



# WORKFORCE ADMINISTRATION SOLUTION



## NAAN MUDHALVAN PROJECT REPORT

*Submitted by*

**SHRUTHIKA C (611220205034)**

**SURYAPRAKASH A (611220205040)**

**SURENDHIRAN K (61122020039)**

**GOKULNATH K (611220205302)**

*in partial fulfilment for the award of the degree of*

**BACHELOR OF TECHNOLOGY**

*in*

**INFORMATION TECHNOLOGY**

**KNOWLEDGE INSTITUTE OF TECHNOLOGY,  
SALEM – 637504.**

**ANNA UNIVERSITY::CHENNAI 600025**

## BONAFIDE CERTIFICATE

Certified that this the project report titled “**Workforce Administration Solution**” is the bonafide work of “**SHRUTHIKA C (611220205034), SURYA PRAKASH A (611220205040), SURENDHIRAN K(611220205039) and GOKULNATH K (611220205302)**” who carried out the project work under my supervision.

### **SIGNATURE**

**Mr. R. AYYAPPAN. ME.,**  
**ASSISTANT PROFESSOR**  
**FACULTY MENTOR**  
Department of Information  
Technology,  
Knowledge Institute of Technology,  
Kakapalayam,  
Salem – 637504.

### **SIGNATURE**

**Mr. T. KARTHIKEYAN B. TECH, M.S(IT),, Ph.D.,**  
**ASSISTANT PROFESSOR**  
**SPOC FACULTY**  
Department of Computer Science  
and Engineering,  
Knowledge Institute of Technology,  
Kakapalayam,  
Salem – 637504.

---

**SPOC**

---

**HEAD OF THE DEPARTMENT**

## ACKNOWLEDGEMENT

At the outset, we express our heartfelt gratitude to GOD, who has been our strength to bring this project to light.

At this pleasing moment of having successfully completed our project, we wish to convey our sincere thanks and gratitude to our beloved president **Mr.C.BALAKRISHNAN**, who has provided all the facilities to us.

We would like to convey our sincere thanks to our beloved principal, **Dr.PSS.SRINIVASAN**, who forward us to do our project and offers adequate duration to complete our project.

We express our sincere thanks to **Dr.P.SACHIDHANANDAM**, Head of the Department of Information Technology, for fostering the excellent academic climate in the department.

We express our pronounced sense of thanks with deepest respect and gratitude to our Faculty Mentor **Mr.R.AYYAPPAN**, Assistant Professor, Department of Information Technology, for his valuable and precious guidance and for having amicable relation.

With deep sense of gratitude, we extend our earnest and sincere thanks to our SPOC **Mr.T.KARTHIKEYAN**, Assistant Professor, Department of Computer science and Engineering , for his guidance and encouragement during this project.

We would also like to express our thanks to all the faculty members of our department friends and students who helped us directly and indirectly in all aspects of the project work to get completed successfully.

## TABLE OF CONTENTS

<b>Chapter No</b>	<b>Title</b>	<b>Page No</b>
	<b>LIST OF FIGURES</b>	<b>6</b>
	<b>LIST OF ABBREVIATION</b>	<b>7</b>
1.	<b>PROJECT SPECIFICATION</b>	<b>8</b>
	1.1 Project Goal	8
	1.2 Project Scope	9
	1.3 Problem Statement Definition	10
	1.4 Empathy Map Canvas	11
	1.5 Ideation & Brainstorming	12
	1.6 Proposed Solution	15
	1.7 Functional & Technical Requirements	16
	1.8 Project Road Map	19
2	<b>PREPARATION DATA MODELING</b>	<b>23</b>
	2.1 Salesforce Developer Org	23
	2.2 Custom Object Creation & Tabs	25
	2.3 Lightning App	29
	2.4 Setting OWD	33
	2.5 User Adoption	34
	2.6 Data Import	35
	2.7 Profiles	36
	2.8 Roles	38
	2.9 Users	39
	2.10 Page Layouts	41
3.	<b>Users &amp; Data Secure</b>	<b>42</b>
	3.1 Chatter Group	42
	3.2 Record Types	44
	3.3 Permission Sets	45
4.	<b>Process and Reports</b>	<b>47</b>
	4.1 Reports	47

4.2 Dashboards	48
4.3 Approval Process	49
4.4 Final Apex trigger	51
<b>6. Conclusion</b>	<b>52</b>
<b>7. Project Demonstration</b>	<b>53</b>
Github & Project Video Demo Link	52

## LIST OF FIGURES

<b>Figure No</b>	<b>Name Of Figure</b>	<b>Page No</b>
1.8.1	Data Flow Diagram	19
1.8.2	Technical Architecture	20

## **LIST OF ABBREVIATION**

CRM	Customer Relationship Management
ESP	Email Service Provider
UI	User Interface
UX	User Experience
OWD	Org - Wide Default
CTA	Call To Action
CSV	Comma - Separated Values
SLA	Service Level Agreement
API	Application Programming Interface
SaaS	Software as a Service
PaaS	Platform as a Service

## CHAPTER-1

### PROJECT SPECIFICATION

#### 1.1 Project Goal

The overarching goal of the Workforce Administration Solution Salesforce project is to revolutionize our HR and workforce management processes. By harnessing the power of Salesforce, we aim to create an efficient, automated, and user-friendly platform that optimizes everything from employee onboarding to performance evaluation. The project's core objectives include integrating Salesforce seamlessly with our existing systems, delivering real-time data visibility, and empowering employees with self-service options.

We also prioritize compliance, data security, and scalability to ensure a system that not only meets current needs but can adapt to future growth and changes. Through effective training, change management, and continuous support, we intend to drive high user adoption while measuring success through quantifiable KPIs and a robust ROI analysis, ultimately improving efficiency, data accuracy, and cost-effectiveness across our workforce management.

By achieving these objectives, the project will not only enhance the efficiency of our HR operations but also elevate the overall employee experience. This Workforce Administration Solution on Salesforce will be a vital tool in ensuring our organization remains compliant with labor laws and data regulations, while also promoting agility in responding to evolving workforce requirements. Ultimately, it will empower us to make informed decisions and drive better outcomes across our workforce, ensuring a more productive, agile, and cost-effective organization.

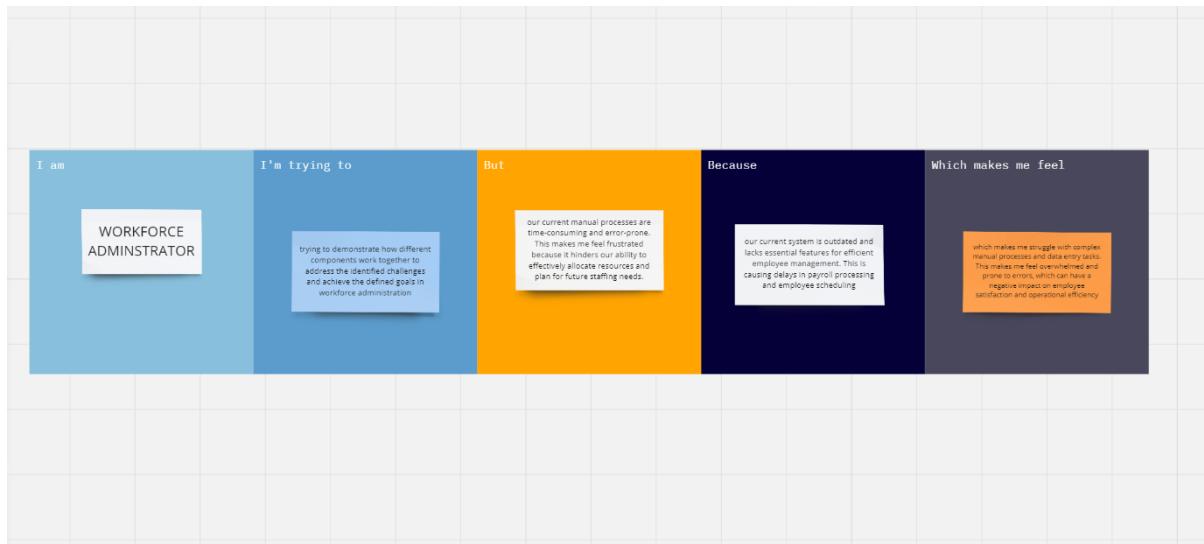
## 1.2 Project Scope

Workforce Administration Solution Salesforce project encompasses a comprehensive set of features and functionalities to transform our HR and workforce management processes. This project's scope includes the implementation of Salesforce as the central platform for managing employee data and workflows. It involves automating key HR tasks such as employee onboarding, leave management, time tracking, and performance evaluations. Salesforce will be integrated with existing systems like HRIS and payroll to ensure data consistency and accuracy.

The scope further entails the development of user-friendly dashboards and reports for real-time data visibility, enabling HR and management to make informed decisions. Additionally, a self-service portal will be created for employees to access and manage their own HR-related tasks, reducing the administrative workload on HR staff. Compliance with labor laws and data privacy regulations will be embedded in the system's design, ensuring that all workforce management processes adhere to legal requirements.

Scalability is a crucial aspect of the project scope to accommodate future growth and changes in workforce needs. The project will also encompass a comprehensive training plan for HR staff and employees to effectively use the system, promoting user adoption and a smooth transition. Ongoing support and maintenance, as well as feedback mechanisms for system improvements, will be part of the project scope to ensure long-term success and continuous improvement. By defining the project scope in this manner, we ensure a comprehensive and effective Workforce Administration Solution on Salesforce that enhances efficiency, data security, compliance, and overall user satisfaction.

## 1.3 Problem Statement Definition

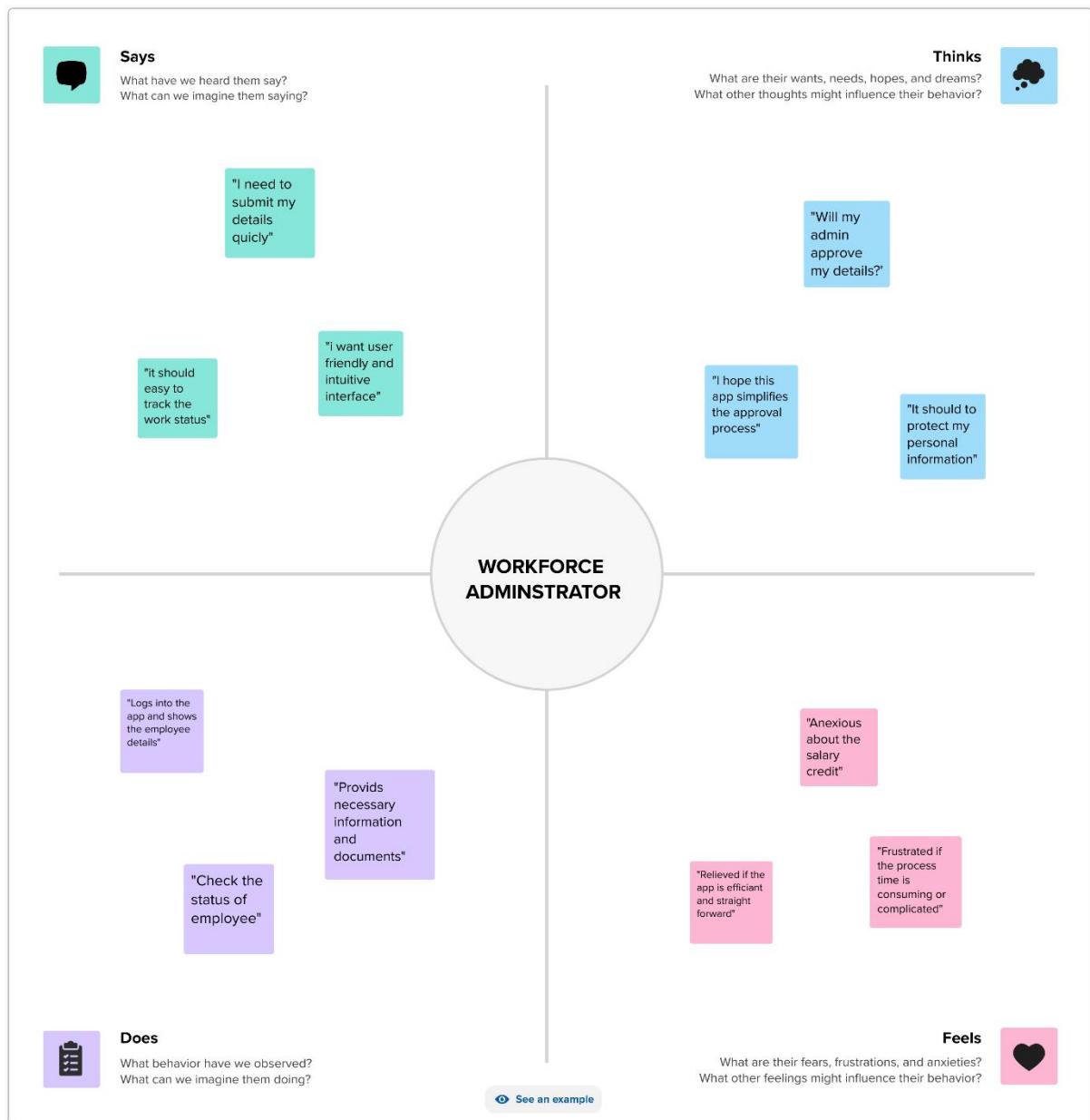


Problem Statement (PS)	I am (Employee)	I'm trying to	But	Because	Which makes me feel
PS	Workforce Administrator	I'm trying to demonstrate how different components work together to address the identified challenges and achieve the defined goals in workforce administration.	our current manual processes are time-consuming and error-prone. This makes me feel frustrated because it hinders our ability to effectively allocate resources and plan for future staffing needs.	our current system is outdated and lacks essential features for efficient employee management. This is causing delays in payroll processing and employee scheduling.	which makes me struggle with complex manual processes and data entry tasks. This makes me feel overwhelmed and prone to errors, which has a negative impact on employee satisfaction and operational efficiency.

## 1.4 Empathy Map Canvas

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behavior and attitudes.

It is a useful tool to help teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.



## 1.5 Ideation & Brainstorming

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

### Step-1: Team Gathering, Collaboration and Select the Problem Statement:

**Template**

**1 Define your problem statement**

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

**PROBLEM**

The project aim is to provide real-time knowledge for all the students who have basic knowledge of Salesforce and Looking for a real-time project. This project will help them to learn more about Salesforce who are in cross-technology and wanted to switch to Salesforce with the help of this project they will gain knowledge and can include into their resume as well.

**2 Before you collaborate**

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

10 minutes

**Team gathering**

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

**3 Set the goal**

Think about the problem you'll be focusing on solving in the brainstorming session.

**4 Learn how to use the facilitation tools**

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#)

**Brainstorm & idea prioritization**

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

10 minutes to prepare  
1 hour to collaborate  
2-8 people recommended

Need some inspiration? Open example

1 of 7

## Step-2: Brainstorm, Idea Listing and Grouping:

**2 Brainstorm**  
Write down any ideas that come to mind that address your problem statement.  
⌚ 10 minutes

**3 Group ideas**  
Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.  
⌚ 20 minutes

**Person 1**

**User-Friendly Dashboard:** Create an intuitive dashboard for employees to submit travel requests and track their status.

**Manager Approval Workflow:**

- Implement a workflow that allows managers to review and approve travel requests easily.

**Person 2**

**Travel Policy Integration:**

- Include the company's travel policy within the app, ensuring employees are aware of guidelines and restrictions.

**Expense Management:**

- Allow employees to submit expense reports related to their trips and attach receipts.

**Person 3**

**Notification System:**

- Implement a notification system to keep employees informed about the status of their travel requests.

**Person 4**

**Real-Time Currency Conversion:**

- Provide a currency conversion feature to help employees manage expenses in different currencies.

**Analytics and Reporting:**

- Generate reports for corporate administrators to analyze travel patterns and expenses.

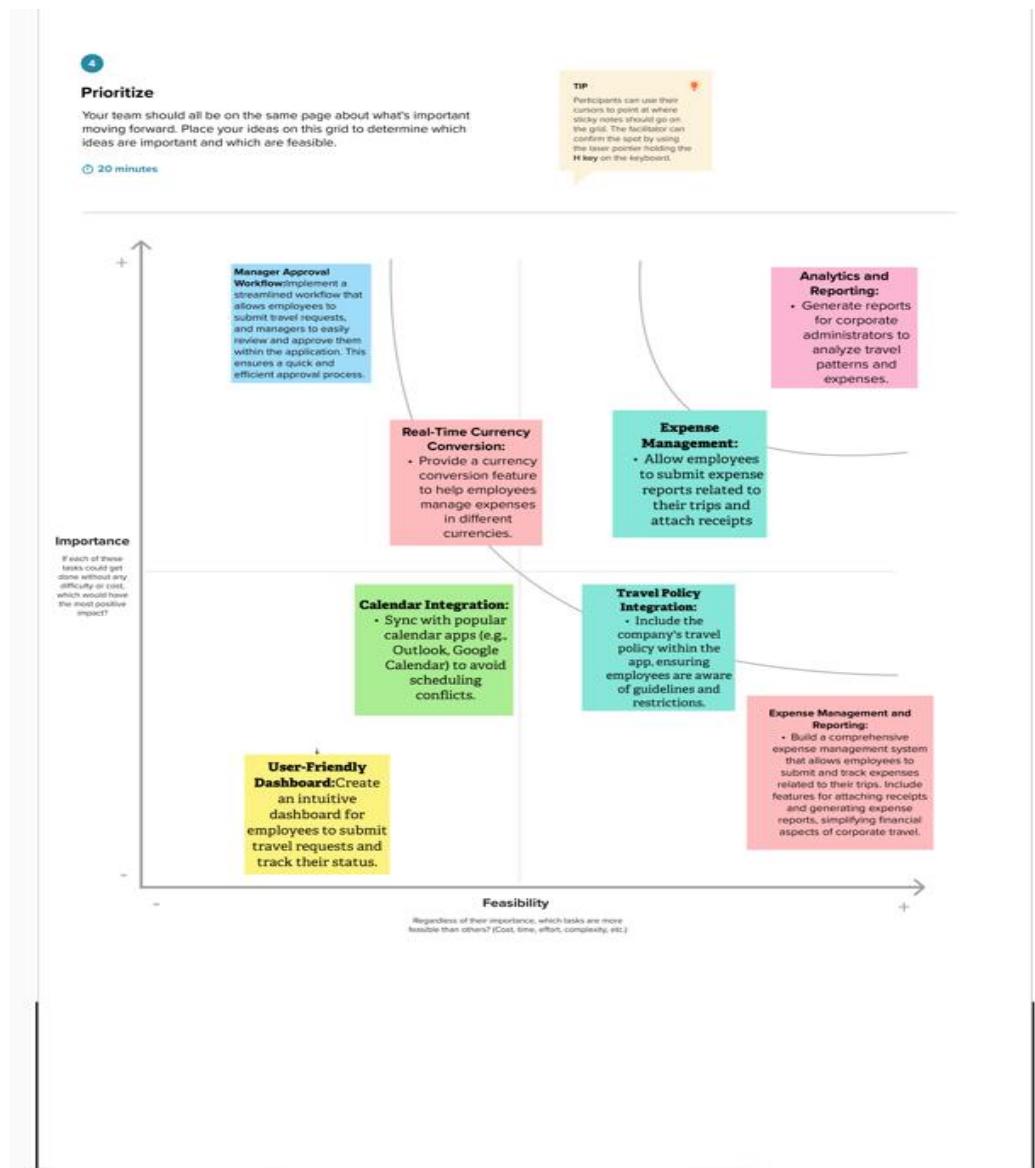
**Manager Approval Workflow:** Implement a streamlined workflow that allows employees to submit travel requests, and managers to easily review and approve them within the application. This ensures a quick and efficient approval process.

**Expense Management and Reporting:**

- Build a comprehensive expense management system that allows employees to submit and track expenses related to their trips. Include features for attaching receipts and generating expense reports, simplifying financial aspects of corporate travel.

Page 4 of 7

### Step-3: Idea Prioritization:



## 1.6 Proposed Solution

S. No	Parameter	Description
1.	Problem Statement (Problem to be solved)	Create a workflow administration solution that streamlines task allocation, progress tracking, and approval processes within organizations, enhancing efficiency and collaboration. This system should provide a user-friendly interface, customizable workflows, and robust reporting capabilities to optimize productivity and decision-making.
2.	Idea / Solution description	Integrate Salesforce with a custom HR module for comprehensive workforce management. Utilize Salesforce's CRM capabilities to streamline talent acquisition and employee records. Leverage Salesforce's reporting and automation tools for data-driven decision-making and efficient workforce administration.
	Novelty / Uniqueness	Incorporate blockchain technology to create a secure and immutable workforce data ledger within Salesforce, ensuring data integrity and privacy. Implement AI-powered predictive analytics for proactive workforce planning and talent optimization. Offer a dynamic, role-based interface that adapts to individual users, enhancing user experience and productivity.
4.	Social Impact / Customer Satisfaction	Empower organizations to prioritize diversity and inclusion initiatives by providing real-time diversity metrics and reporting within Salesforce. Enhance employee well-being through integrated wellness programs and resources. Continuously gather feedback from customers to fine-tune the solution for maximum user satisfaction and societal impact.

## 1.7 Functional & Technical Requirements

### 1.7.1 Functional Requirements

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Management	<p><b>User Registration:</b> Allow employees to register and log into the system.</p> <p><b>User Roles:</b> Define roles (employees, managers, HR) with different permissions.</p> <p><b>User Profiles:</b> Capture and manage employee profiles, including contact details.</p>
FR-2	Workforce Scheduling	<p><b>Shift Creation:</b> Admins can create and manage shifts, including specifying times, locations, and positions.</p> <p><b>Employee Availability:</b> Employees can input their availability, including time-off requests.</p> <p><b>Automated Scheduling:</b> System should auto-generate schedules based on workload.</p> <p><b>Schedule Publishing:</b> Ability to publish schedules for employees to access.</p>
FR-3	Approval workflow	<p><b>Workflow Automation:</b> Implement an automated approval process with defined workflows.</p> <p><b>Manager Assignment:</b> Automatically route requests to the appropriate manager based on criteria like department or project.</p> <p><b>Notifications:</b> Send notifications to managers and employees at various stages of the approval process.</p> <p><b>Delegation:</b> Allow managers to delegate their approval authority when they are unavailable.</p>
FR-4	Approval Management	<p><b>Manager Dashboard:</b> Provide managers with a dashboard to view and manage pending employee information.</p> <p><b>Request Review:</b> Allow HR Managers to review employee details, work, and time.</p> <p><b>Approval/Rejection:</b> Enable HR Managers to approve or reject requests with comments.</p> <p><b>Escalation:</b> Implement escalation processes for unattended requests or those exceeding certain thresholds.</p>

FR-5	Time and Attendance	<p><b>Clock-In/Out:</b> Employees can record their working hours with timestamps.</p> <p><b>Overtime Tracking:</b> System should calculate and track overtime hours.</p> <p><b>Absense Management:</b> Manage and track leaves, sick days and other absences.</p>
FR-6	Reporting and Analytics	<p><b>Reporting Tools:</b> Develop custom reports and dashboards to monitor travel request status and expenses.</p> <p><b>Analytics:</b> Implement data analytics for insights into employee details, workloads, and time management.</p> <p><b>Custom Reports:</b> Create and generate custom reports for workforce data analysis.</p>

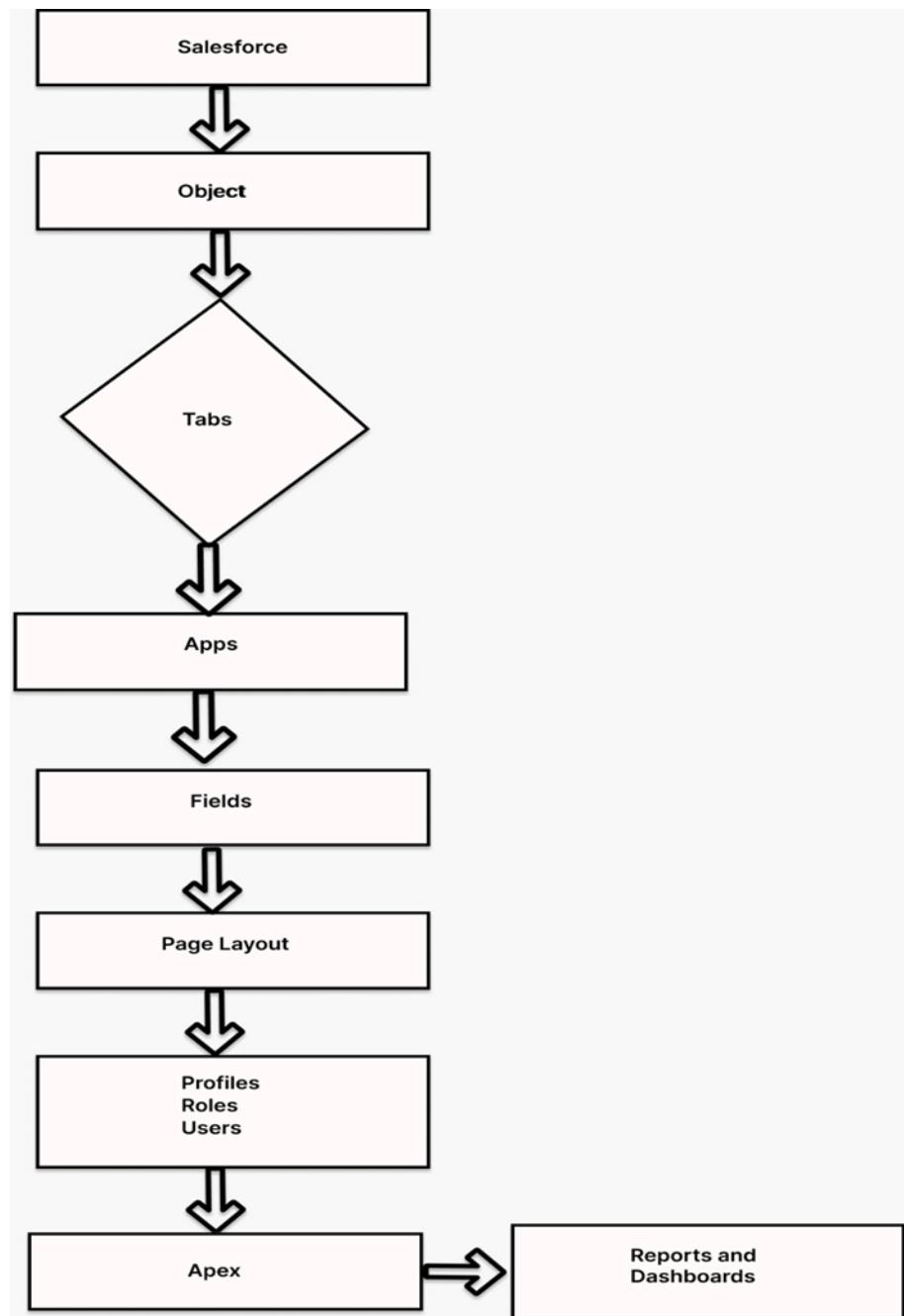
### 1.7.2 Technical Requirements

TR No.	Technical Requirement	Description
TR-1	Salesforce Environment	Utilize Salesforce's Enterprise or Unlimited edition to ensure scalability and access to advanced features.
TR-2	Development language	Develop using Salesforce's proprietary programming language, Apex, for server-side logic.
TR-3	Security	<ul style="list-style-type: none"> <li>Implement role-based access control (RBAC) to control who can access and modify data.</li> <li>Encrypt sensitive data both in transit and at rest.</li> <li>Utilize Salesforce Shield for enhanced security, including event monitoring and field-level encryption.</li> </ul>
TR-4	Integration	<ul style="list-style-type: none"> <li>Use REST and SOAP APIs for integration with external systems, such as finance and expense management tools.</li> <li>Implement Single Sign-On (SSO) solutions for seamless and secure access.</li> </ul>
TR-5	Customization	Allow administrators to customize and configure the application, including approval workflows, fields, and user profiles.
TR-6	Mobile Accessibility	<ul style="list-style-type: none"> <li>Ensure that the application is accessible via the Salesforce mobile app for on-the-go request submission and tracking.</li> <li>Develop a custom mobile app using Salesforce Mobile SDK for more tailored mobile functionality.</li> </ul>

## 1.8 Project Road Map

### 1.8.1 Data Flow Diagram

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



### 1.8.2 Technical Architecture

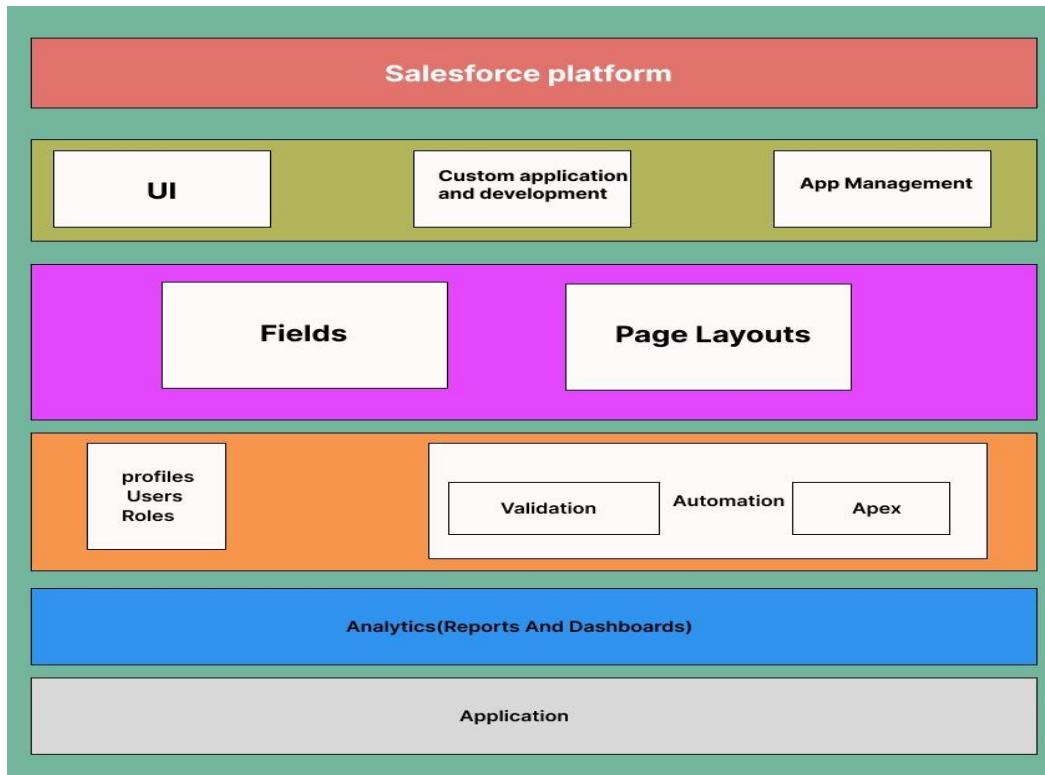


TABLE-1: Component and Technologies:

S.No	Component	Description	Technology
1.	User Interface	<p><b>Lightning Components:</b> Use Salesforce Lightning components to design the user interface for employees, managers, and administrators.</p> <p><b>Custom Pages:</b> Create custom Visualforce pages for more tailored and complex UI elements</p>	Salesforce
2.	Data Model	<p><b>Custom Objects:</b> Define custom objects in Salesforce to represent entities like travel requests, expenses, and approvals.</p> <p><b>Master-Detail and Lookup Relationships:</b> Establish relationships between objects to maintain data integrity.</p> <p><b>Custom Fields:</b> Create custom fields to capture specific information, such as</p>	Salesforce

		travel dates, expenses, and approval status.	
3.	Workflow Automation	<b>Approval Processes:</b> Implement Salesforce Approval Processes to automate and streamline the travel request approval workflow. <b>Process Builder and Flows:</b> Use Process Builder and Flows to automate routine tasks and send notifications.	Salesforce
4.	Reporting and Analytics	<b>Custom Reports:</b> Create custom reports to track travel request status, expenses, and other relevant metrics.	Salesforce
5.	Security	<b>Role-Based Access Control (RBAC):</b> Configure RBAC to control who can access and modify data. <b>Data Encryption:</b> Encrypt sensitive data both in transit and at rest. <b>Audit Trails:</b> Maintain audit trails to log user activities for security and compliance purposes.	Salesforce
6.	Salesforce Development	<b>Apex:</b> Use Salesforce's proprietary programming language, Apex, for server-side logic and data manipulation. <b>Visualforce:</b> Develop custom user interfaces with Visualforce pages and components. <b>Lightning Web Components:</b> Create modern, component-based UIs using Lightning Web Components for a more responsive and dynamic user experience	Salesforce

**Table-2: Application Characteristics:**

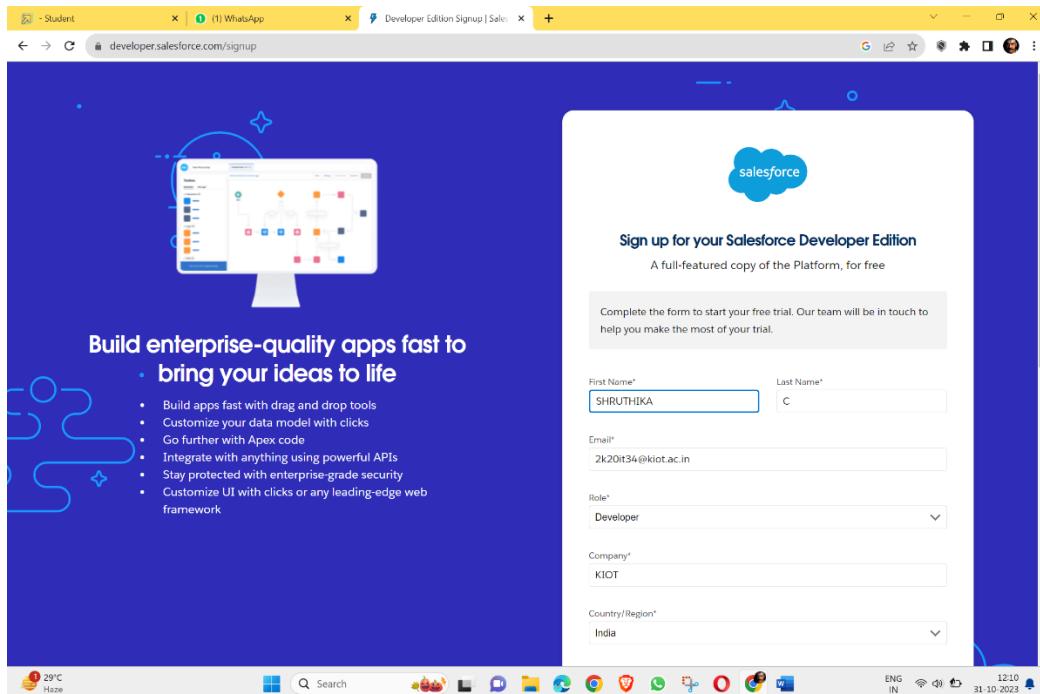
S. No	Characteristics	Description	Technology
1.	Responsive Design	Implement responsive design to adapt to various screen sizes, ensuring a consistent and visually pleasing user experience.	salesforce
2.	Accessibility	Ensure that the application is accessible via multiple devices and browsers, catering to users on desktops, tablets, and mobile devices. This accessibility is crucial for users who need to make or approve travel requests while on the go.	salesforce
3.	User-friendly	The application should have an intuitive and user-friendly interface to make it easy for employees, managers, and administrators to navigate and use the system without extensive training.	Salesforce
4.	Scalability	The application should be able to scale with the growing number of users and data, accommodating increasing demands without significant performance degradation.	salesforce
5.	Performance	Ensure the application's performance meets or exceeds user expectations, with rapid response times for actions such as submitting requests or generating reports.	salesforce
6.	Reporting and Analytics	Enable users to generate custom reports and access analytics tools to gain insights into travel patterns, expenses, and approval efficiency.	salesforce

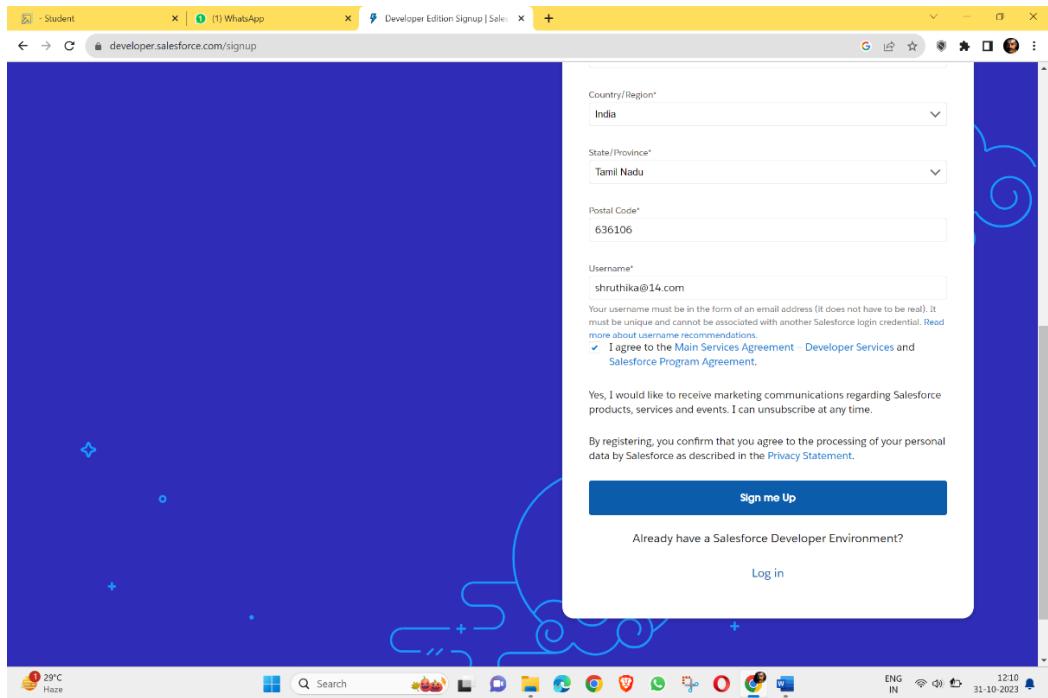
## CHAPTER-2

### PREPARATION DATA MODELING

#### 2.1 Salesforce Developer Org

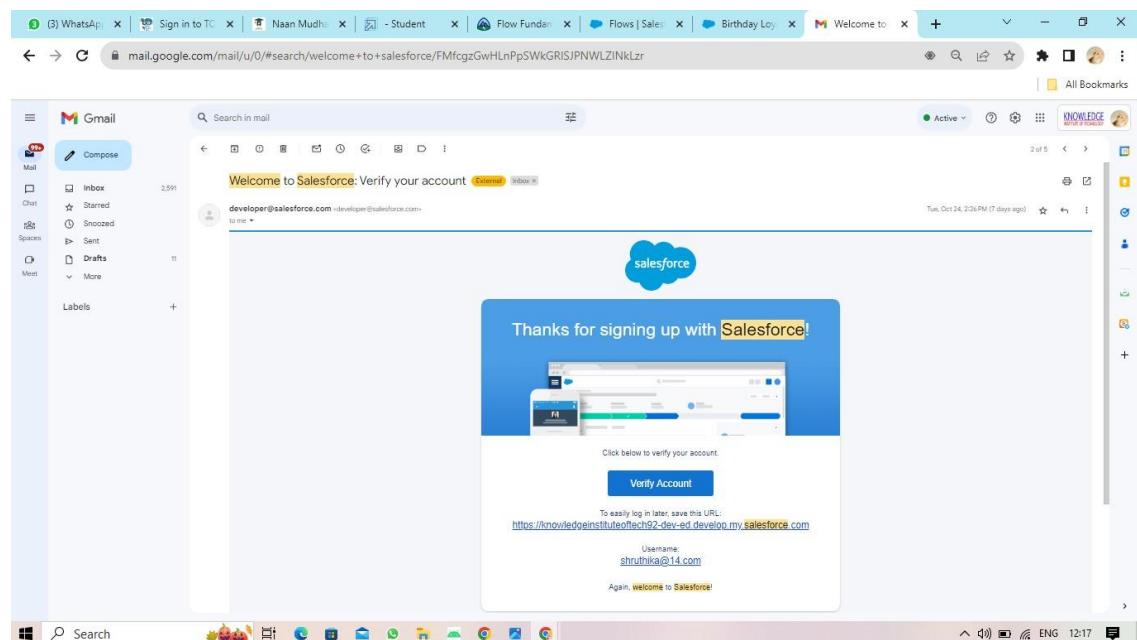
In Salesforce, a Developer Sign Up or Developer Edition is a special type of Salesforce environment that is primarily used for development, testing, and learning purposes.





## Account Activation

Activation tracks information about devices from which users have verified their identity.



**Change Your Password**

Enter a new password for **vignaya@kiot.com**. Make sure to include at least:

- 8 characters
- 1 letter
- 1 number

\* New Password

.....
Good

\* Confirm New Password

.....
Match

Security Question

▼ What is your pet's name?

\* Answer

Jackie

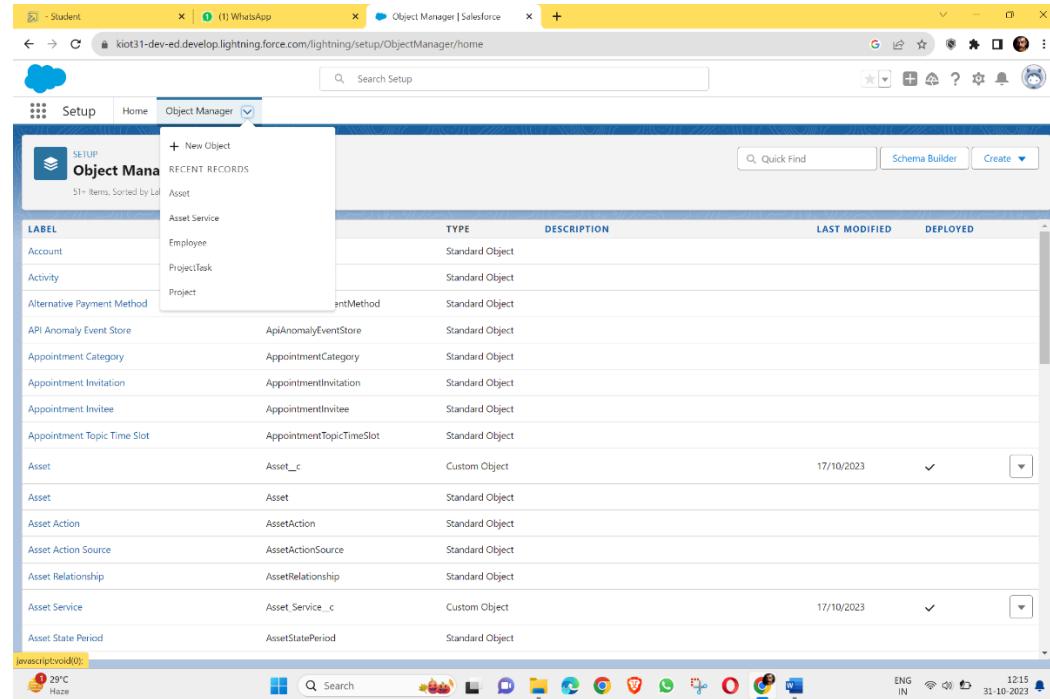
**Change Password**

## 2.2 Custom Object Creation & Tabs

### Custom Object Creation

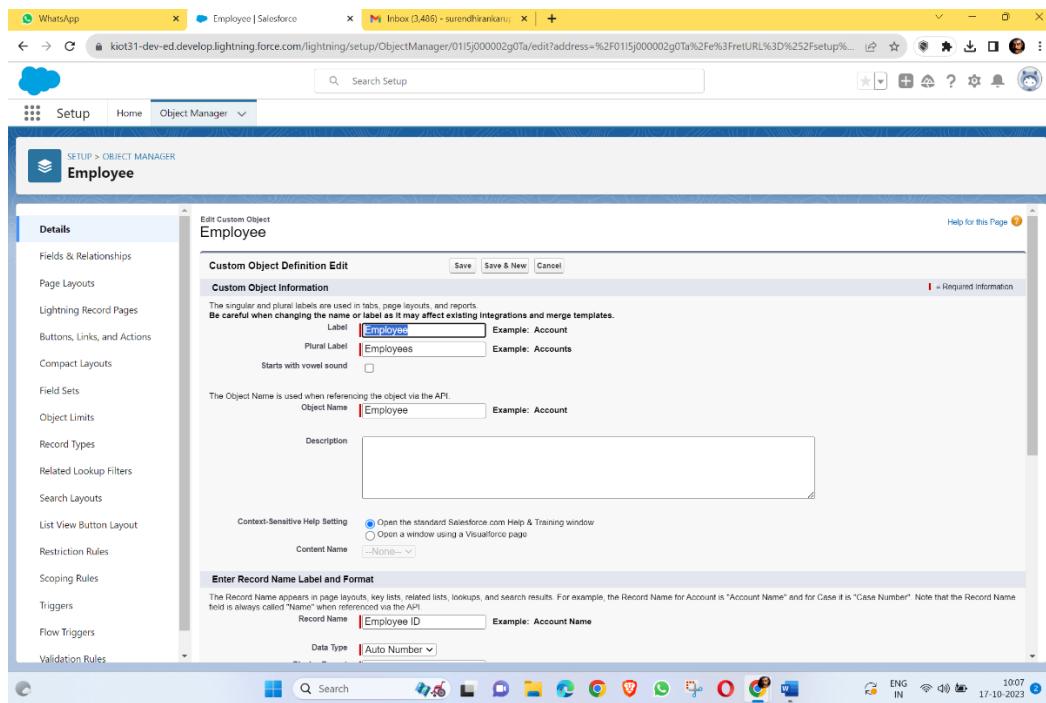
Objects are containers for your information, but they also give you special functionality.

Custom objects are created to store information that's specific to your company or industry.

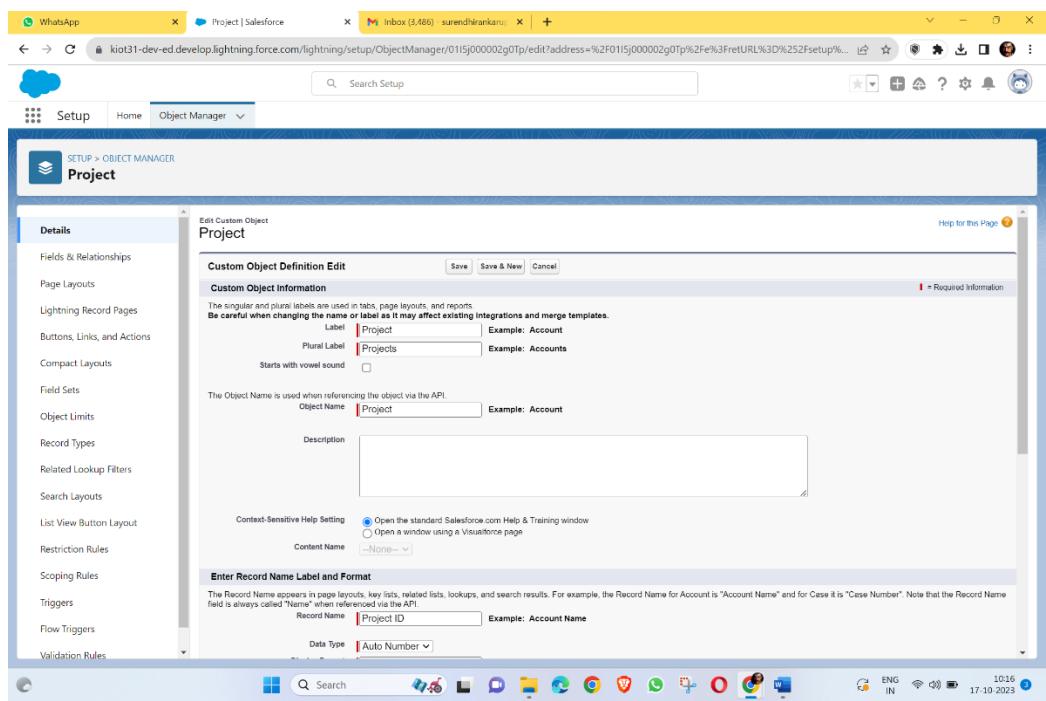


The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The 'Object Manager' tab is active. A sidebar on the left lists various objects: Account, Activity, Alternative Payment Method, API Anomaly Event Store, Appointment Category, Appointment Invitation, Appointment Invitee, Appointment Topic Time Slot, Asset, Asset Action, Asset Action Source, Asset Relationship, Asset Service, and Asset State Period. The main content area displays a table of objects with columns for 'LABEL', 'TYPE', 'DESCRIPTION', 'LAST MODIFIED', and 'DEPLOYED'. The 'Asset' object is highlighted in the table. The status bar at the bottom shows the date as 17/10/2023 and the time as 12:15.

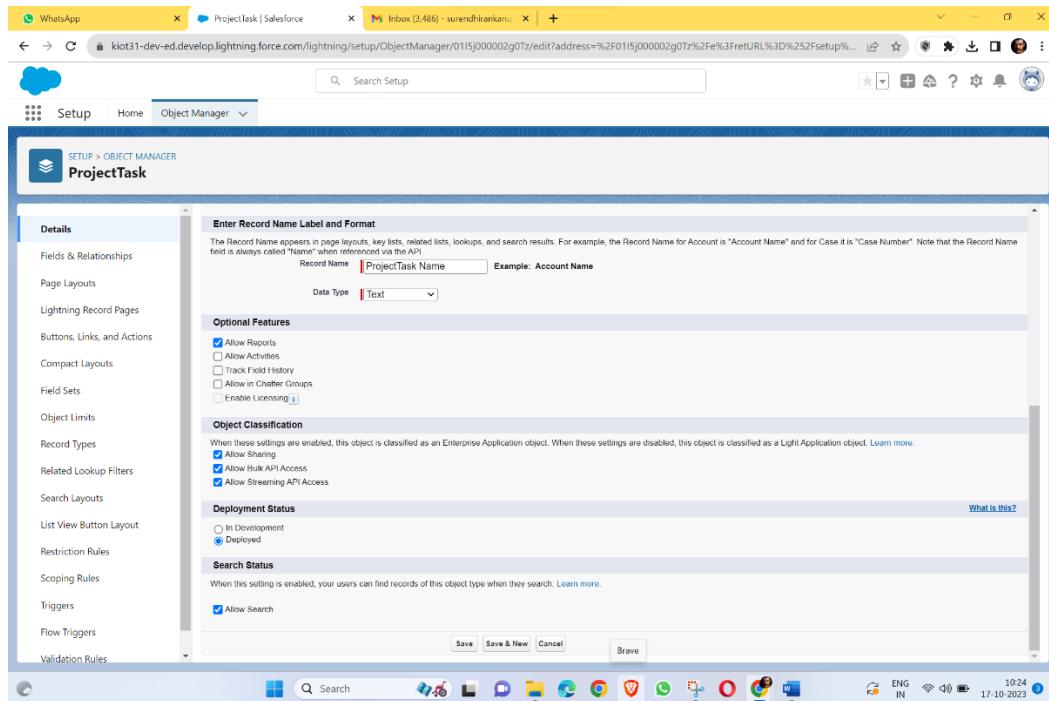
## Creating Employee Object



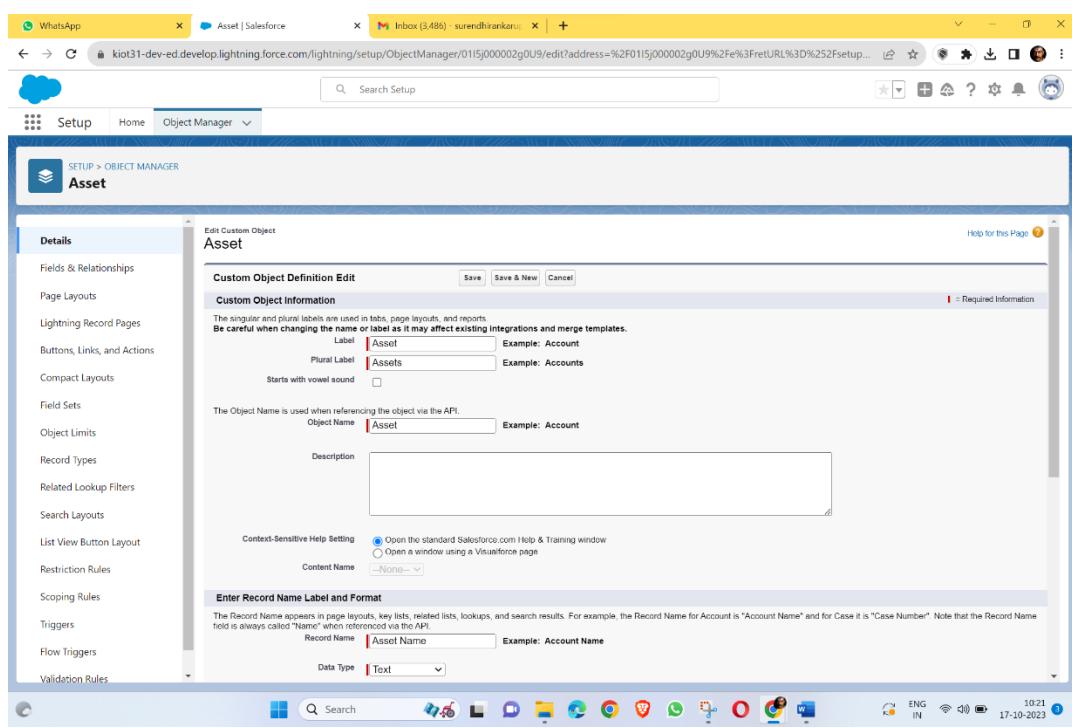
## Creating Project Object



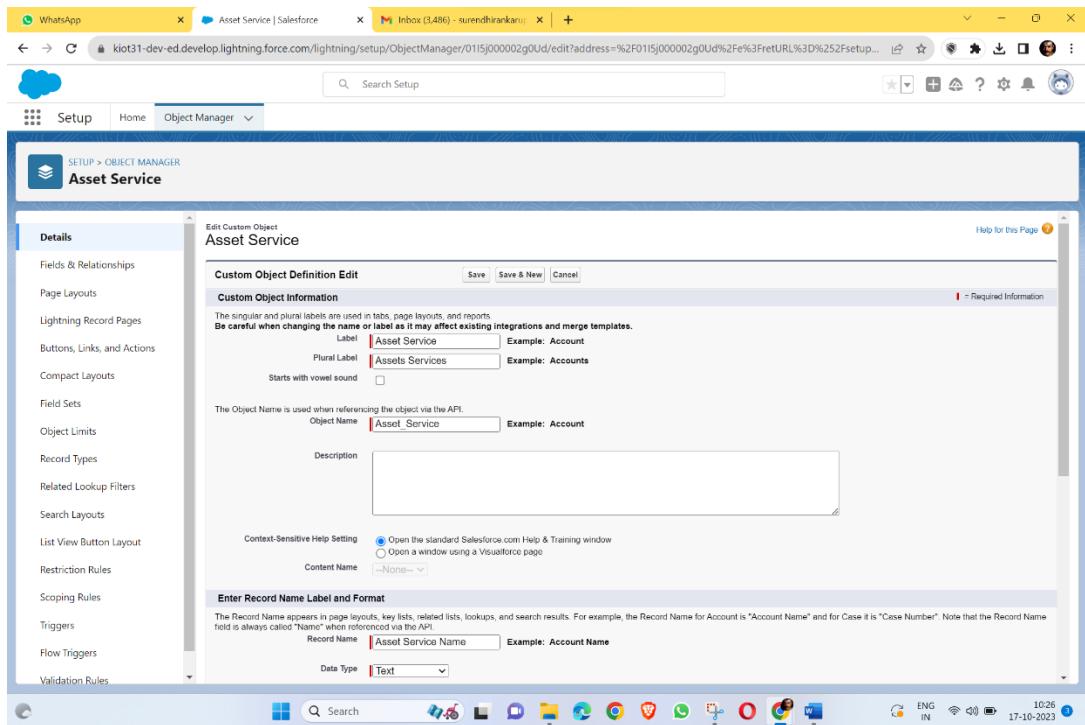
## Creating Project Task Object



## Creating Asset Object

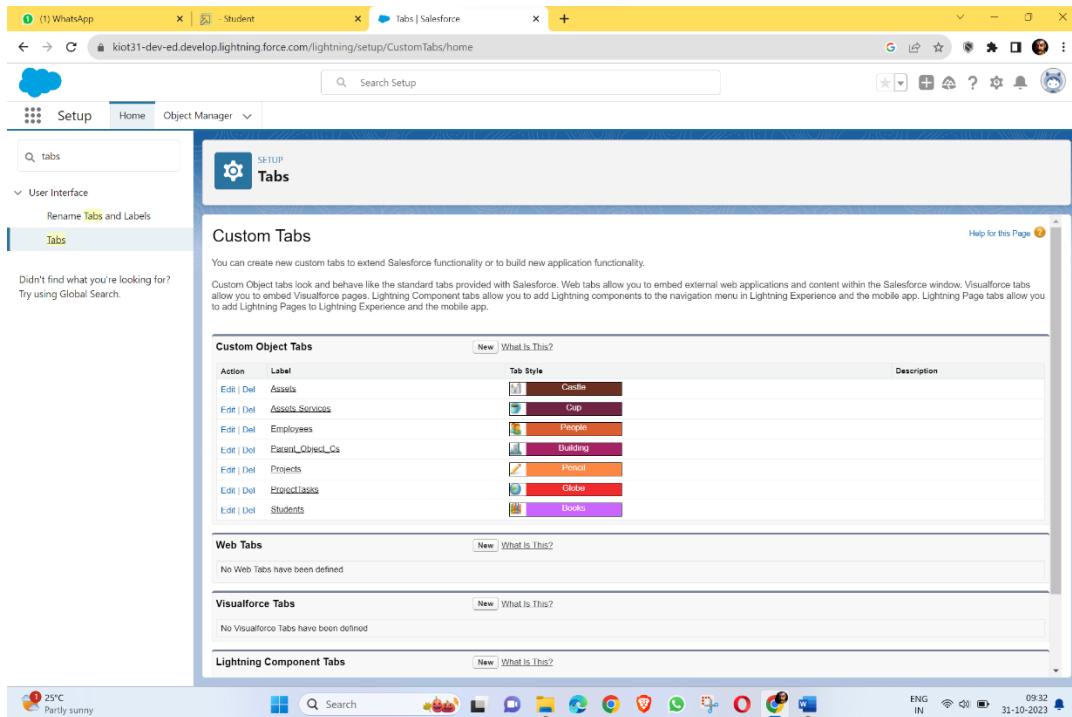


## Creating the Asset Service Object



## Tabs

Salesforce Tabs are like the menu options in a software application. They allow you to access specific functions, objects, or data.



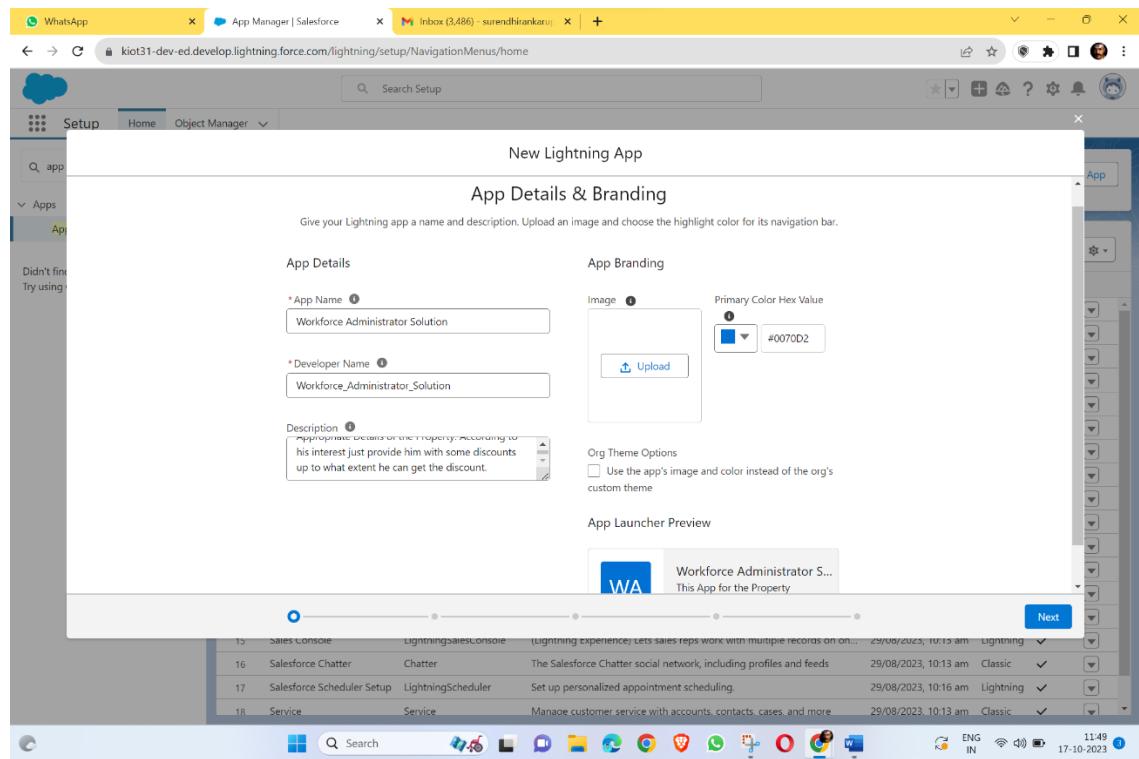
## 2.3 Lightning App

The Lightning App Builder is a point-and-click tool that makes it easy to create custom pages for the Salesforce mobile app and Lightning Experience, giving your users what they need all in one place.

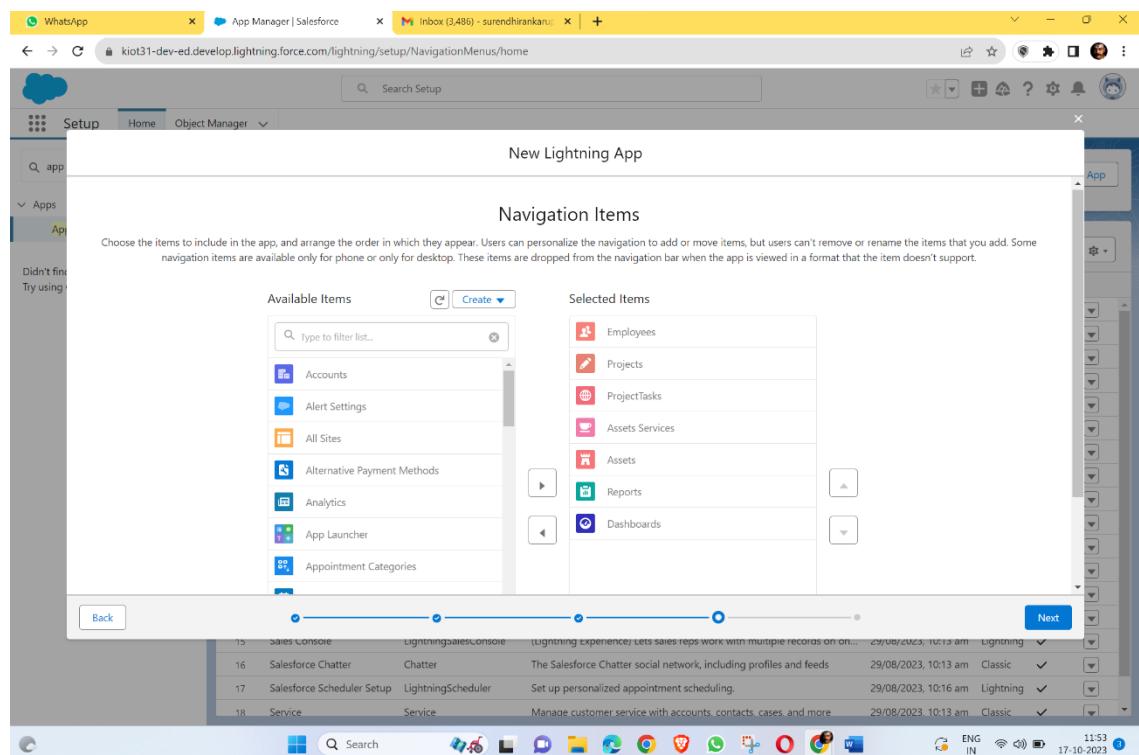
### Create a Workforce Administration Solution Lightning App

- Build a Lightning app, add tabs, and customize page layouts.
- Create custom objects and fields for the app.
- Add Navigation Items
- Add User Profiles

## Workforce Administration Solution



## Add Navigation Items



## Add User Profiles

## Creating Fields

Creating Fields for Text , Date of Birth, Formula, Self Relationship for Employee Object

SETUP > OBJECT MANAGER  
Employee

**Fields & Relationships**

**New Custom Field**

**Step 2. Enter the details** Step 2 of 4

Field Label: Date of Birth.

Field Name: Date\_of\_Birth

Description: (empty)

Help Text: (empty)

Required:  Always require a value in this field in order to save a record

Auto add to custom report type:  Add this field to existing custom report types that contain this entity

Default Value: Show Formula Editor

Use formula syntax. Enclose text and picklist value API names in double quotes ("The\_Text"). Include numbers without quotes. To reference a field from a Custom Metadata type record use \${CustomMetadataType\_\_mdt} Record API Name \${Field\_\_c}.

Previous Next Cancel

SETUP > OBJECT MANAGER  
Employee

**Fields & Relationships**

**New Custom Field**

**Step 2. Enter the details** Step 2 of 4

Field Label: Gender

Values:  Use global picklist value set  
  Enter values, with each value separated by a new line

Field Name: Gender

Description: (empty)

Help Text: (empty)

Required:  Always require a value in this field in order to save a record

Previous Next Cancel

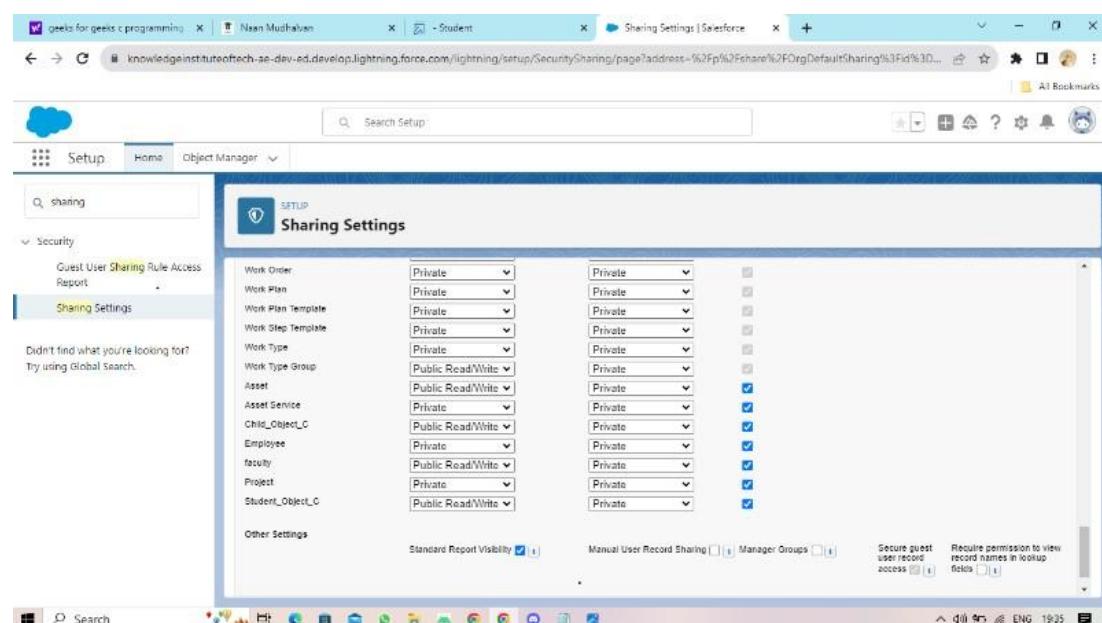
## 2.4 Setting OWD

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.

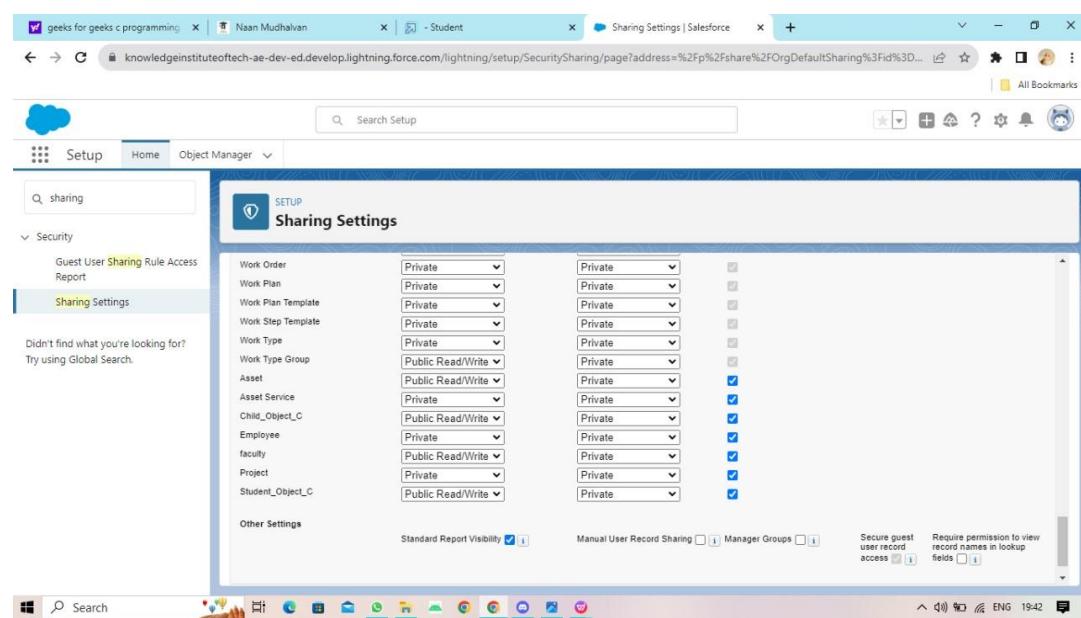
There are four levels of access that can be set in Salesforce OWD and they are-

- Public Read/Write/Transfer
- Public Read/Write
- Public Read/Only
- Private

### Create OWD Setting



The screenshot shows the 'Sharing Settings' page in the Salesforce Setup. The left sidebar has a 'Sharing' search bar and a 'Sharing Settings' section. The main area displays a table of sharing rules for various objects. The table has two columns: 'Object' and 'Sharing Rule'. The 'Object' column lists objects like 'Work Order', 'Work Plan', 'Work Plan Template', etc. The 'Sharing Rule' column shows dropdown menus with options: 'Private', 'Public Read/Write', and 'Public Read/Only'. For most objects, the 'Private' option is selected. In the 'Asset' row, the 'Public Read/Write' option is selected. In the 'Child\_Object\_C' row, the 'Public Read/Write' option is selected. In the 'Employee' row, the 'Private' option is selected. In the 'faculty' row, the 'Public Read/Write' option is selected. In the 'Project' row, the 'Private' option is selected. In the 'Student\_Object\_C' row, the 'Public Read/Write' option is selected. At the bottom of the table, there are 'Other Settings' and checkboxes for 'Standard Report Visibility', 'Manual User Record Sharing', 'Manager Groups', 'Secure guest user record access', and 'Require permission to view record names in lookup fields'.



This screenshot is identical to the one above, showing the 'Sharing Settings' page in the Salesforce Setup. It displays the same table of sharing rules for various objects, with the 'Asset' object having its sharing rule changed to 'Public Read/Write'. The rest of the objects remain with their original sharing rules: 'Private' for most, 'Public Read/Write' for 'Child\_Object\_C' and 'faculty', and 'Public Read/Write' for 'Student\_Object\_C'. The 'Other Settings' and checkboxes at the bottom of the table are also identical to the first screenshot.

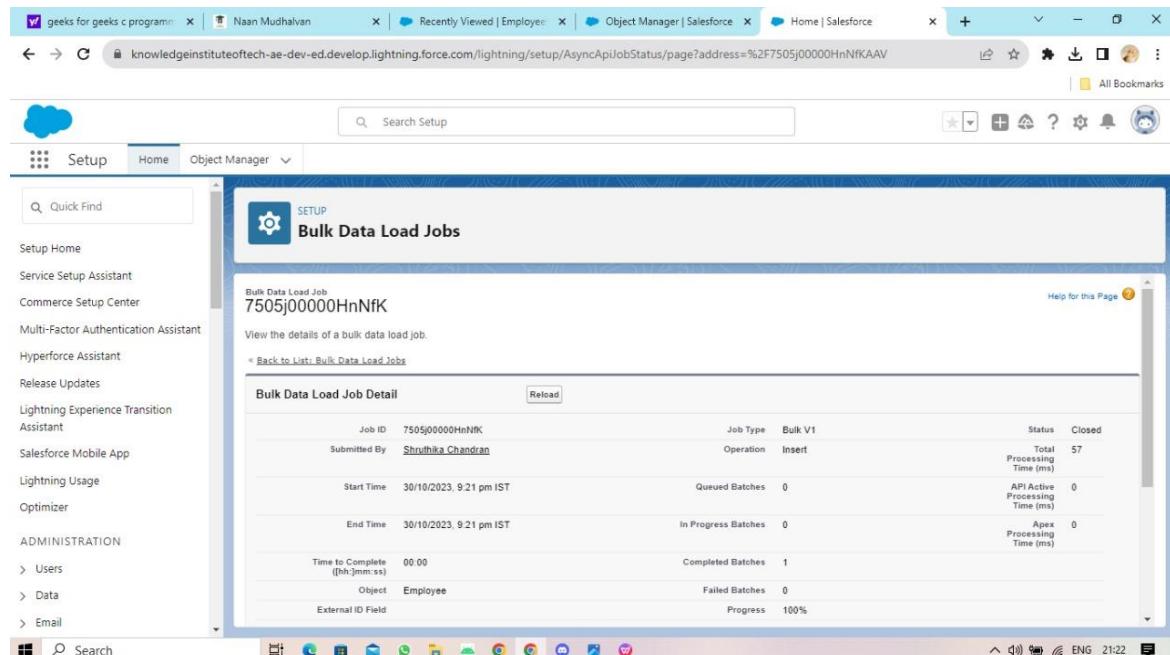
## 2.5 User Adoption

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.

### Create, View, Delete Records

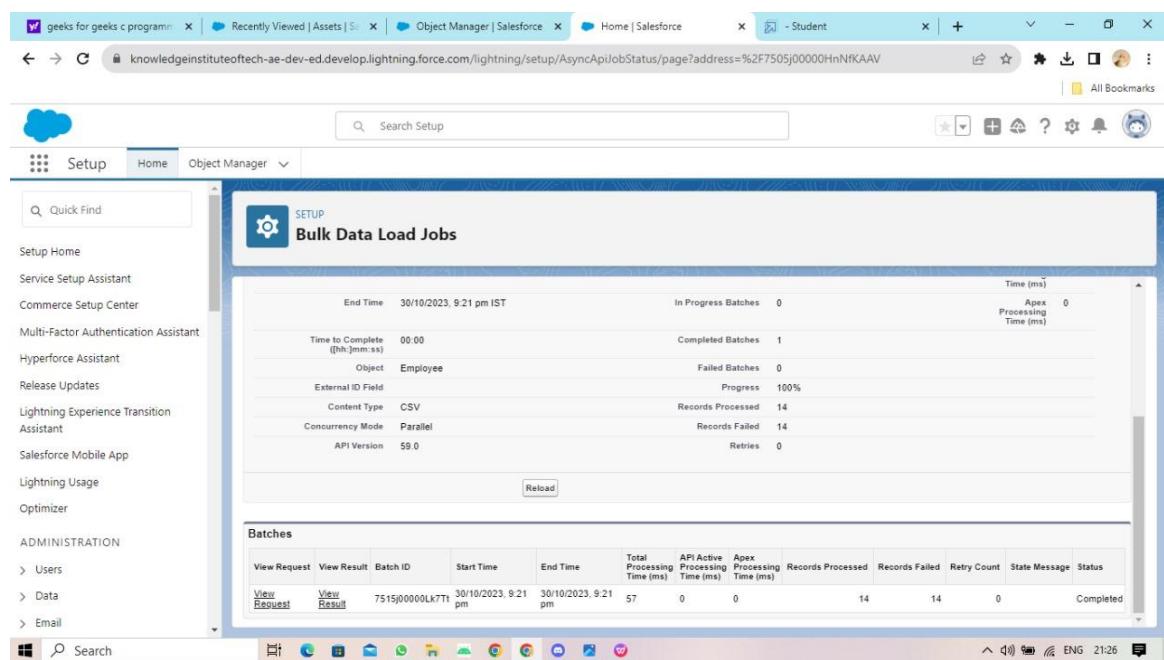
## 2.6 Data Import

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 screenshot shows the Salesforce Setup interface with the 'Bulk Data Load Jobs' page open. The job details are as follows:

Job ID	7505j00000HnNfK	Job Type	Bulk V1	Status	Closed
Submitted By	Shruthika Chandran	Operation	Insert	Total Processing Time (ms)	57
Start Time	30/10/2023, 9:21 pm IST	Queued Batches	0	API Active Processing Time (ms)	0
End Time	30/10/2023, 9:21 pm IST	In Progress Batches	0	Apex Processing Time (ms)	0
Time to Complete (hh:mm:ss)	00:00	Completed Batches	1		
Object	Employee	Failed Batches	0		
External ID Field		Progress	100%		



The screenshot shows the Salesforce Setup interface with the 'Bulk Data Load Jobs' page open. The job details are as follows:

End Time	30/10/2023, 9:21 pm IST	In Progress Batches	0	Time (ms)	
Time to Complete (hh:mm:ss)	00:00	Completed Batches	1	Apex Processing Time (ms)	0
Object	Employee	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	14		
Concurrency Mode	Parallel	Records Failed	14		
API Version	59.0	Retries	0		

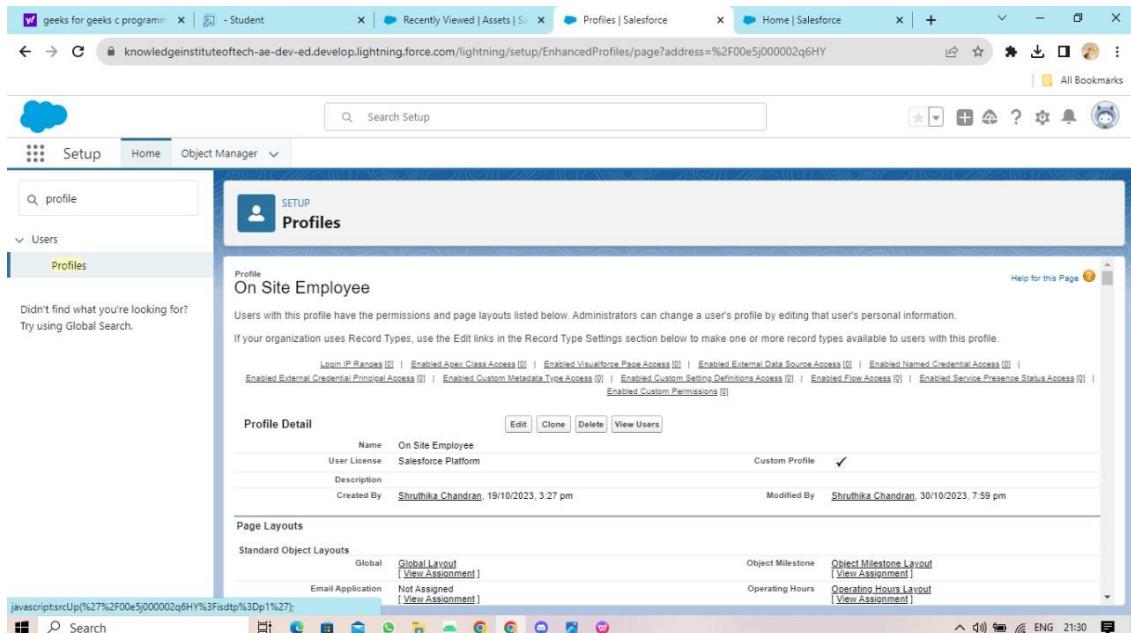
The 'Batches' section shows the following table:

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
View Request	View Result	7515j00000Lk7T1	30/10/2023, 9:21 pm	30/10/2023, 9:21 pm	57	0	0	14	14	0	Completed	

## 2.7 Profiles

A profile is a group/collection of settings and permissions that define what a user can do in salesforce. Profile controls “Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function. For example System Administrator, Developer, Sales Representative.

## Workforce Administration Solution

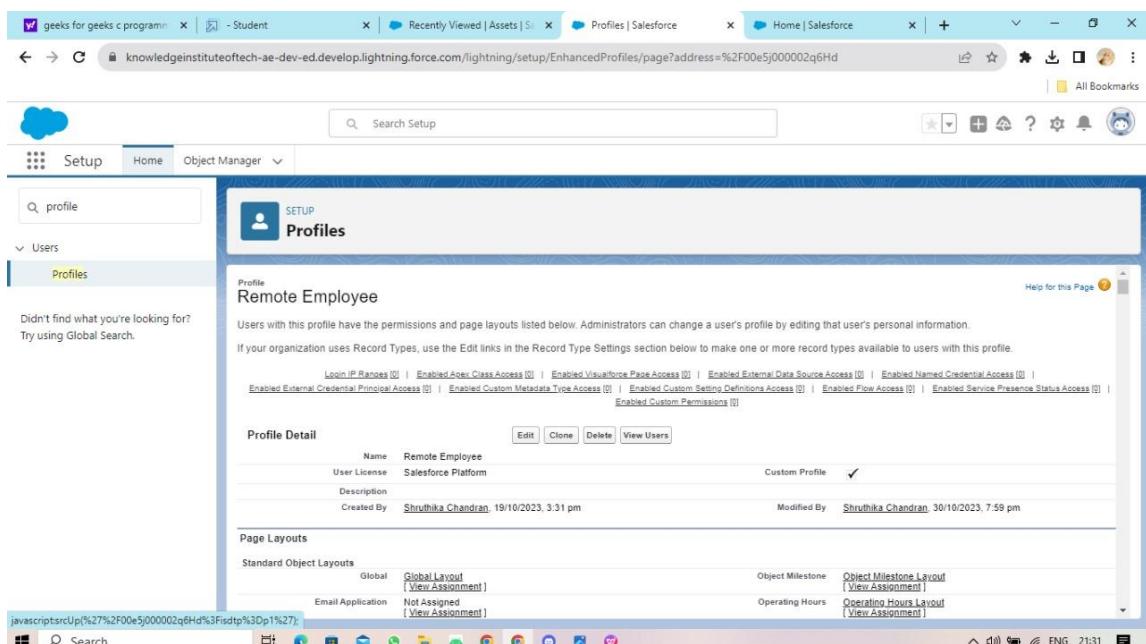


The screenshot shows the Salesforce Setup interface for managing profiles. The current view is the 'Profiles' section under 'Users'. A search bar at the top left shows 'profile'. The main content area displays the 'On Site Employee' profile. The profile details are as follows:

Name	On Site Employee	User License	Salesforce Platform	Custom Profile
Description		Created By	Shruthika Chandran	Modified By
	19/10/2023, 3:27 pm		Shruthika Chandran	30/10/2023, 7:59 pm

The 'Page Layouts' section shows the following assignments:

Standard Object Layouts	Global	Email Application	Object Milestone	Operating Hours
	Global Layout [View Assignment]	Not Assigned [View Assignment]	Object Milestone Layout [View Assignment]	Operating Hours Layout [View Assignment]



The screenshot shows the Salesforce Setup interface for managing profiles. The current view is the 'Profiles' section under 'Users'. A search bar at the top left shows 'profile'. The main content area displays the 'Remote Employee' profile. The profile details are as follows:

Name	Remote Employee	User License	Salesforce Platform	Custom Profile
Description		Created By	Shruthika Chandran	Modified By
	19/10/2023, 3:31 pm		Shruthika Chandran	30/10/2023, 7:59 pm

The 'Page Layouts' section shows the following assignments:

Standard Object Layouts	Global	Email Application	Object Milestone	Operating Hours
	Global Layout [View Assignment]	Not Assigned [View Assignment]	Object Milestone Layout [View Assignment]	Operating Hours Layout [View Assignment]

## 2.8 Roles

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.

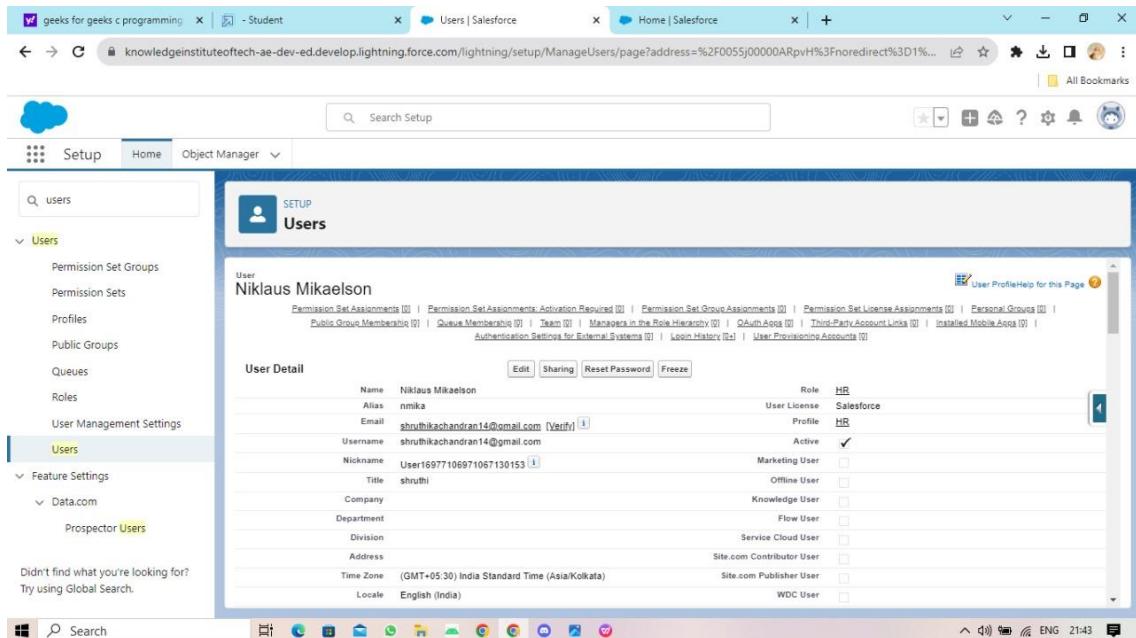
The screenshot shows the Salesforce 'Roles' page under the 'Setup' tab. The sidebar on the left has a search bar and navigation links for 'Users', 'Roles', 'Feature Settings', 'Sales', 'Service', and 'Case Teams'. The main content area is titled 'Creating the Role Hierarchy' and shows a tree view of roles. The root node is 'Knowledge Institute of technology', which contains 'Add Role' and several child nodes: 'CEO', 'HR', 'Manager', and four 'Emp.' nodes (Emp.1, Emp.2, Emp.3, Emp.4). Each node has 'Edit | Del | Assign' buttons. A 'Show in tree view' button is located in the top right of the tree area. The status bar at the bottom shows 'Search' and system icons.

The screenshot shows the same Salesforce 'Roles' page as the previous one, but with a more complex hierarchy. The root node 'Knowledge Institute of technology' now contains additional roles: 'HR', 'Manager', 'Emp.1', 'Emp.2', 'Emp.3', 'Emp.4', 'Emp.5', 'On\_Site\_Employee', 'Remote\_Employee', and 'SVP\_Customer\_Service & Support'. Each of these nodes has its own set of 'Edit | Del | Assign' buttons. The status bar at the bottom shows 'Search' and system icons.

## 2.9 Users

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

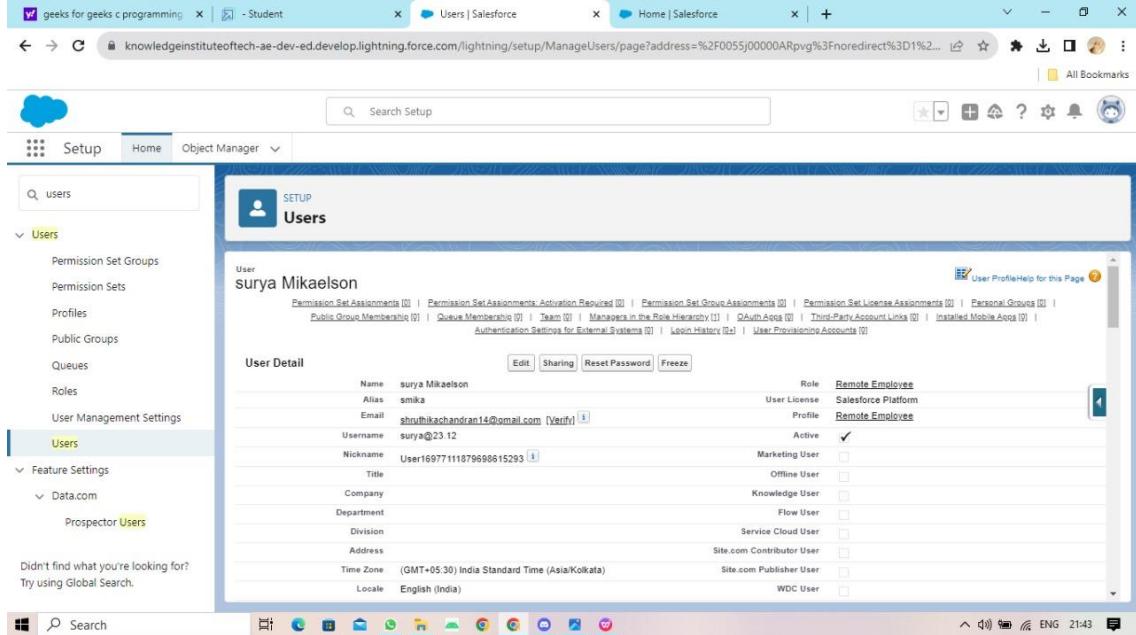
## Workforce Administration Solution



User Niklaus Mikaelson

**User Detail**

Name	Niklaus Mikaelson	Role	HR
Alias	nmika	User License	Salesforce
Email	shruthikachandran14@gmail.com (Verify)	Profile	HR
Username	shruthikachandran14@gmail.com	Active	<input checked="" type="checkbox"/>
Nickname	User16977106971087130153	Marketing User	<input type="checkbox"/>
Title	shruthi	Offline User	<input type="checkbox"/>
Company		Knowledge User	<input type="checkbox"/>
Department		Flow User	<input type="checkbox"/>
Division		Service Cloud User	<input type="checkbox"/>
Address		Site.com Contributor User	<input type="checkbox"/>
Time Zone	(GMT+05:30) India Standard Time (Asia/Kolkata)	Site.com Publisher User	<input type="checkbox"/>
Locale	English (India)	WDC User	<input type="checkbox"/>



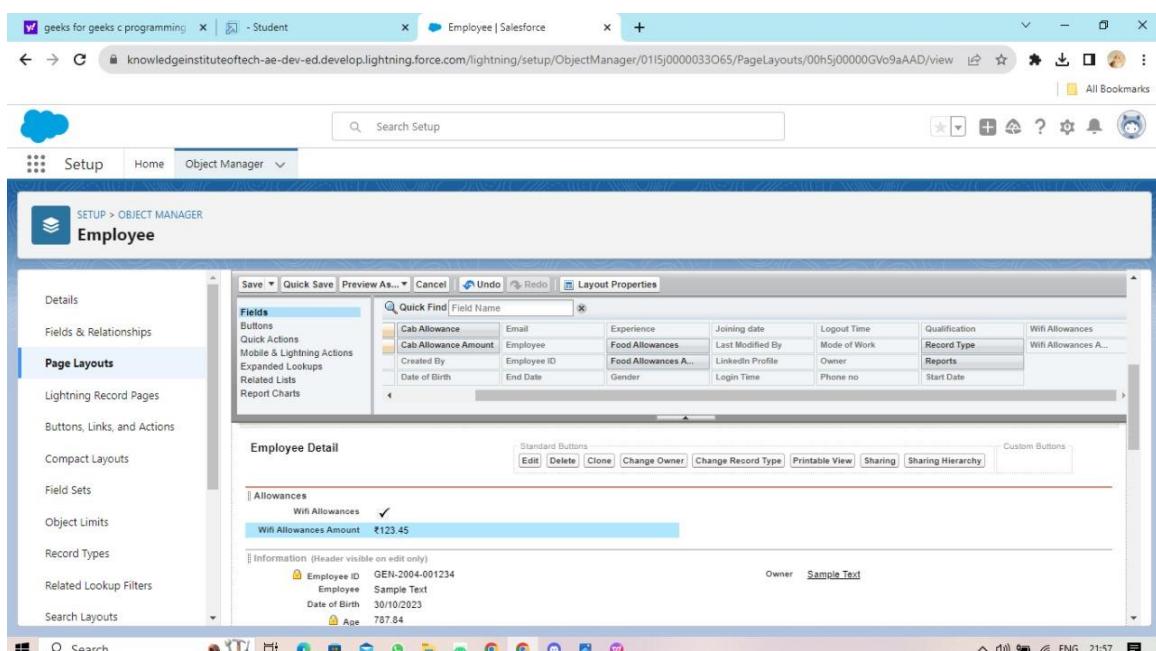
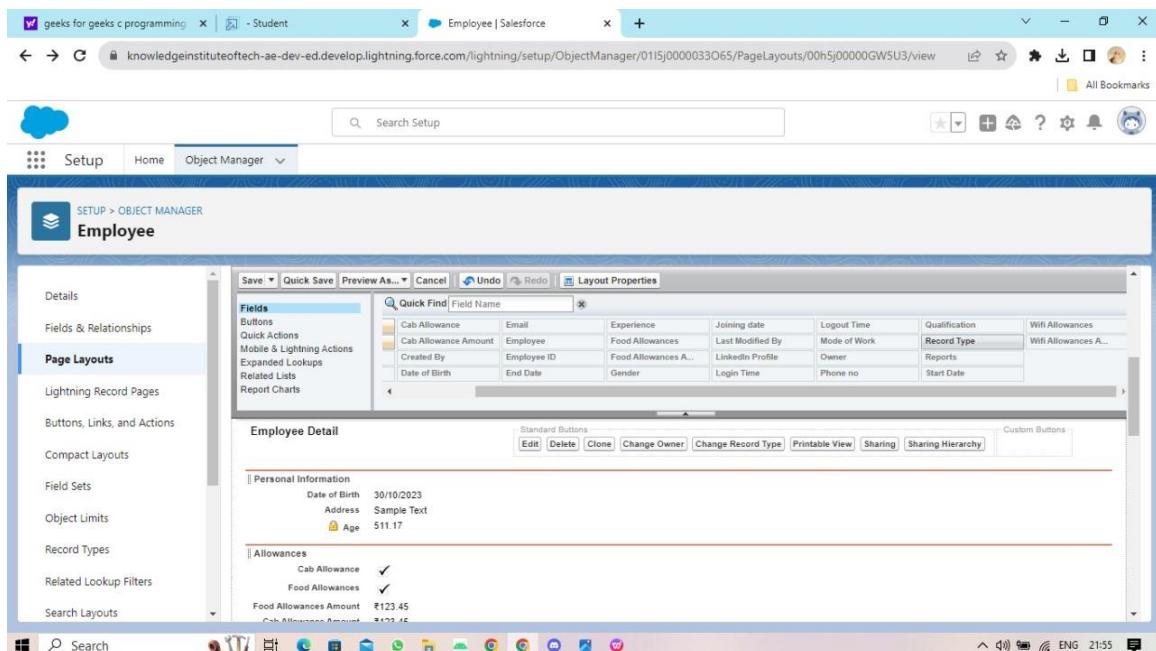
User surya Mikaelson

**User Detail**

Name	surya Mikaelson	Role	Remote Employee
Alias	smika	User License	Salesforce Platform
Email	shruthikachandran14@gmail.com (Verify)	Profile	Remote Employee
Username	surya@23.12	Active	<input checked="" type="checkbox"/>
Nickname	User16977111879688615293	Marketing User	<input type="checkbox"/>
Title		Offline User	<input type="checkbox"/>
Company		Knowledge User	<input type="checkbox"/>
Department		Flow User	<input type="checkbox"/>
Division		Service Cloud User	<input type="checkbox"/>
Address		Site.com Contributor User	<input type="checkbox"/>
Time Zone	(GMT+05:30) India Standard Time (Asia/Kolkata)	Site.com Publisher User	<input type="checkbox"/>
Locale	English (India)	WDC User	<input type="checkbox"/>

## 2.10 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.



## CHAPTER-3

### USERS & DATA SECURE

#### 3.1 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.

The image contains two screenshots of the Salesforce Chatter Group interface. The top screenshot shows the 'New Group' dialog box, where the owner is set to 'Shruthika Chandran', the access type is 'Private', and the 'Allow customers' checkbox is checked. The bottom screenshot shows the 'Manage Members' dialog box, listing four members: 'surya Mikaelson', 'shru Mikaelson', 'Kol Mikaelson', and 'Niklaus Mikaelson', all of whom are currently marked as 'Member'.

The screenshot shows the Salesforce Internal Discussion page. At the top, there is a navigation bar with various tabs and a search bar. Below the navigation bar, the page title is "Internal Discussion" and it is "Private with Customers". The main content area is divided into two sections: "Chatter" and "Group Details". The "Chatter" section contains a "Post" tab, a text input field for "Share an update...", and a "Share" button. The "Group Details" section contains a "Description" field with the following text:

An internal group discussion for a project is a structured conversation involving team members to collaborate, share updates, problem-solve, and make project-related decisions. It typically follows an agenda, includes brainstorming, decision-making, and results in actionable tasks and deadlines to move the project forward.

The screenshot shows the Salesforce Internal Discussion page. The "Chatter" section displays a post from "Shruthika Chandran" with the text "hello team members". Below the post, there are "Like" and "Comment" buttons. The "Group Details" section contains a "Description" field with the same text as the previous screenshot. To the right of the "Group Details" section, there is a "Manage Members" section with a table showing one member: "Shruthika Chandran".

## 3.2 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.

Record Type  
Remote Employee  
Back to Custom Object: Employee

Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

Record Type Label	Remote Employee	Active	
Record Type Name	Remote_Employee		
Namespace Prefix			
Description			
Created By	Shruthika Chandran, 19/10/2023, 9:38 pm	Modified By	Shruthika Chandran, 30/10/2023, 8:05 pm

Picklists Available for Editing

Action	Field	Modified Date
Edit	Gender	19/10/2023, 9:38 pm
Edit	Mode of Work	19/10/2023, 9:38 pm

Record Type  
On Site Employee  
Back to Custom Object: Employee

Use the Edit button to change the properties of this record type. Use the Edit links in the Picklist Values related list to choose the picklist values available for records with this record type.

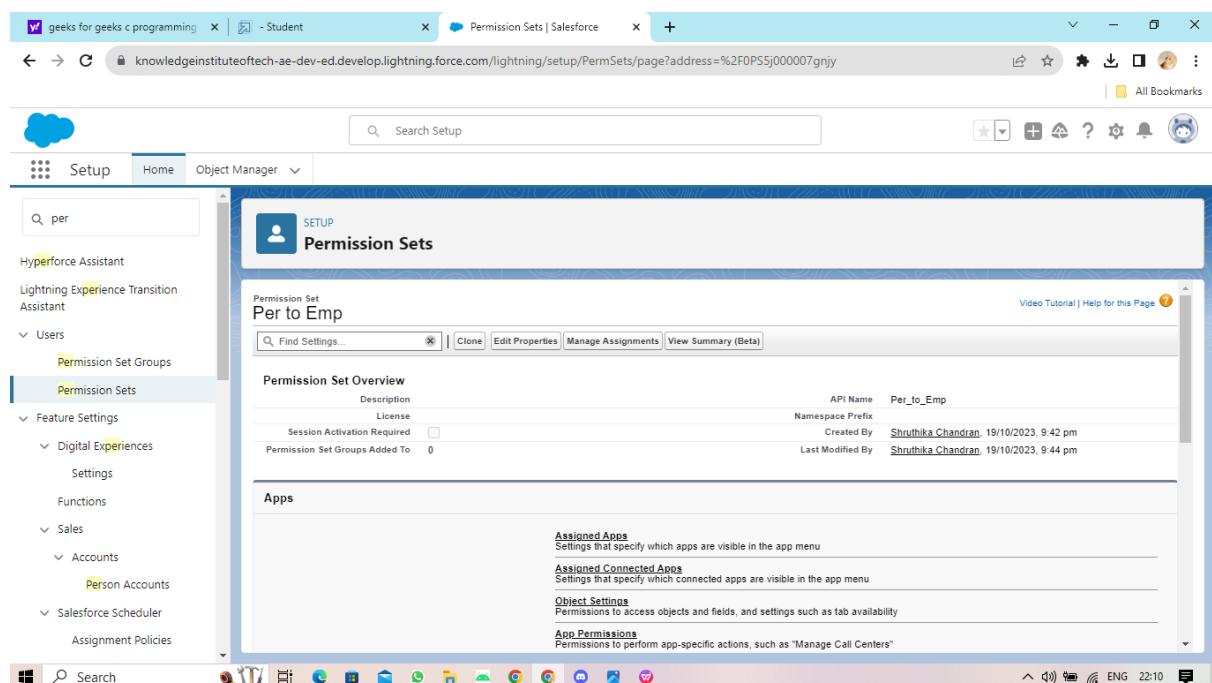
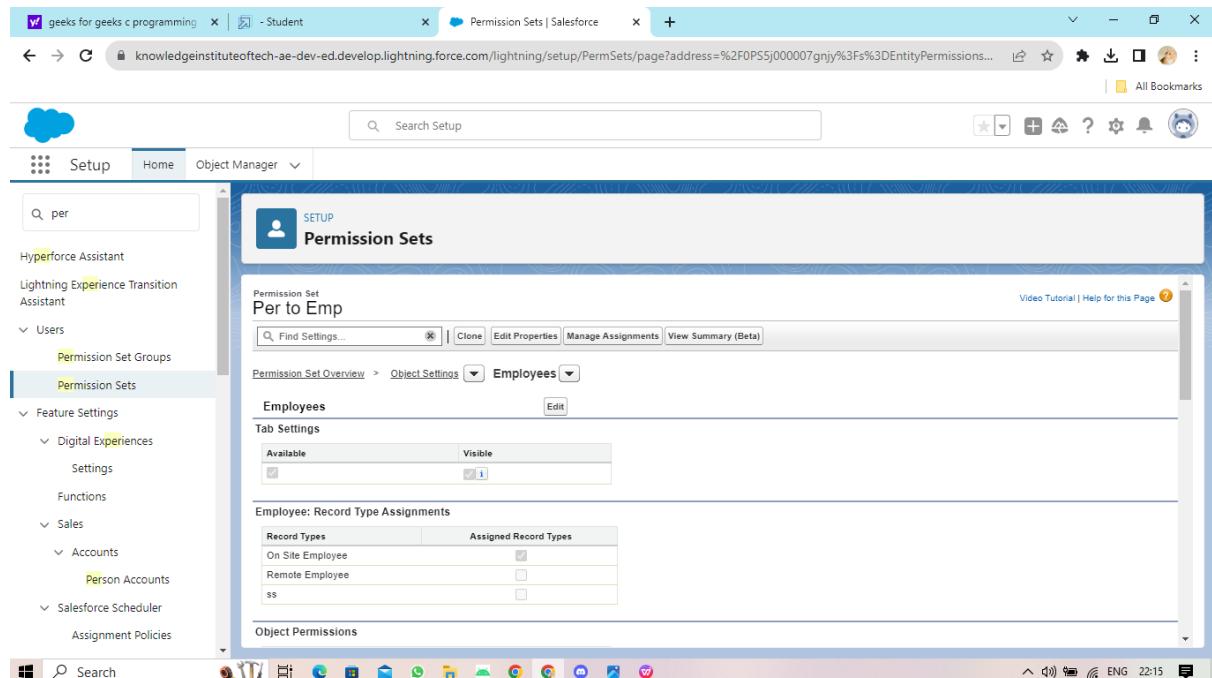
Record Type Label	On Site Employee	Active	
Record Type Name	On_Site_Employee		
Namespace Prefix			
Description			
Created By	Shruthika Chandran, 19/10/2023, 9:35 pm	Modified By	Shruthika Chandran, 30/10/2023, 8:06 pm

Picklists Available for Editing

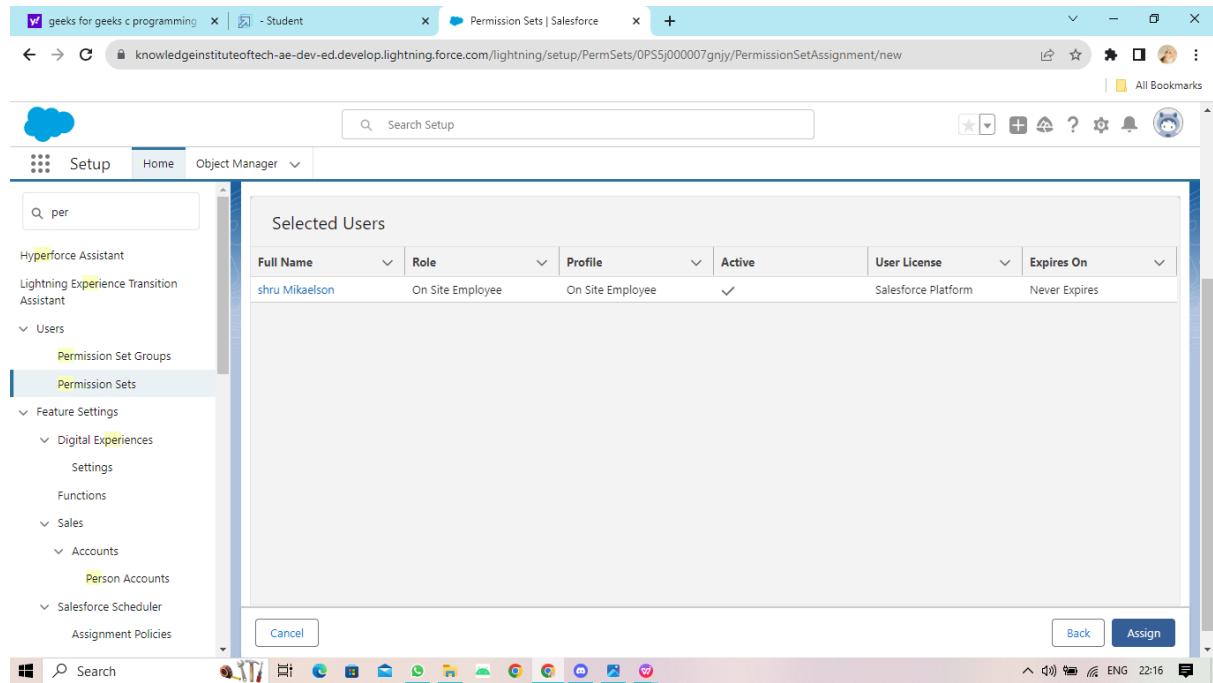
Action	Field	Modified Date
Edit	Gender	19/10/2023, 9:35 pm
Edit	Mode of Work	19/10/2023, 9:35 pm

### 3.3 Permission Sets

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.



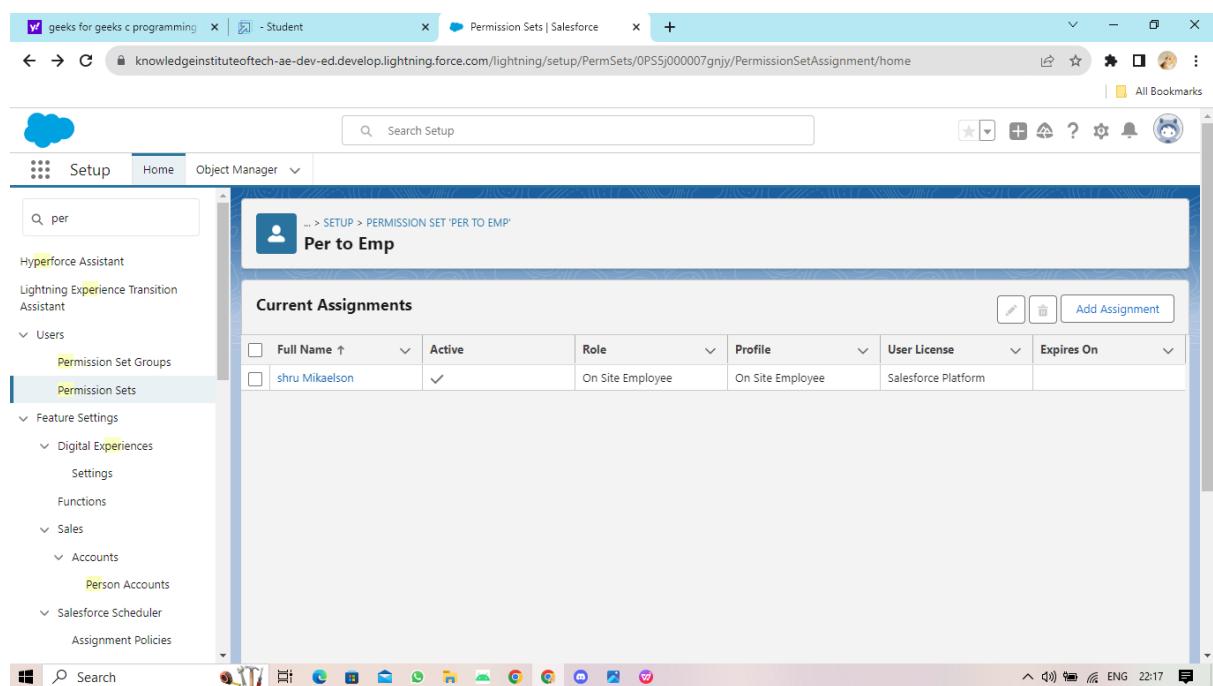
## Workforce Administration Solution



The screenshot shows the 'Permission Sets Assignment' screen in the Salesforce Setup. The URL is <knowledgeinstituteoftech-ae-dev-ed.develop.lightning.force.com/lightning/setup/PermSets/0P55j000007gnjy/PermissionSetAssignment/new>. The sidebar on the left is expanded, showing the 'Permission Sets' section under 'Users'. The main content area is titled 'Selected Users' and displays a table with the following data:

Full Name	Role	Profile	Active	User License	Expires On
shru Mikaelson	On Site Employee	On Site Employee	✓	Salesforce Platform	Never Expires

At the bottom right of the table are 'Back' and 'Assign' buttons.



The screenshot shows the 'Permission Set Assignment' screen in the Salesforce Setup. The URL is <knowledgeinstituteoftech-ae-dev-ed.develop.lightning.force.com/lightning/setup/PermSets/0P55j000007gnjy/PermissionSetAssignment/home>. The sidebar on the left is expanded, showing the 'Permission Sets' section under 'Users'. The main content area is titled 'Per to Emp' and displays a table titled 'Current Assignments' with the following data:

Full Name	Active	Role	Profile	User License	Expires On
shru Mikaelson	✓	On Site Employee	On Site Employee	Salesforce Platform	

At the top right of the table are edit and delete icons, and an 'Add Assignment' button. The status bar at the bottom right shows 'ENG 22:16'.

## CHAPTER-4

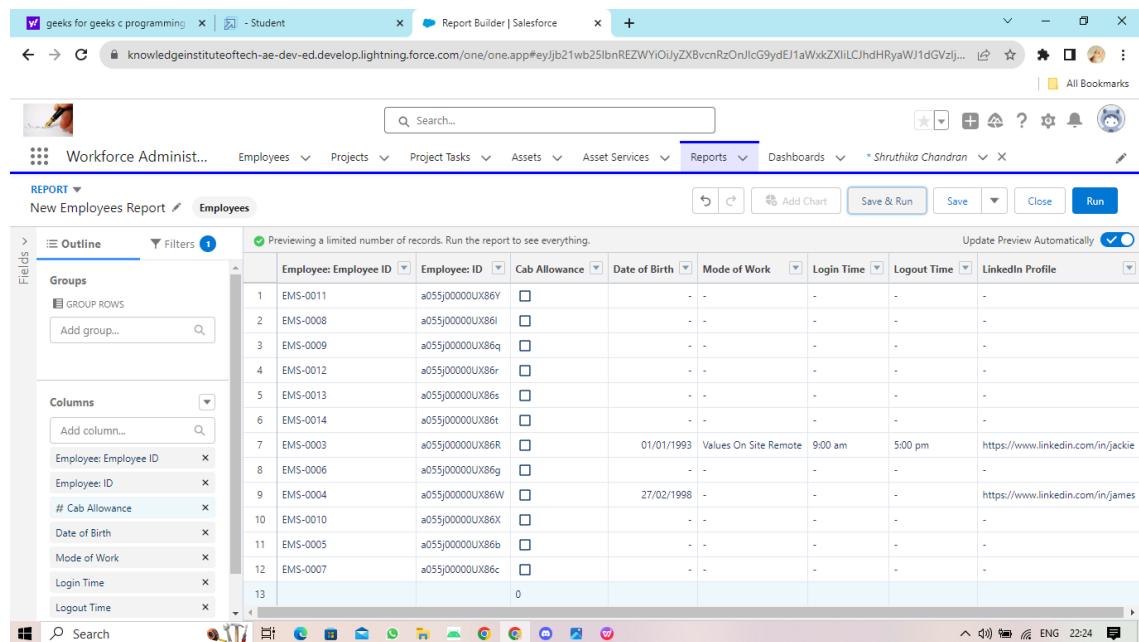
### PROCESS AND REPORTS

#### 4.1 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

- Tabular
- Summary
- Matrix
- Joined Reports



The screenshot shows the Salesforce Report Builder interface. The top navigation bar includes tabs for 'geeks for geeks c programming', 'Student', 'Report Builder | Salesforce', and a search bar. The main menu bar has options like 'Employees', 'Projects', 'Asset Services', 'Reports', 'Dashboards', and a user profile for 'Shruthika Chandran'. The 'Reports' tab is currently selected. Below the menu is a toolbar with buttons for 'Add Chart', 'Save & Run', 'Save', 'Close', and 'Run'. The main content area is titled 'New Employees Report' under the 'Employees' section. On the left, a sidebar titled 'Fields' shows a list of fields: 'Groups' (with 'GROUP ROWS' and 'Add group...'), 'Columns' (with 'Add column...'), and several specific fields: 'Employee: Employee ID', 'Employee: ID', 'Cab Allowance', 'Date of Birth', 'Mode of Work', 'Login Time', 'Logout Time', and 'LinkedIn Profile'. The main table has 13 rows, each with a unique Employee ID and various data points like cab allowance, mode of work, and LinkedIn profiles. The table is styled with alternating row colors.

Report: Employees  
New Employees Report

Total Records Total Cab Allowance  
12 0

	Employee: Employee ID	Employee: ID	Cab Allowance	Date of Birth	Mode of Work	Login Time	Logout Time	LinkedIn Profile
1	EMS-0011	a055j00000UX86Y	<input type="checkbox"/>	-	-	-	-	-
2	EMS-0008	a055j00000UX86I	<input type="checkbox"/>	-	-	-	-	-
3	EMS-0009	a055j00000UX86q	<input type="checkbox"/>	-	-	-	-	-
4	EMS-0012	a055j00000UX86r	<input type="checkbox"/>	-	-	-	-	-
5	EMS-0013	a055j00000UX86s	<input type="checkbox"/>	-	-	-	-	-
6	EMS-0014	a055j00000UX86t	<input type="checkbox"/>	-	-	-	-	-
7	EMS-0003	a055j00000UX86R	<input type="checkbox"/>	01/01/1993	Values On Site Remote	9:00 am	5:00 pm	<a href="https://www.linkedin.com/in/jackie">https://www.linkedin.com/in/jackie</a>
8	EMS-0006	a055j00000UX86g	<input type="checkbox"/>	-	-	-	-	-
9	EMS-0004	a055j00000UX86W	<input type="checkbox"/>	27/02/1998	-	-	-	<a href="https://www.linkedin.com/in/james">https://www.linkedin.com/in/james</a>
10	EMS-0010	a055j00000UX86X	<input type="checkbox"/>	-	-	-	-	-
11	EMS-0005	a055j00000UX86b	<input type="checkbox"/>	-	-	-	-	-

## 4.2 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.

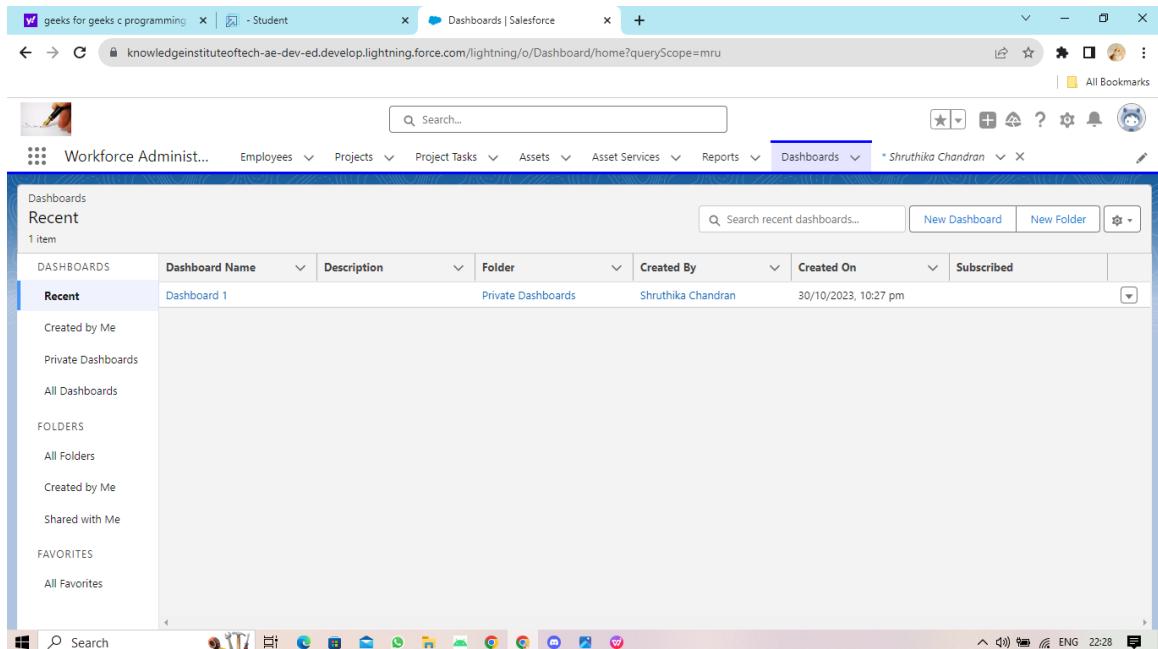
Dashboard 1

New Employees Report

Employee: Employee ID	Employee: ID	Cab A...	Dat...	Mode of Work
EMS-0003	a055j00000l	<input type="checkbox"/>	01/01/	Values On Site R
EMS-0004	a055j00000l	<input type="checkbox"/>	27/02/	-
EMS-0005	a055j00000l	<input type="checkbox"/>	-	-
EMS-0006	a055j00000l	<input type="checkbox"/>	-	-
EMS-0007	a055j00000l	<input type="checkbox"/>	-	-
EMS-0008	a055j00000l	<input type="checkbox"/>	-	-
EMS-0009	a055j00000l	<input type="checkbox"/>	-	-

View Report (New Employees Report)

Dashboard saved



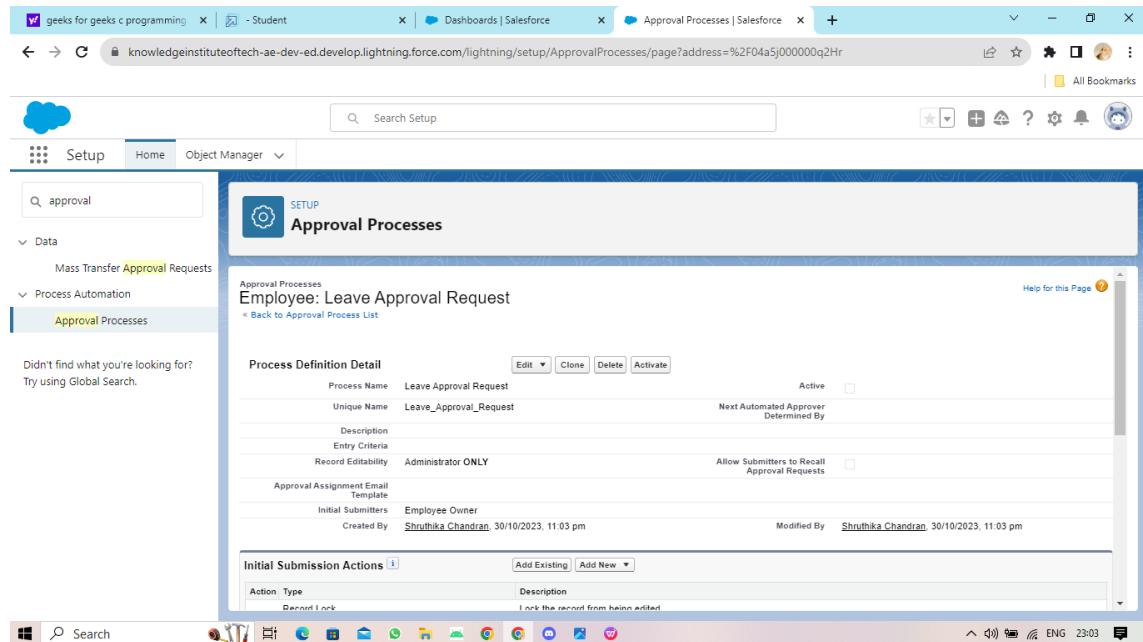
### 4.3 Approval Process

An approval process is an automated process your agency can use to approve records in Salesforce.

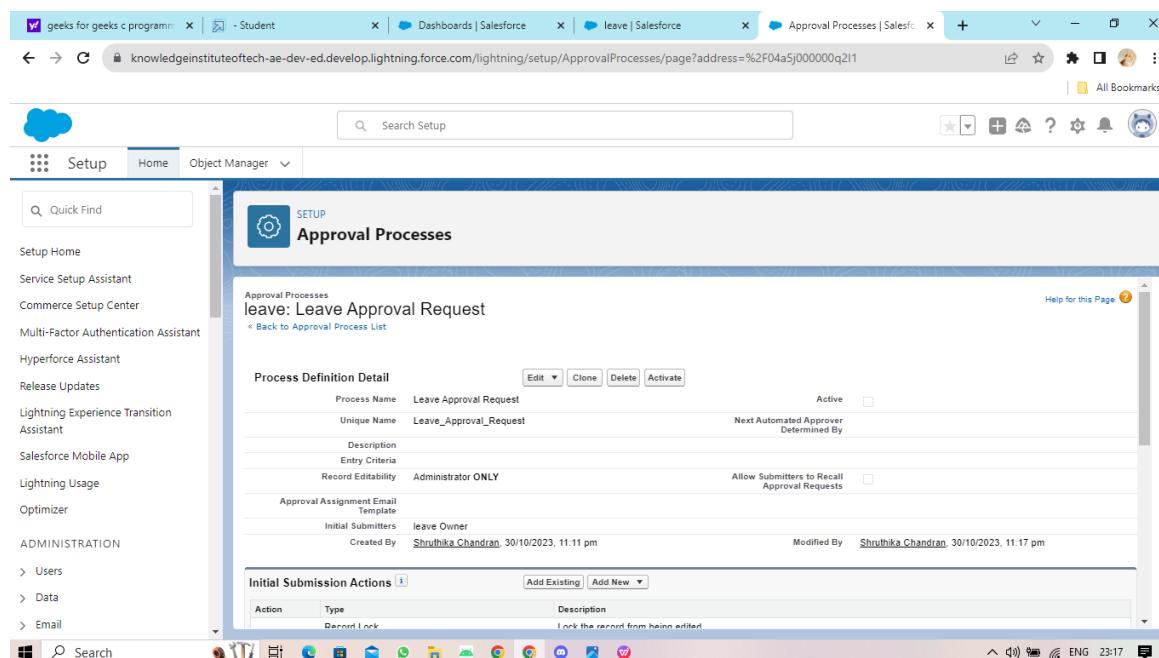
An approval process specifies the criteria a record must meet before it can be submitted for approval, the steps necessary for a record to be approved, and who must approve it at each step.

A step can apply to all records included in the process or just records that have certain attributes. An approval process also specifies the actions to take when a record is approved, rejected, recalled, or first submitted for approval.

## Workforce Administration Solution



The screenshot shows the 'Approval Processes' page in the Salesforce Setup. The process is named 'Leave Approval Request' with a unique name of 'Leave\_Approval\_Request'. It is set to be 'Active' and 'Determined By' the 'Next Automated Approver'. The 'Record Editability' is 'Administrator ONLY'. The 'Initial Submitters' is 'Employee Owner' and the 'Created By' is 'Shruthika Chandran' on 30/10/2023, 11:03 pm. The 'Modified By' is also 'Shruthika Chandran' on the same date and time. The 'Initial Submission Actions' section contains a single entry: 'Record Lock' with the description 'Lock the record from being edited'.

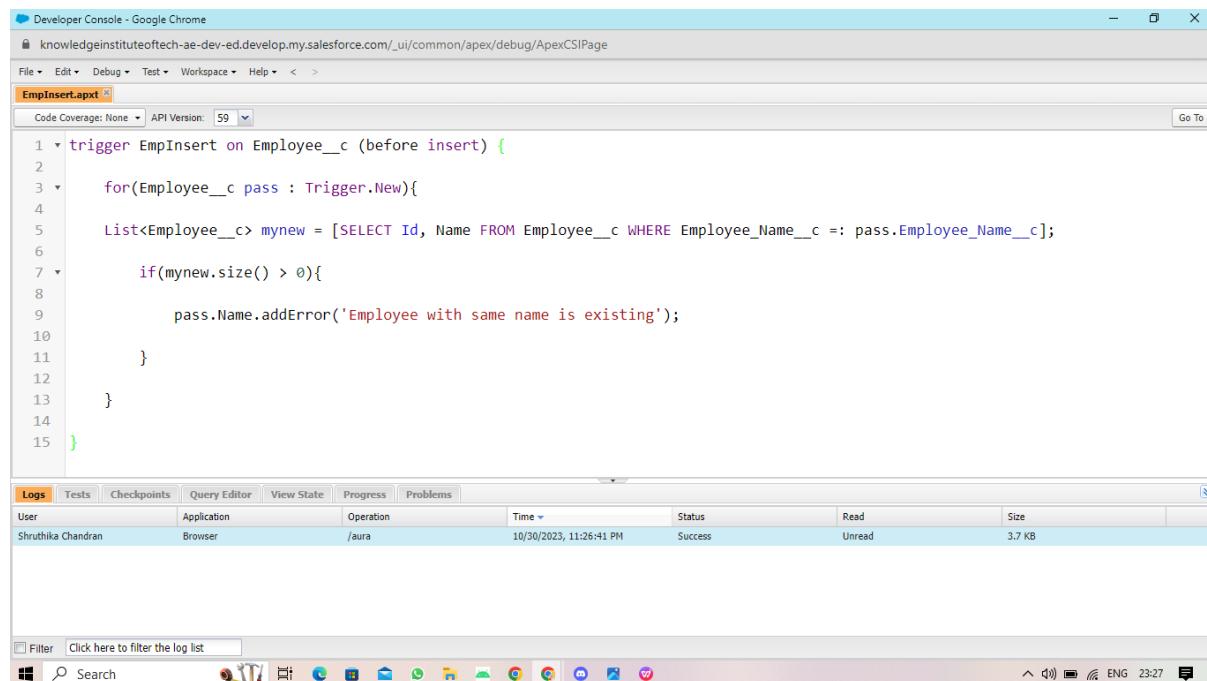


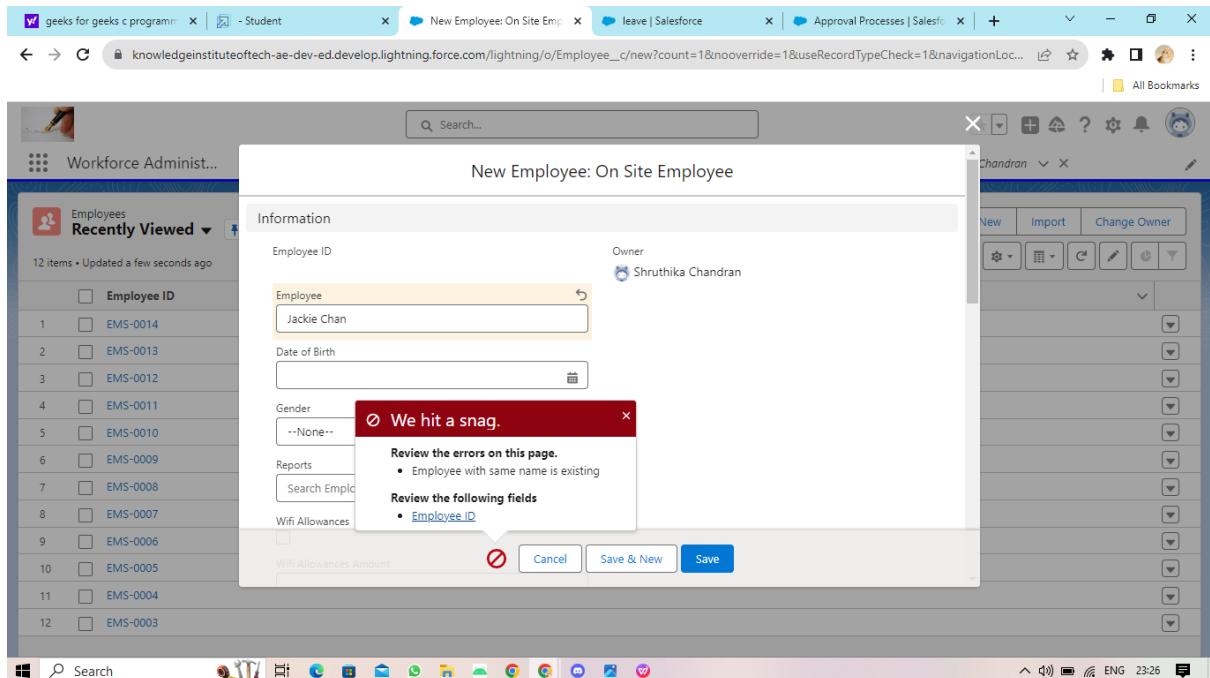
The screenshot shows the 'Approval Processes' page in the Salesforce Setup. The process is named 'Leave Approval Request' with a unique name of 'Leave\_Approval\_Request'. It is set to be 'Active' and 'Determined By' the 'Next Automated Approver'. The 'Record Editability' is 'Administrator ONLY'. The 'Initial Submitters' is 'leave Owner' and the 'Created By' is 'Shruthika Chandran' on 30/10/2023, 11:11 pm. The 'Modified By' is also 'Shruthika Chandran' on the same date and time. The 'Initial Submission Actions' section contains a single entry: 'Record Lock' with the description 'Lock the record from being edited'.

## 4.4 Final Apex Trigger

Create a new Apex Class and Write down the following code logic

```
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');
        }
    }
}
```





## CHAPTER-5

### Conclusion

In conclusion, the Workforce Administration Solution project implemented through Salesforce has been a resounding success. It has not only streamlined and optimized our workforce management processes but also enhanced data visibility and improved the overall employee experience. We now have a robust platform that offers scalability and cost savings, and we're better equipped to make data-driven decisions for the future.

However, it wasn't without its challenges, such as the complex data migration and the need for effective change management and user adoption strategies. Nevertheless, the benefits far outweigh the challenges, and this project represents a significant milestone in our journey toward a more efficient and data-driven workforce administration.

Moving forward, it's crucial to continue monitoring the system's performance and gathering feedback from users to make further improvements. Regular training and support will ensure that all employees fully leverage the system's capabilities, and as our organization evolves, we can adapt the solution to meet new workforce administration needs. This project serves as a testament to our commitment to innovation and efficiency in managing our workforce, and it positions us for a more productive and successful future.

## **CHAPTER-6**

### **PROJECT DEMONSTRATION**

**Github:**

<https://github.com/ShruthikaChandran/Naanmudhalvan-Salesforce--NM2023TMID02212-Kiot.git>

**Demo Link:**

[https://drive.google.com/drive/folders/1SBz9V7G1WWHQNHWnhr5tUNbzdHKW\\_ih](https://drive.google.com/drive/folders/1SBz9V7G1WWHQNHWnhr5tUNbzdHKW_ih)