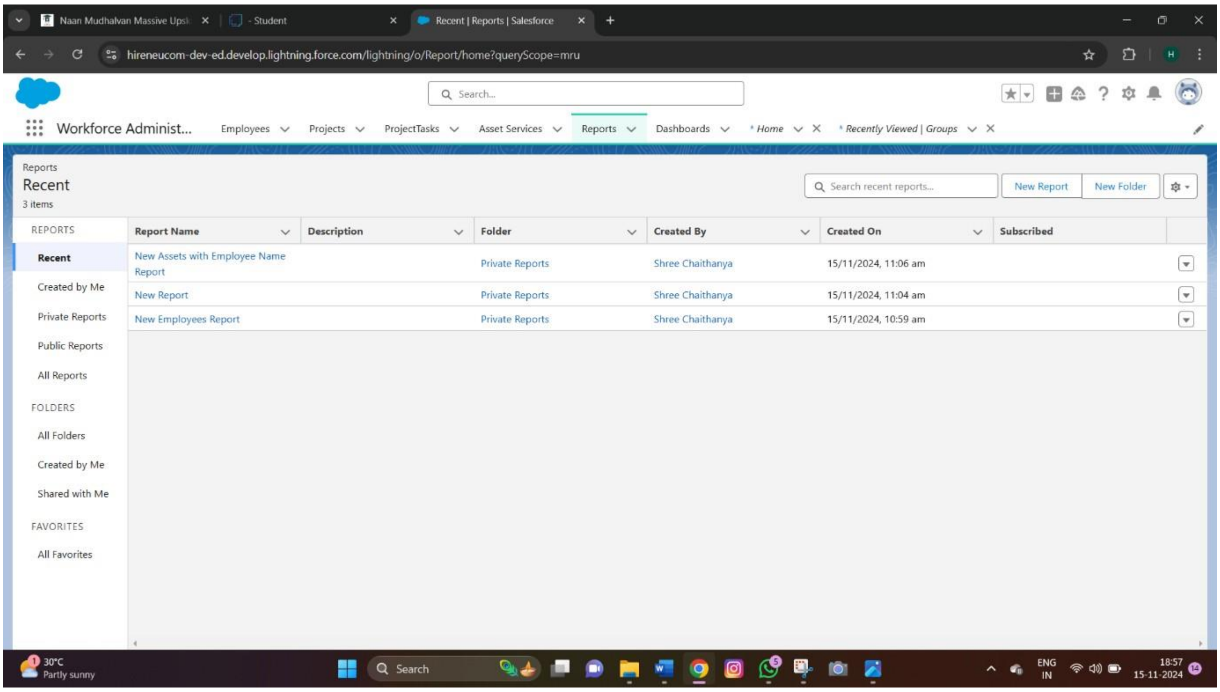
1. Go to the app --> click on the reports tab
2. Click New Report.

3. Customize your report
4. 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”.

FIGURE 36 :



STEP 15:DASHBOARDS

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.

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.

FIGURE 37 :

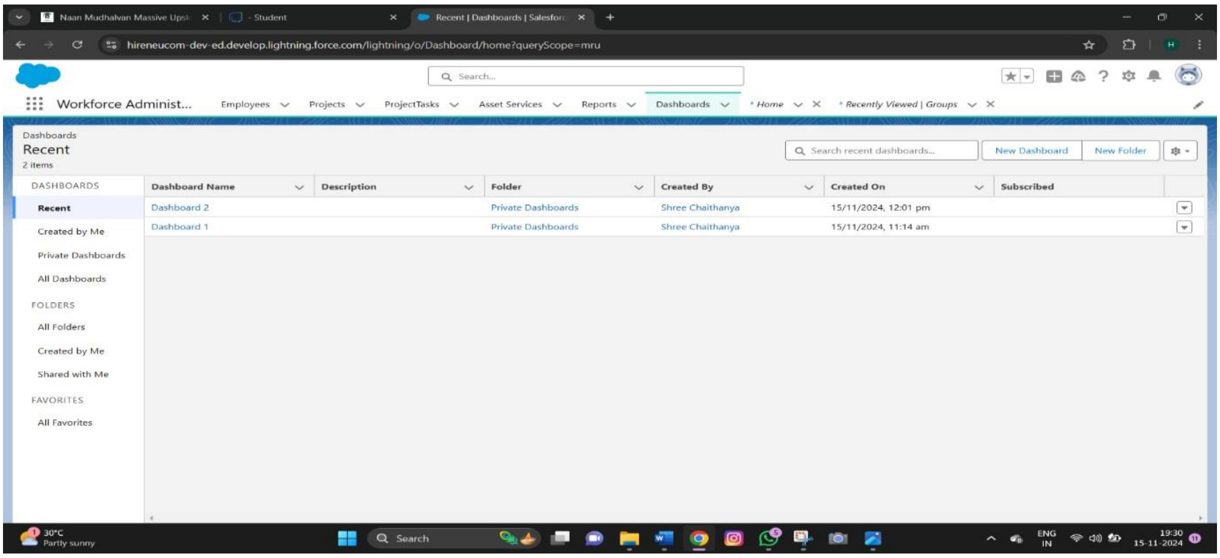


FIGURE 38 :

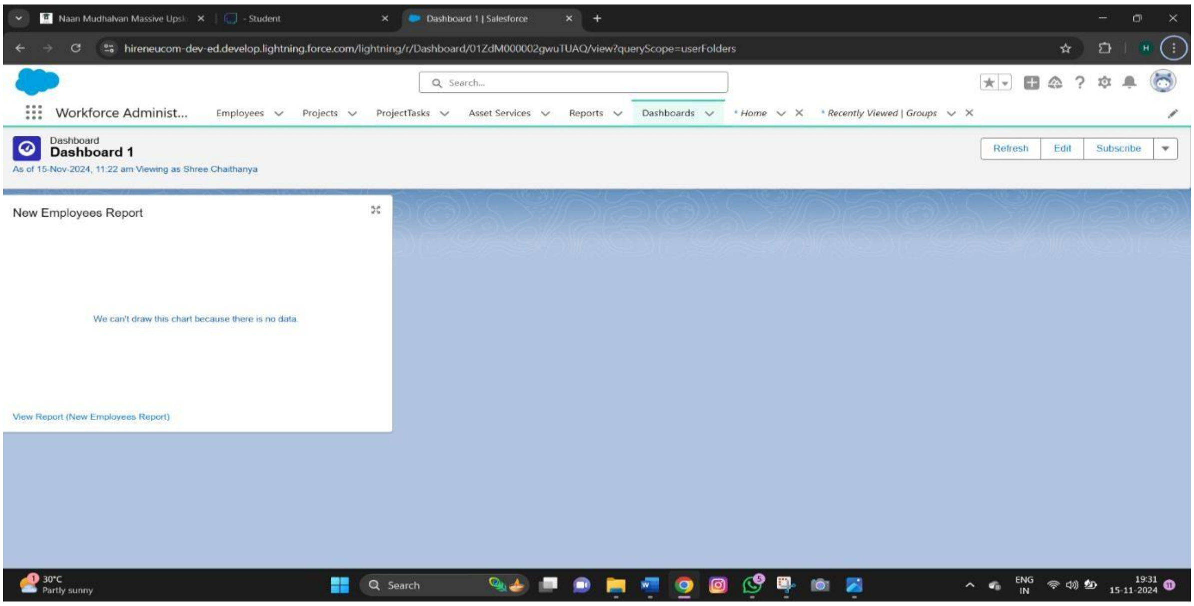
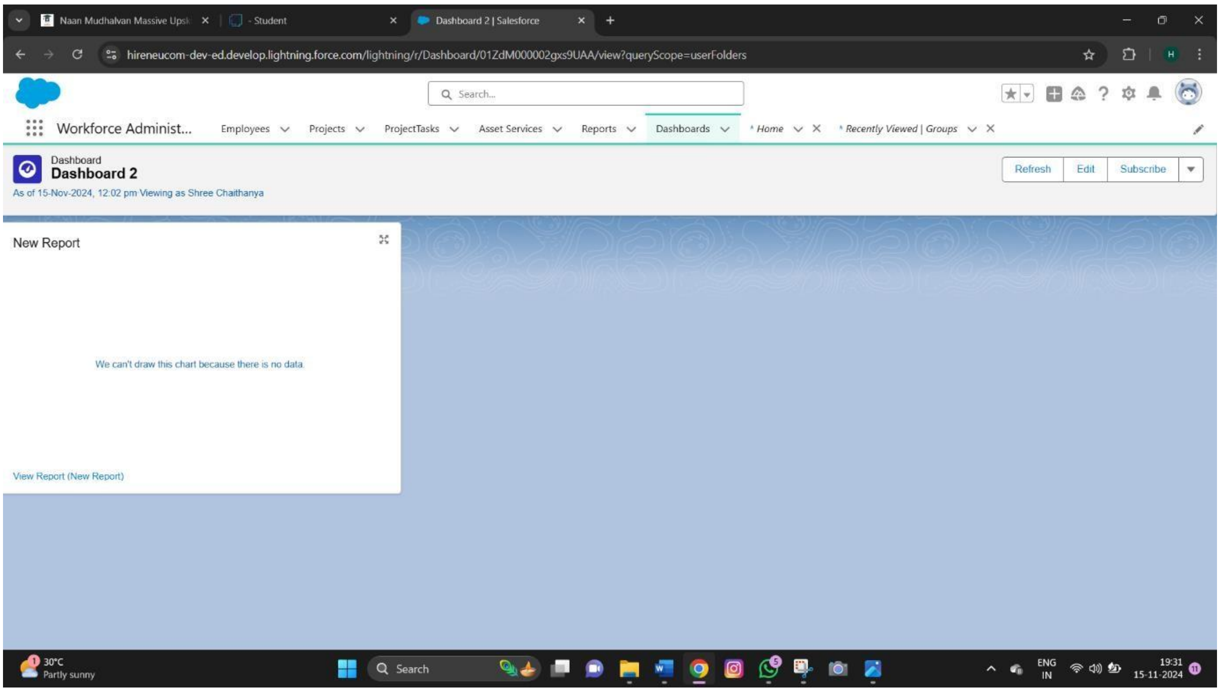


FIGURE 39 :



STEP 16:APPROVAL PROCESS

Approval Process

Use Case:

The Hiring Manager (HR) at TheSmartBridge wants to track the leave applications for each and every employee of the company. His requirement is the no leave application with more than 5 days of leave should come to him but automatically get submitted to the Employee Manager. If the leave application is more than 5 days then only his approval is needed.

Activity - 1

Prerequisites:

Create the leave object with the following fields.

Object	Fields	Datatype
Leave	Employee Name	Lookup with Employee object
	No. of Days	Number
	Subject	Text
	Description	Text Area(Rich)
	Status	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)

Create the tab for the leave object.

FIGURE 40 :

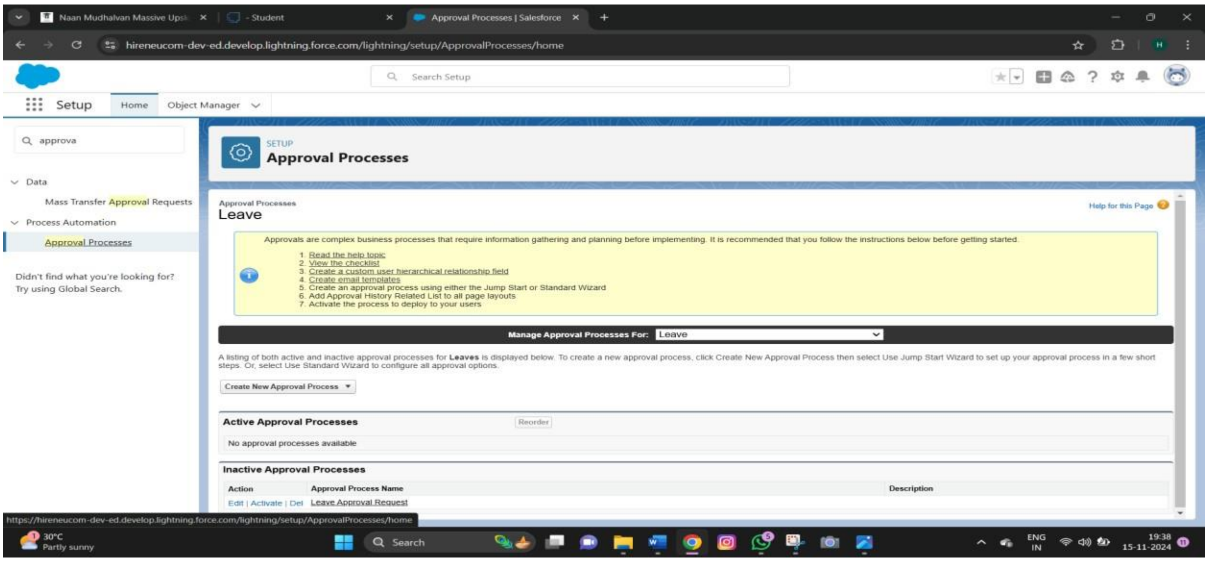


FIGURE 41 :

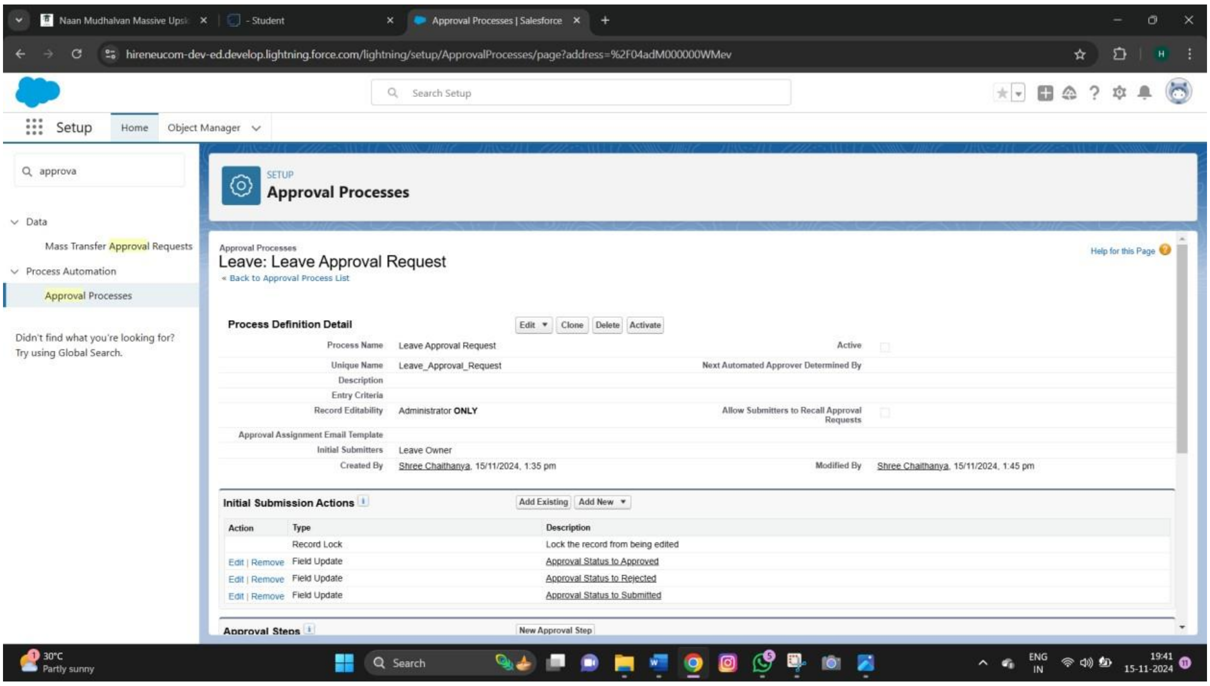
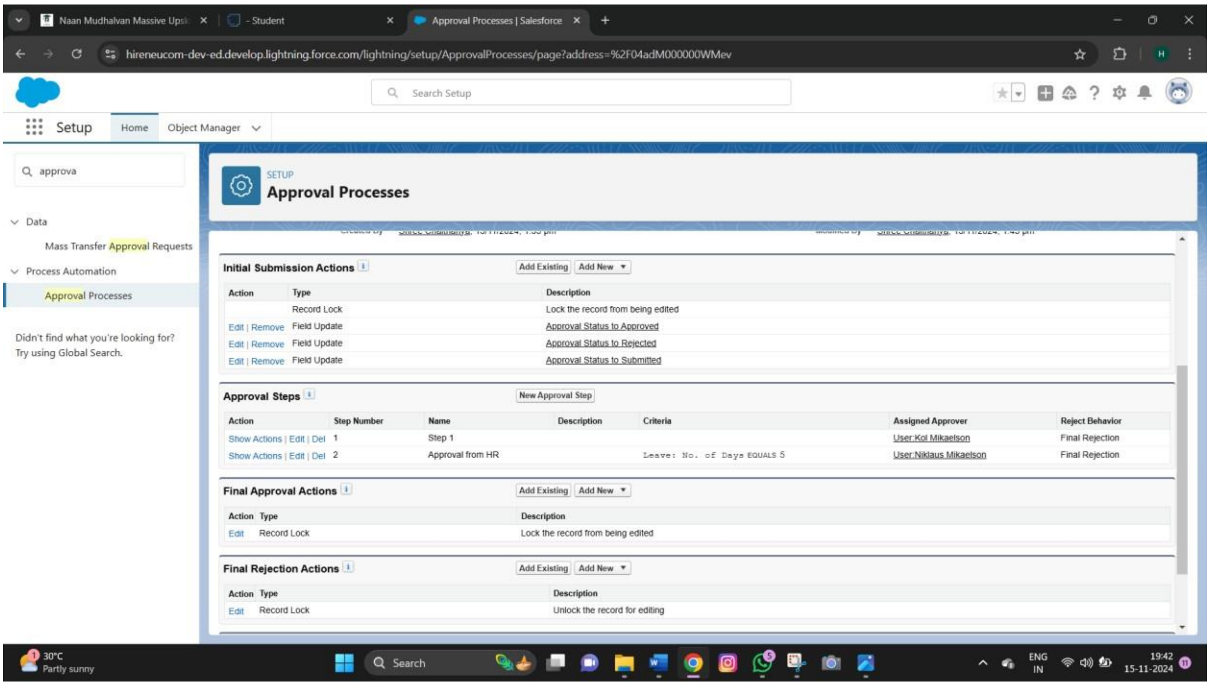


FIGURE 42 :



STEP 17:APEX TRIGGER

Use Case :

The Manager at TheSmartBridge wants no duplicate names of employees should enter into the database. So he/she recalls you for the solution.

Write a code to achieve this requirement using Salesforce developer skills to fulfill the Managers requirement.

Activity 1 : Create an Apex Trigger

Create an Apex Trigger

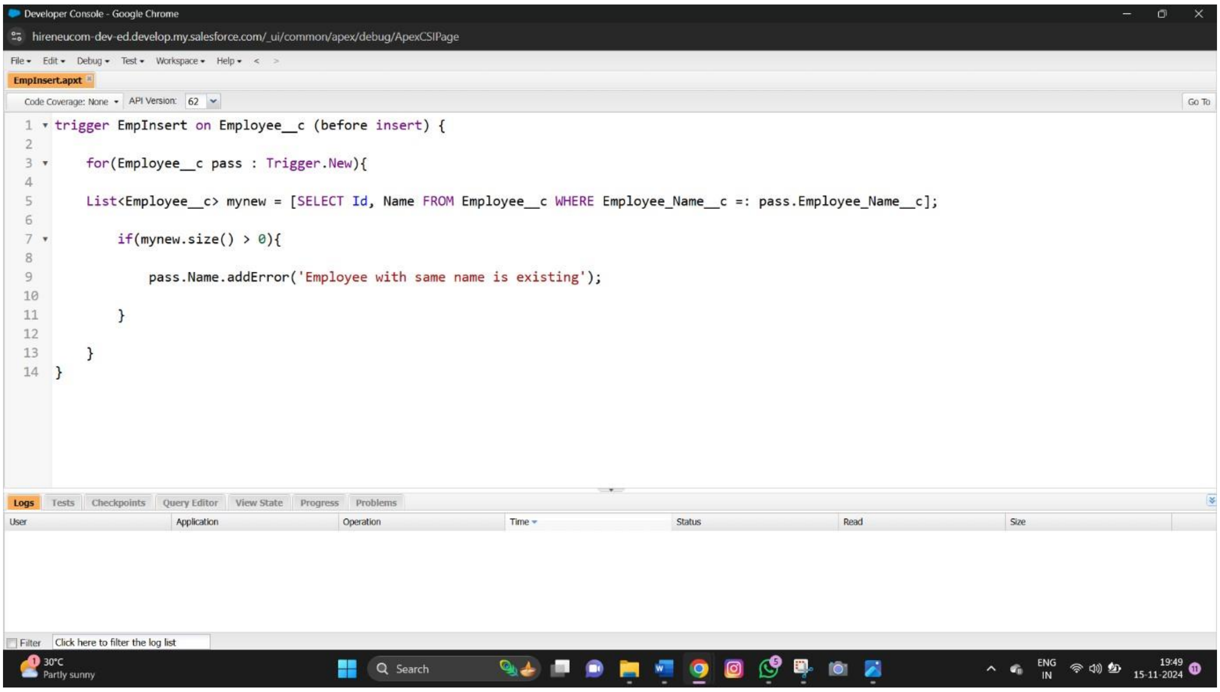
1. To create a new Apex Class follow the below steps:
   Click on the file --> New --> Apex Class.
2. Give the Apex Trigger name as "EmpInsert", and select "Employee_c" from the dropdown for sObject.
3. Click Submit.
4. Now write the code logic here as,

Code Snippet:

```
trigger EmpInsert on Employee_c (before insert) {
        for(Employee_c pass : Trigger.New){
        List<Employee_c> mynew = [SELECT Id, Name FROM Employee_c WHERE
Employee_Name_c =: pass.Employee_Name_c];
                if(mynew.size() >  0){
        pass.Name.addError('Employee with same name is existing');
       }
    }
}
```

5.Save the code.(click on file --> Save)

FIGURE 43:



8. Conclusion

- The *Workforce Administration Solution* project successfully developed a comprehensive platform for managing employee, project, and asset data within a centralized Salesforce application. This solution not only met the objectives of enhanced data visibility and management but also demonstrated effective automation, reporting, and user interface customization, which resulted in improved operational efficiency.

Key achievements included:

- Implementing robust data models for seamless integration and scalability.
- Customizing user interfaces to enhance usability and accessibility.
- Automating manual processes, leading to improved operational efficiency.
- Developing real-time reports and dashboards for actionable insights into employee performance and asset utilization.
- The project also overcame challenges such as bulk data import complexities, performance issues with large datasets, and customization limitations within Salesforce through innovative solutions like data validation, batch processing, and leveraging advanced Salesforce components.

- Overall, the *Workforce Administration Solution* not only fulfilled its objectives but also demonstrated the value of leveraging modern platforms like Salesforce for comprehensive workforce and asset management. It stands as a scalable and efficient framework, with potential for further enhancements such as integration with external HR systems and advanced analytics, to meet evolving organizational needs.