APPLICATION TO MAKE THE WORKFORCE ADMINSTRATION SOLUTION BY USING CRM (DEVELOPER)

ABSTRACT:

This project details the development of a comprehensive Workforce Administration Solution (WAS) designed to streamline, automate, and centralize key human resource and operational processes. The existing manual or fragmented administration methods often result in inefficiencies, increased errors, and a lack of real-time visibility, hindering effective resource management and organizational decision-making.

The developed solution provides a unified, cloud-based platform for managing the complete employee lifecycle, with core features including centralized employee data management, automated project and asset assignment, time and attendance tracking, and real-time reporting via analytical dashboards.

Implemented using a modern, scalable development framework (e.g., Salesforce, in the context of one example), the WAS significantly enhances operational efficiency, ensures data accuracy and compliance, and fosters improved collaboration through features like internal communication tools. The project successfully demonstrates the creation of a robust and user-friendly system that mitigates administrative bottlenecks, ultimately enabling an organization to optimize its workforce deployment and achieve strategic business objectives.

OBJECTIVE:

The core objective of the Workforce Administration Solution (WAS) development project is to design, build, and deploy a secure, centralized digital platform that optimizes workforce deployment and streamlines all administrative tasks.

- **Streamline Operations & Centralize Data:** Consolidate all critical workforce information (employee records, skills, projects, and asset assignments) into a single, unified WAS platform to simplify management.
- **Enhance Employee Experience:** Provide employees with self-service features for managing their personal details, viewing assignments, and logging time, leading to increased engagement and transparency.
- **Ensure Robust Security & Access Control:** Implement a strong role-based access control (RBAC) model and data policies to guarantee the confidentiality and integrity of sensitive employee and project data.
- **Improve Efficiency through Automation:** Automate routine administrative functions, such as onboarding workflows, task assignments, and absence management, to drastically reduce manual effort and minimize human errors.

- **Enable Data-Driven Decisions:** Establish a flexible and scalable architecture capable of generating real-time analytics, dashboards, and compliance reports to support strategic workforce planning and utilization.

TECHNOLOGY DESCRIPTION:

Salesforce:

A cloud-based CRM platform used to manage customer relationships, streamline operations, and securely store data. It provides tools for creating custom objects, automation, user roles, and reporting.

Custom objects:

These Objects in Salesforce are user-defined database tables used to store information specific to a business. They allow you to create fields, relationships, and layouts to manage and organize data unique to your organization.

Tabs:

Tabs in Salesforce are user interface elements that provide easy access to objects, apps, or web pages. They allow users to quickly navigate and work with custom or standard objects within a Lightning App.

Lightning App:

An app is a collection of items-such as objects, tabs, and utilities-bundled together to serve a specific function. It provides a branded, user-friendly interface that allows employees to access and switch between related objects and tools efficiently.

Page Layouts:

Fields and sections are organized on a record page to make data entry easier, more structured, and user-friendly.

Profiles:

Define user permissions and access in Salesforce, determining what objects, fields, and features a user can view or modify.

Roles and hierarchy:

Control record-level access, defining who can see or act on data based on their position in the organizational structure.

Users:

These are individual accounts that allow people to log in and access the system, with permissions and roles assigned based on their profiles and responsibilities.

Permission sets:

Grant additional access rights to users without changing their profiles, allowing flexible, role based permissions for specific objects or actions.

Organization-Wide Defaults (OWD):

Define the baseline level of access users have to records they do not own, ensuring data security and controlled visibility across the organization.

Reports and dashboards:

Provide visual insights and summaries of business data, helping users track performance, analyse trends, and make informed decisions.

Flows:

Automate business processes by collecting, updating, and managing data, allowing tasks to run automatically based on record changes or user actions.

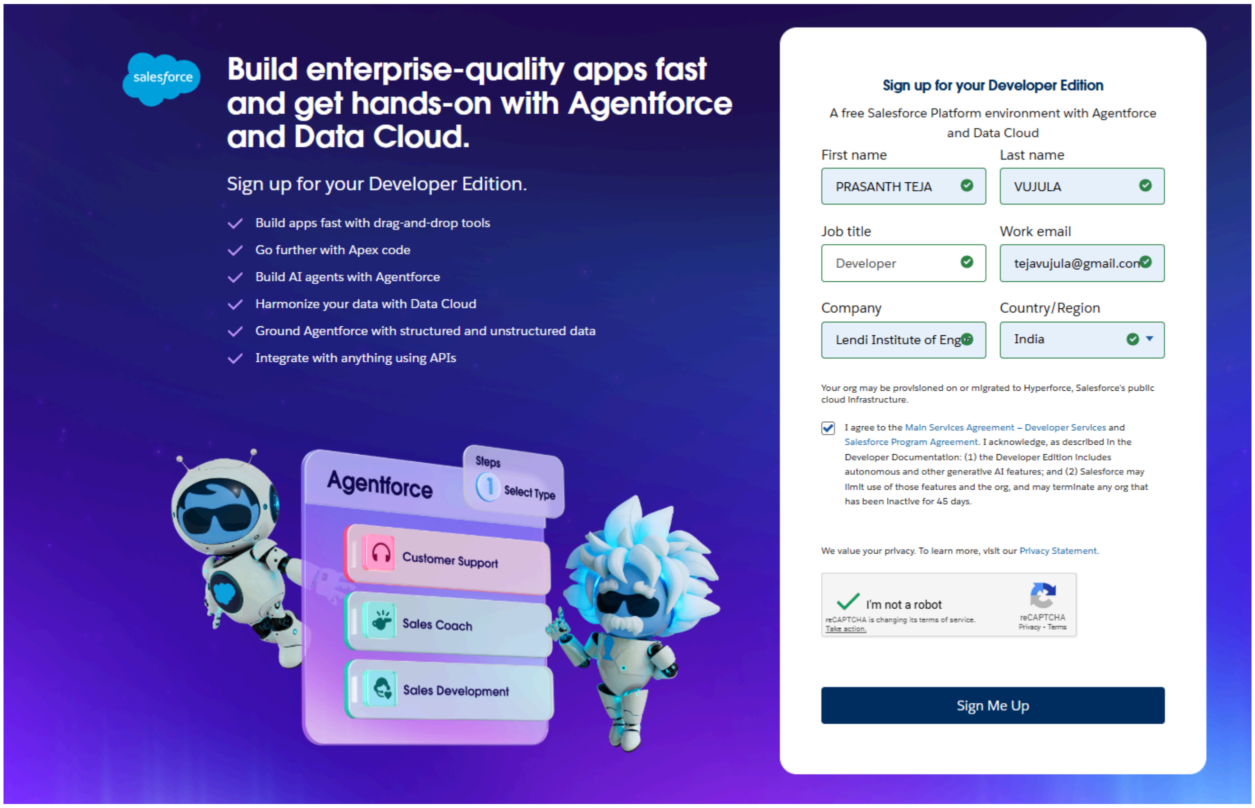
Apex triggers:

These are custom codes that execute before or after specific events on records, automating complex business logic like validations, updates, or notifications.

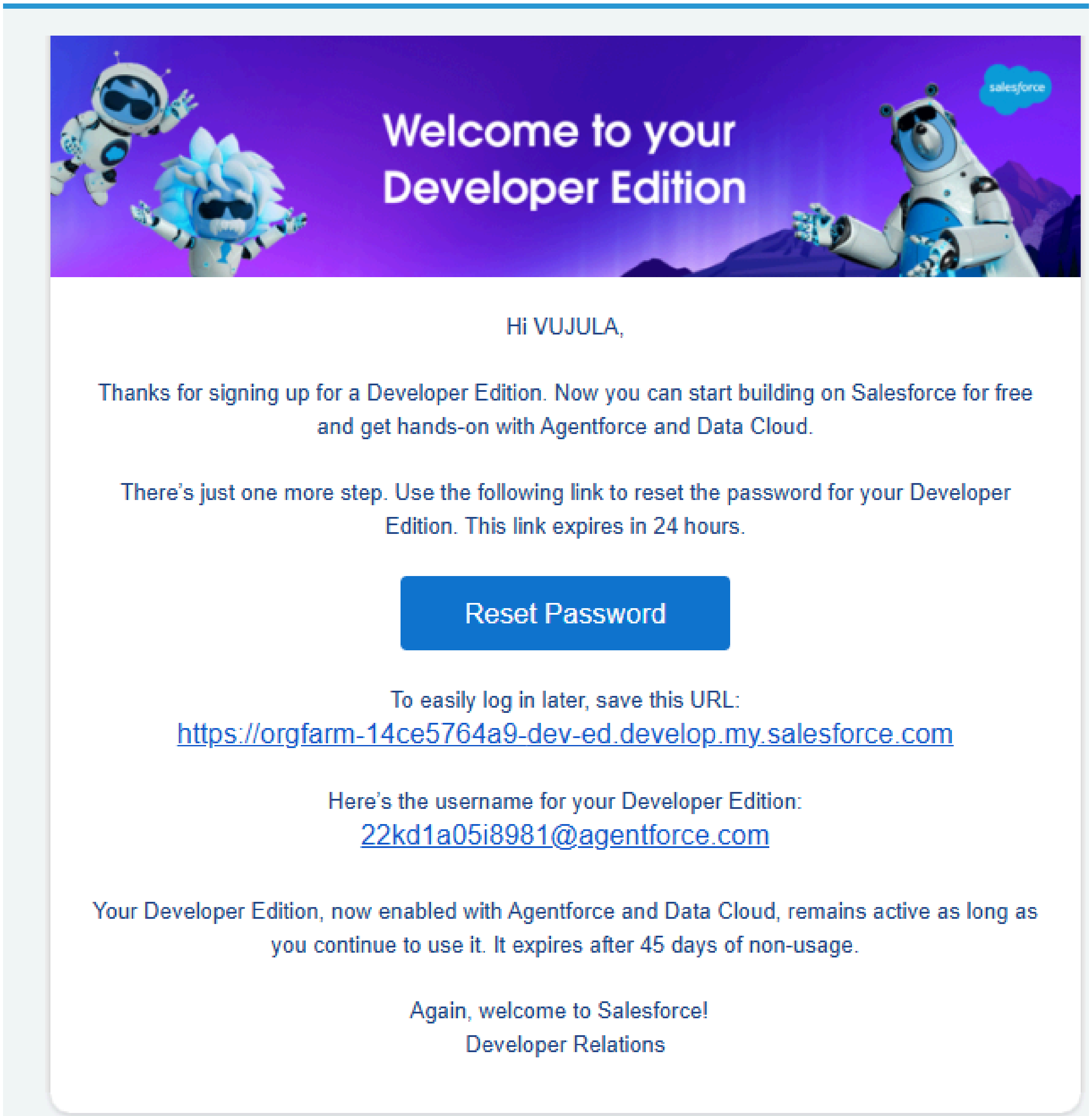
Project Implementation Steps :

1. **Setting Up a Salesforce Developer Org**:

- Sign up for a Developer Org with your details using https://developer.salesforce.com/signup
- Verify your email, set a password, and access the setup page



Activation through the salesforce developer mail



Welcome to your Developer Edition

Hi VUJULA,

Thanks for signing up for a Developer Edition. Now you can start building on Salesforce for free and get hands-on with Agentforce and Data Cloud.

There's just one more step. Use the following link to reset the password for your Developer Edition. This link expires in 24 hours.

Reset Password

To easily log in later, save this URL:
https://orgfarm-14ce5764a9-dev-ed.develop.my.salesforce.com

Here's the username for your Developer Edition:
22kd1a05i8981@agentforce.com

Your Developer Edition, now enabled with Agentforce and Data Cloud, remains active as long as you continue to use it. It expires after 45 days of non-usage.

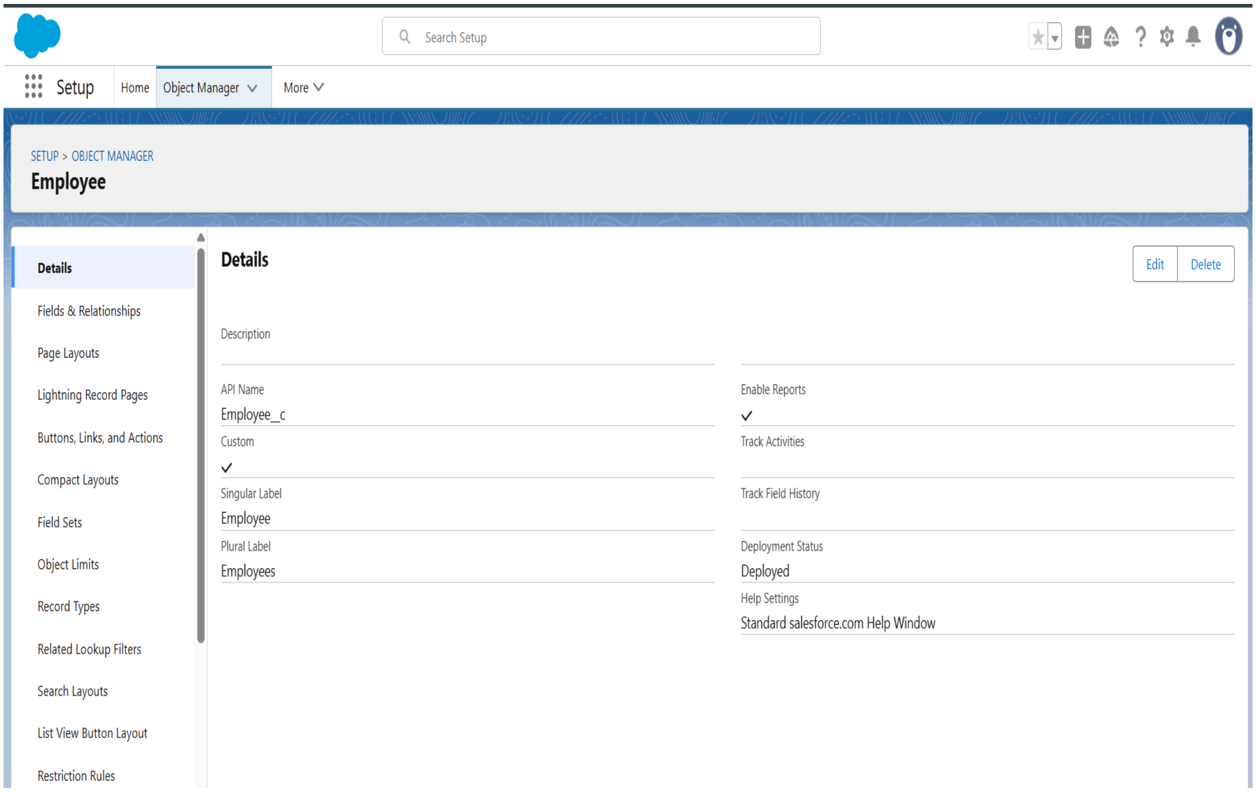
Again, welcome to Salesforce!
Developer Relations

2. Custom Objects Creation:

Four custom objects:

- Employee__c:Stores employees details and manages their records.
- Manager__c:Maintains all employees details in our sector.
- Project__c:Storing projects data with the specific naming records.

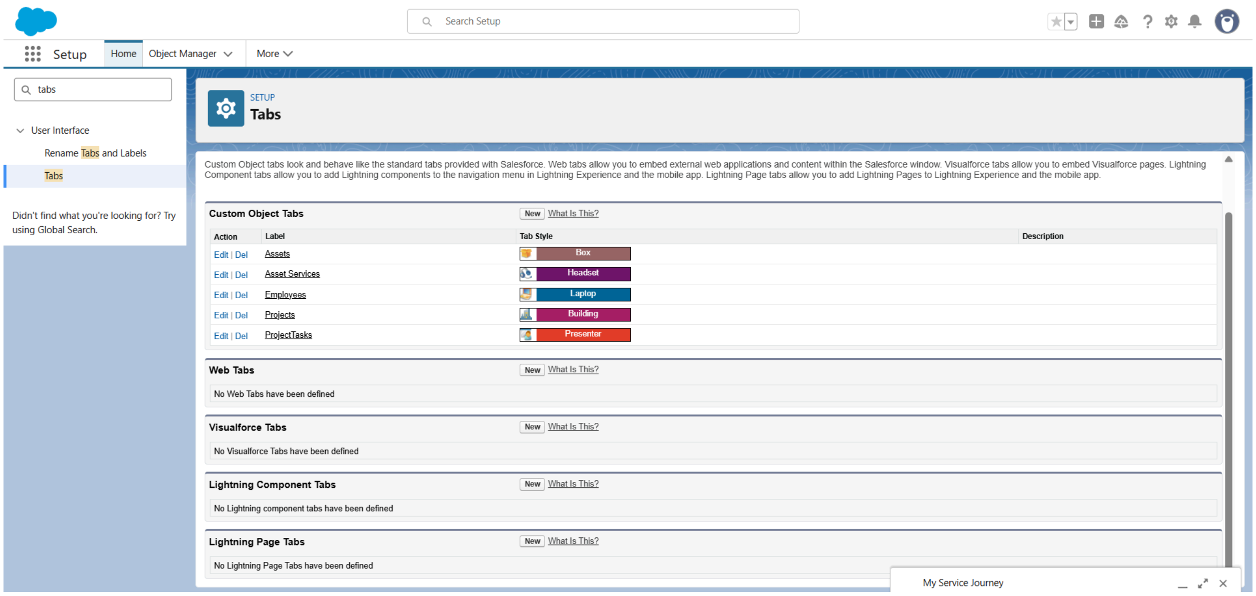
- Asset__c: It is used to store and manage detailed information about a company’s owned items, such as equipment or products, for tracking and maintenance purposes.



3. Custom Tabs:

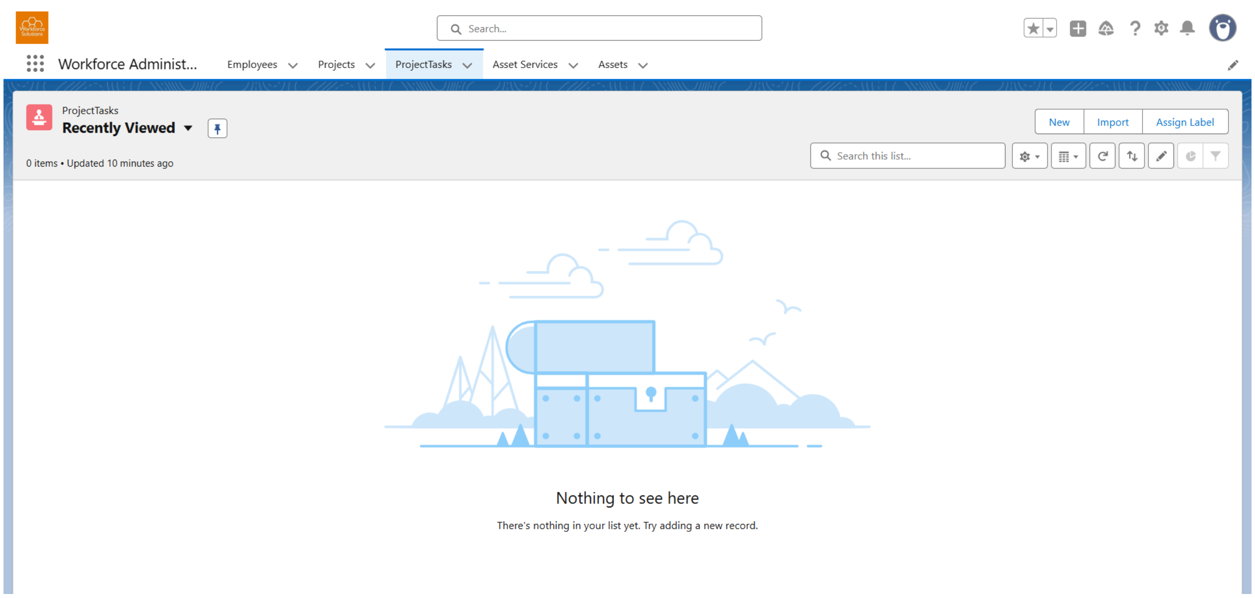
Represents a way to access Salesforce objects easily.

- Tabs are created for each custom object - Employee, Asset, Asset Service, and Project Tasks allowing users to navigate and manage records efficiently within the Lightning App.



3. Create Lightning App:

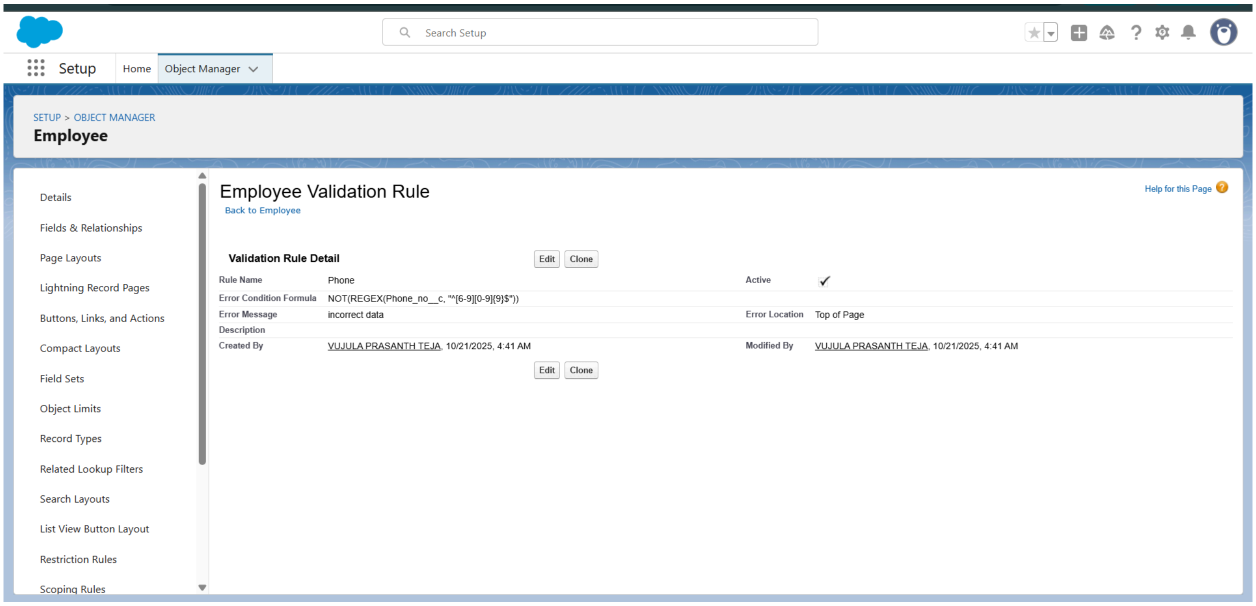
Developed a "Workforce Administration" Lightning App for managing employee and operational activities. Configured essential custom objects — Employee, Department, Attendance, and Payroll — with necessary fields to ensure smooth workforce management and efficient HR operations. The app was assigned to the System Administrator profile for comprehensive access and control.



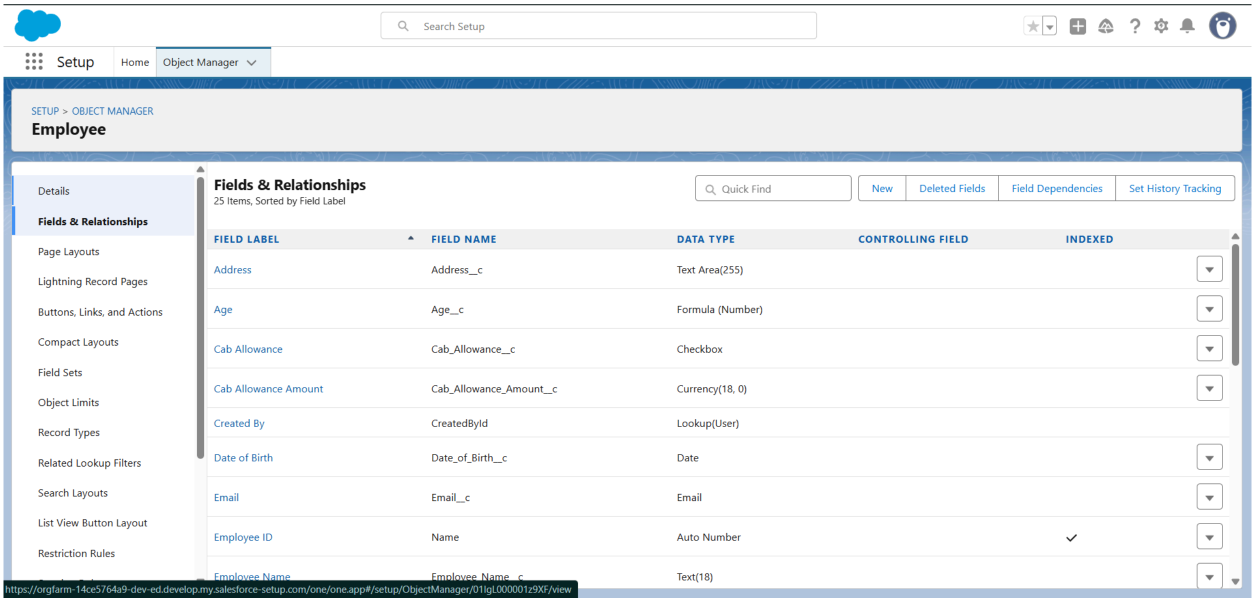
4. Fields to be created:

- Employee__c:Employee name,Gender(picklist),Qualification,Experience,E-mail,Phone number, Joinining date(formula),Date of birth(personal details),Linkedin profile(url)

Validation in Employee object(Phone number)



- Project__c:Project Name,Project Lead,Start Date(Date),End Date(Date),Project Status(Picklist)
- Project__Task__c:Project taskName,Employee Name(Maste-Detail),Project task,Working Hours(Number)
- Assests:Assest Name,Model Name,Assest Type(Picklist),Employee Name(Lookup)
- Assest__Services__c:Assest service Name,Assest Service Id(Lookup),Type(Picklist),Technician,Subject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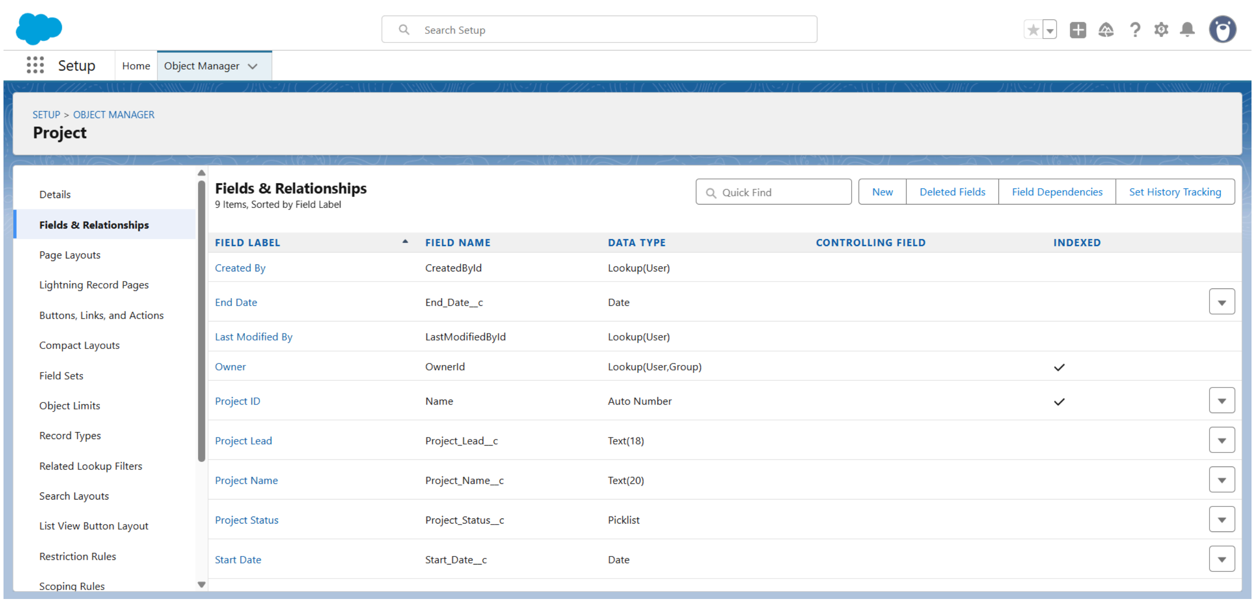
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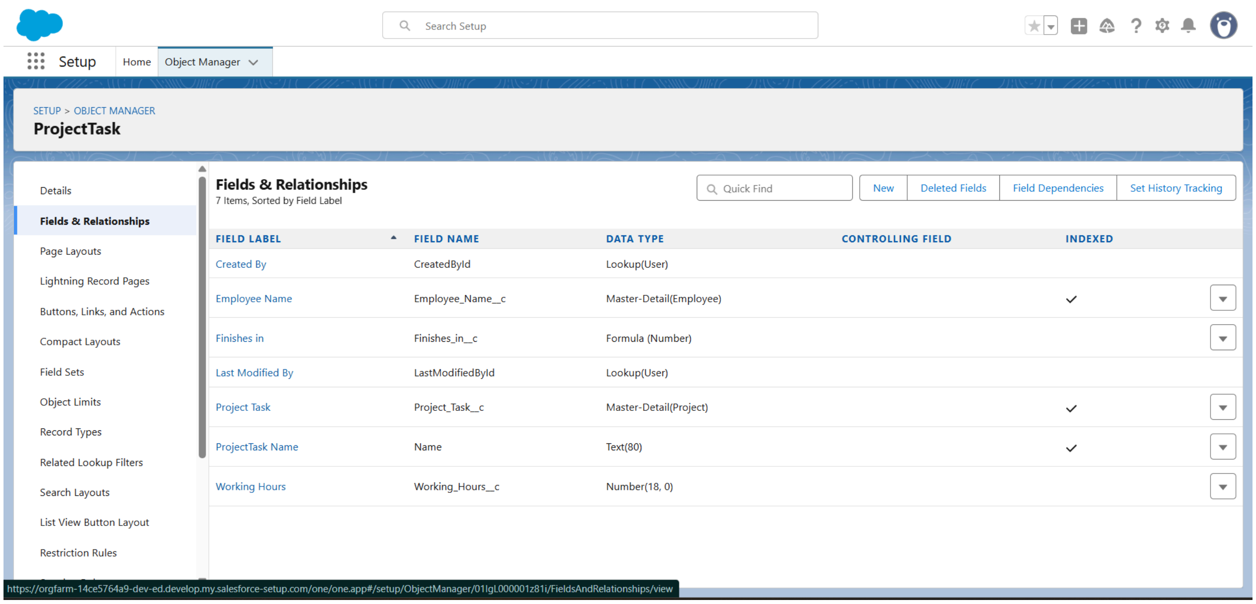
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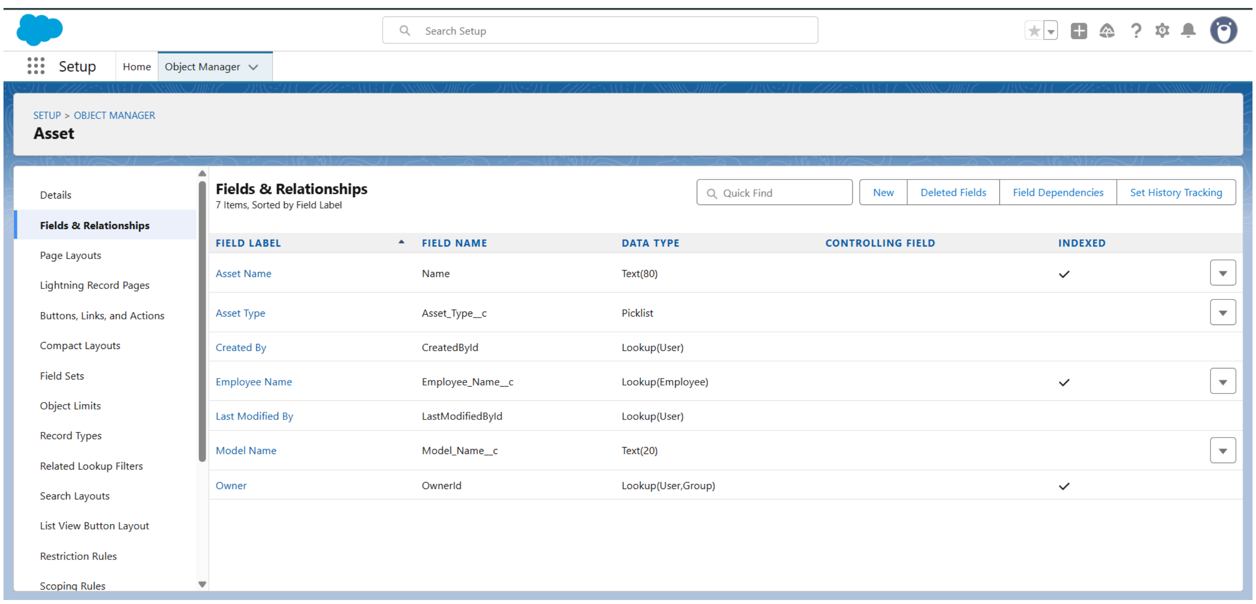
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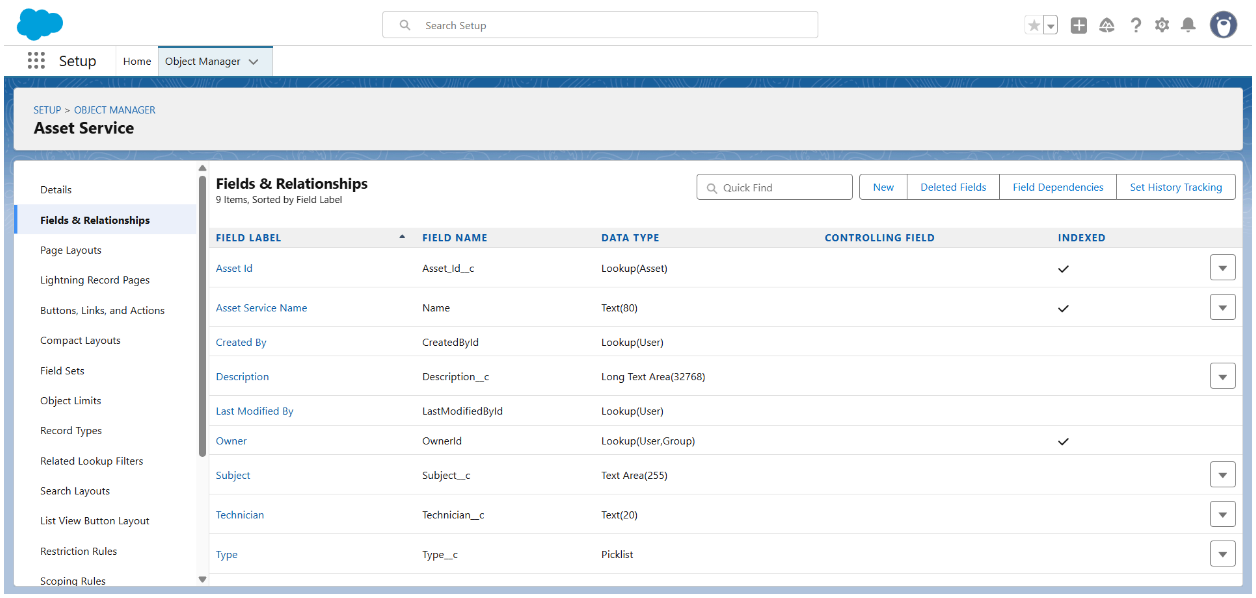
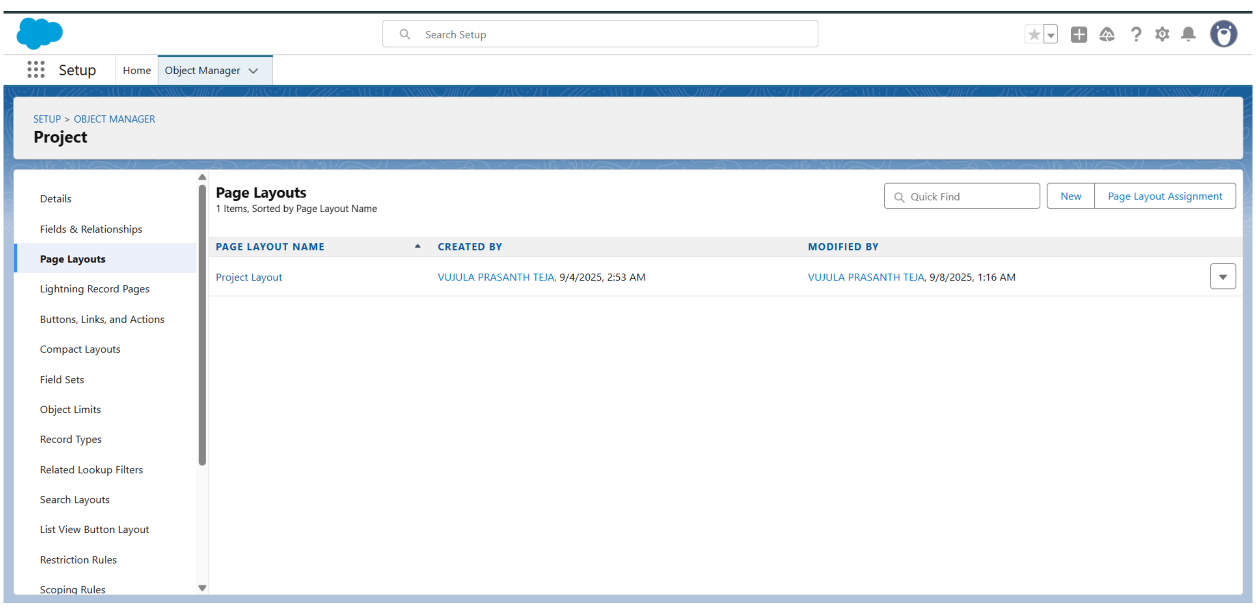
Lookup(User,Group)



5. Create Page Layout for Objects:

Created page layouts for objects, organized sections, and arranged fields for better usability.

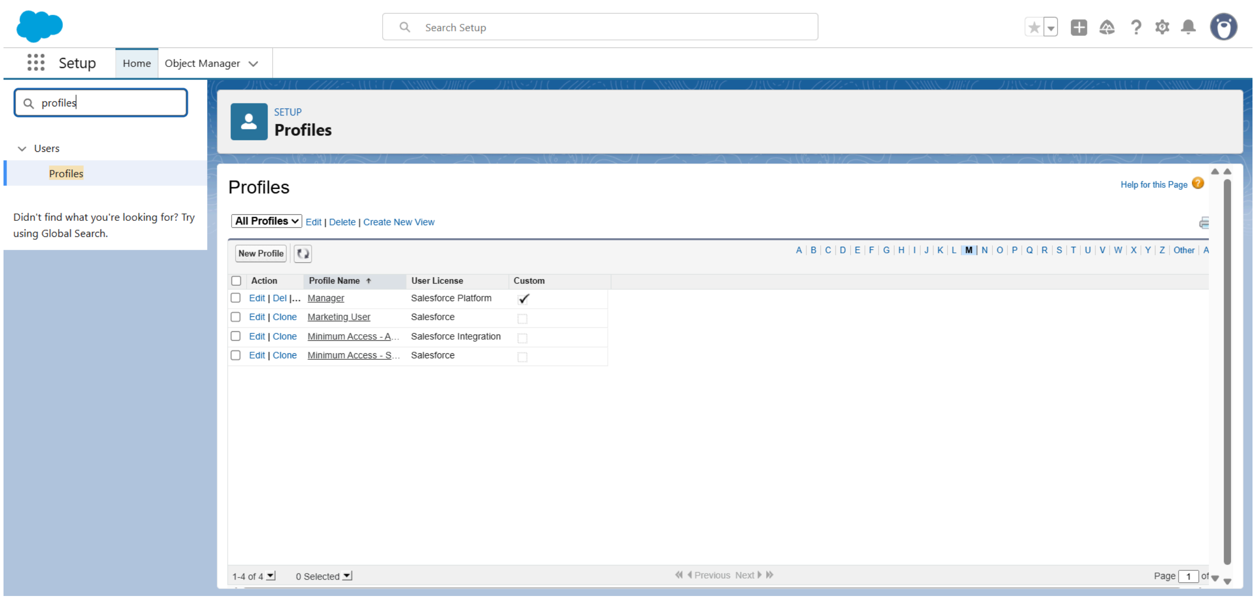
- Go to Setup → Object Manager → [Object] → Page Layouts → New.
- Create sections as needed and drag relevant fields into each section.
- Arrange fields for clear organization and improved usability.
- Click Save to apply the layout across the object.



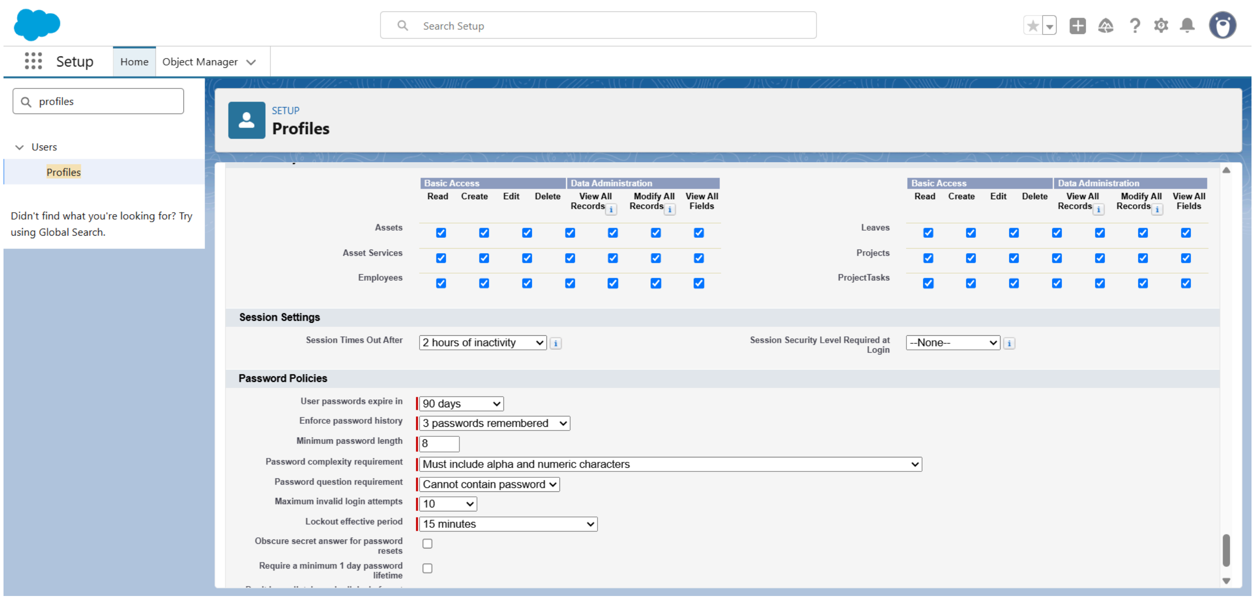
6. Create Profiles:

Profiles ensure proper access control and define what data/actions each role can perform. They also help in maintaining security and restricting unnecessary access.

- Cloned an existing profile Standard User for manager and Salesforce Platform User for remaining.
- Give a Profile Name (Manager, Sales Executive, Sales Person) and click Save.

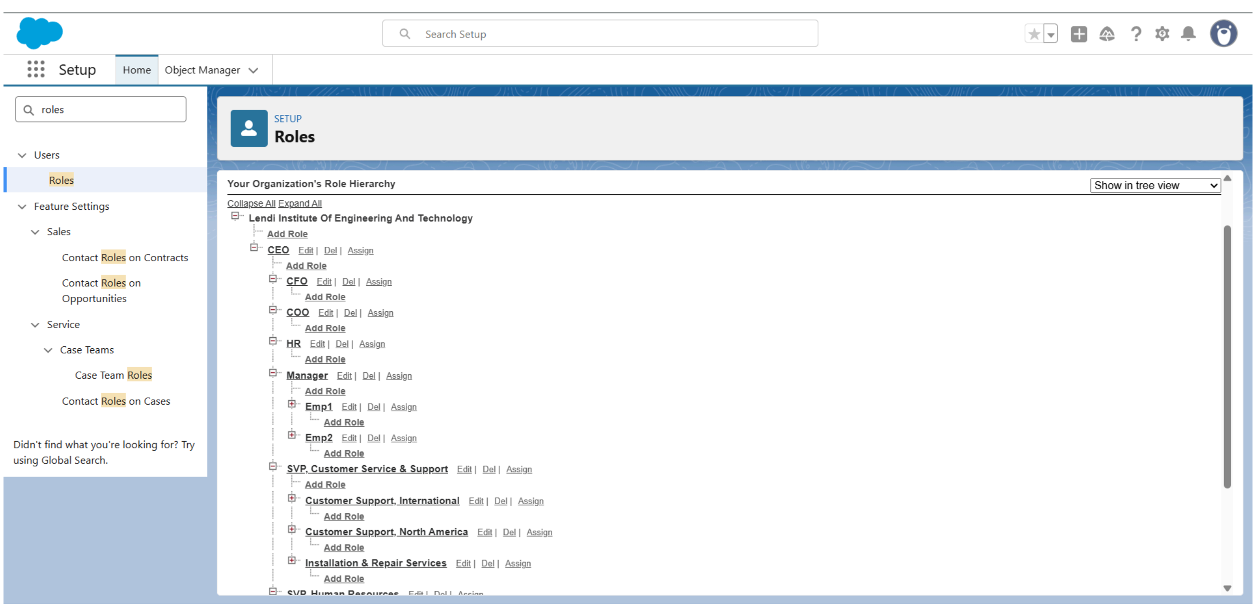


- Click Edit to configure Custom App Settings and Object Permissions for relevant objects.
- Adjust Session Settings and Password Policies as needed.



7. Creating Roles & Hierarchy:

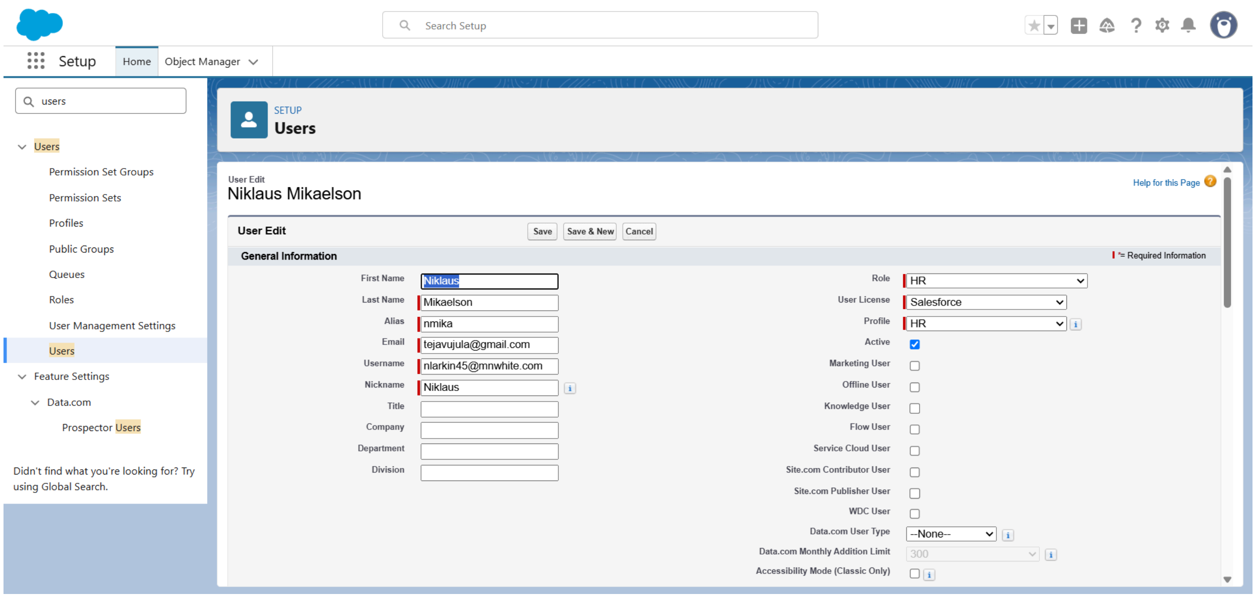
- Go to Setup → Roles → Set Up Roles → Expand All and click Add Role under the relevant parent.
- Enter the Role Label (Manager); the Role Name auto-populates, then click Save.
- Create Sales Executive and Sales Person roles under the Manager with the assigned profiles.
- Ensure the hierarchy reflects reporting lines: Manager → Sales Executive → Sales Person.



Users are Salesforce accounts that allow access based on role and profile.

In this project, users were created for Manager, Sales Executive, and Sales Person.

- Exec Sales – Sales Executive
- Mikaelson, Niklaus – Manager
- Person, Sales – Sales Person



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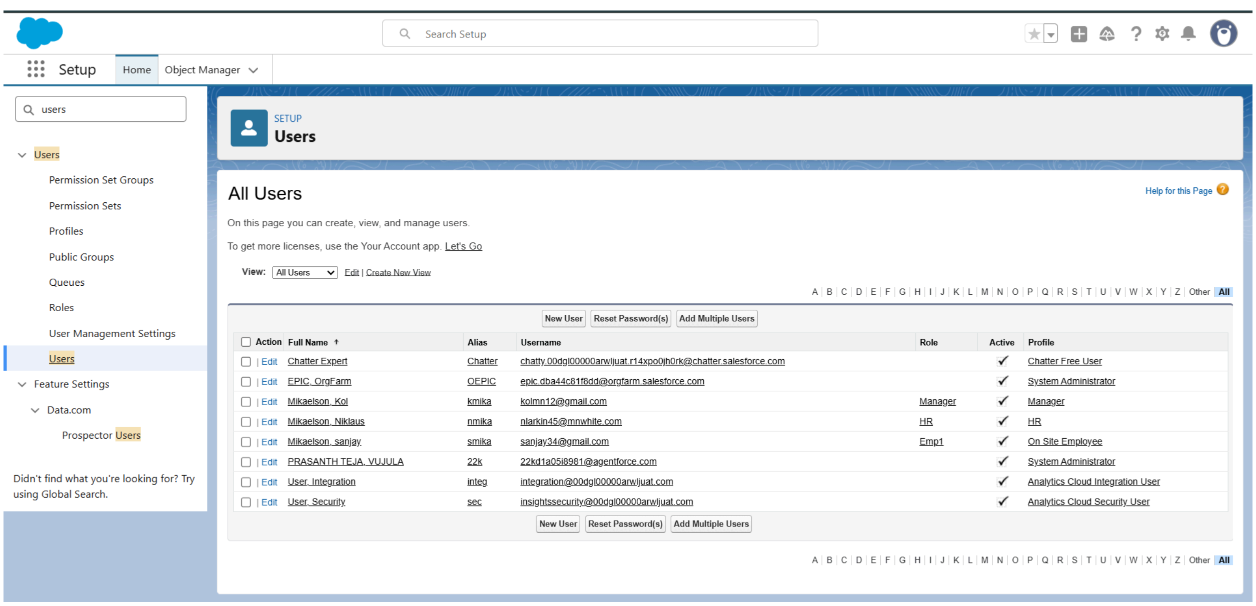
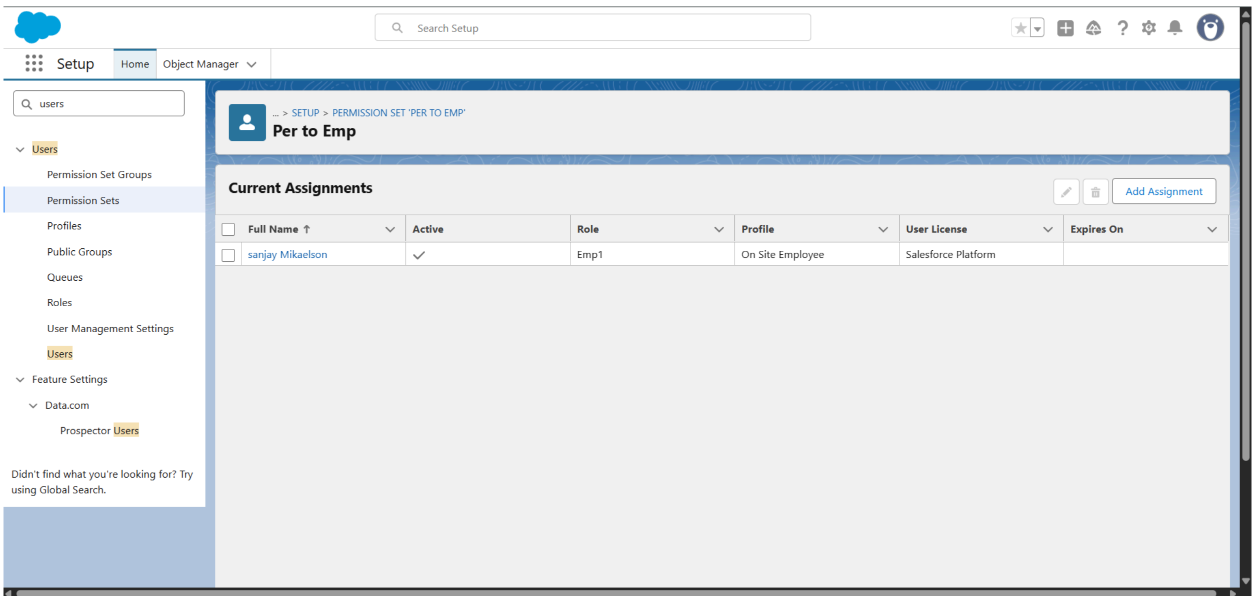


9. Create Permission Sets:

Permission sets extend users' access without changing their profiles. In this project, a permission set was created to give additional access to relevant objects.

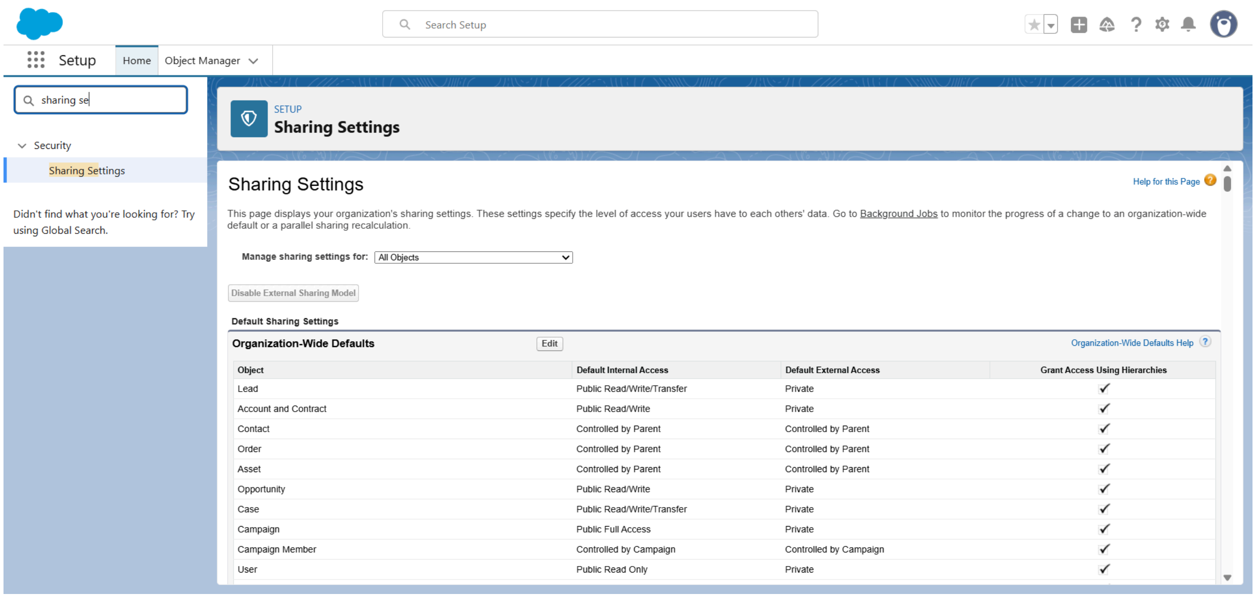
- Assigning Per to emp set to sales executive.



10. OWD (Organization-Wide Defaults):

OWD settings define the baseline level of access users have to records they don't own.

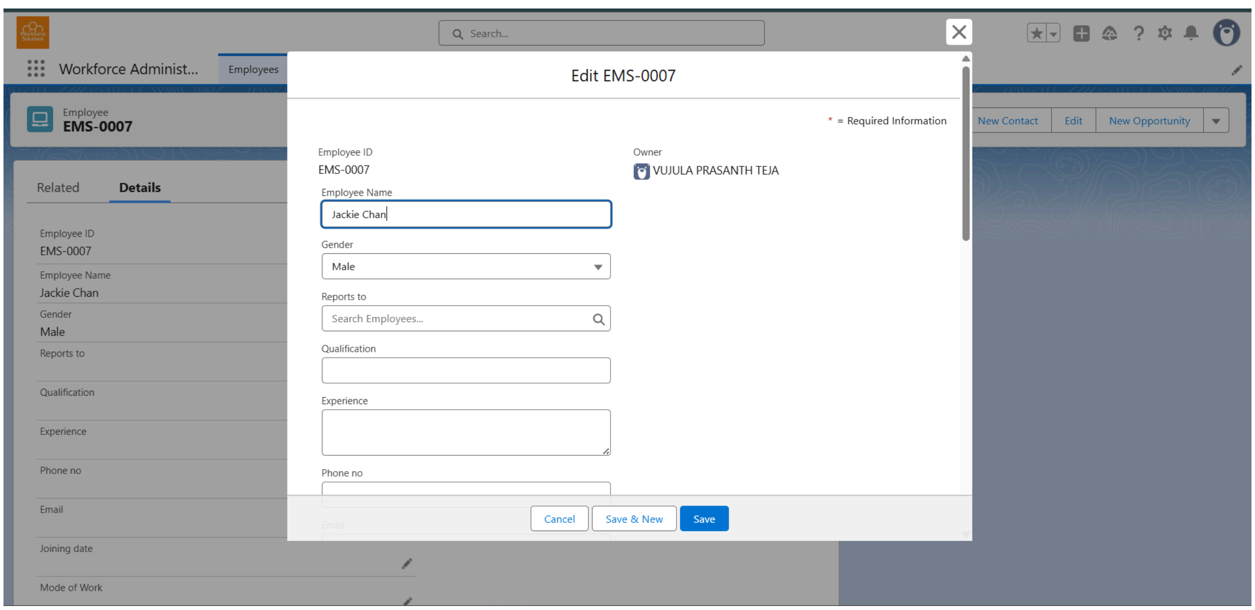
- In this project, Gas Station and Supplier objects were set to Public Read-Only, while roles and profiles controlled additional access.



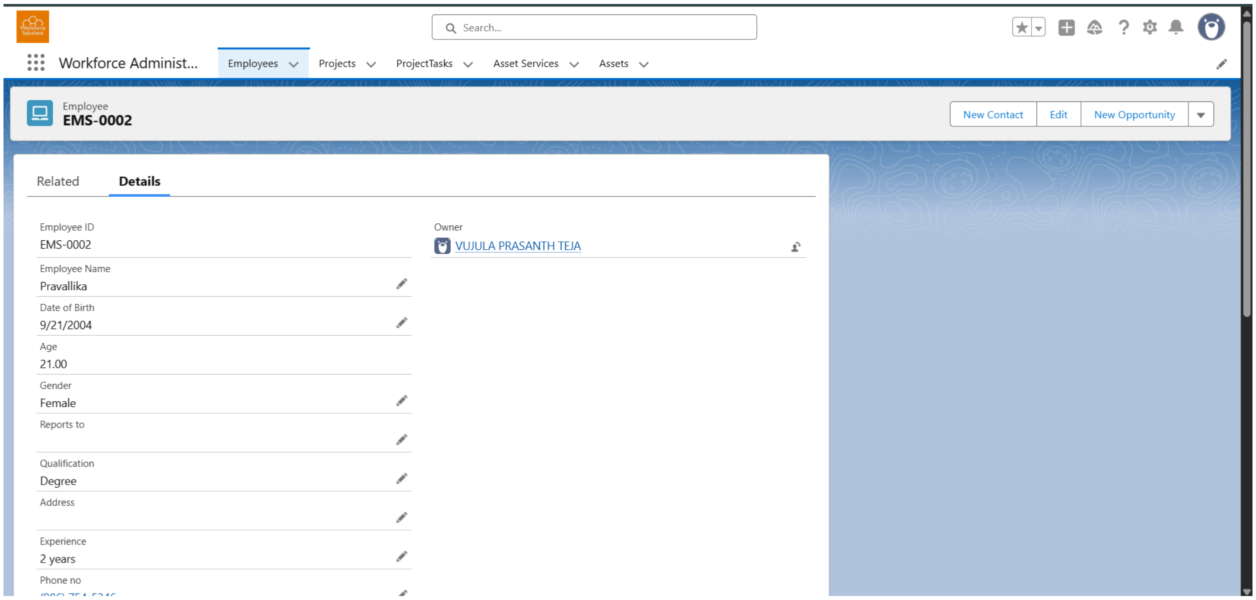
11. Create, View, Delete Records:

User adoption measures how effectively users engage with Salesforce features.

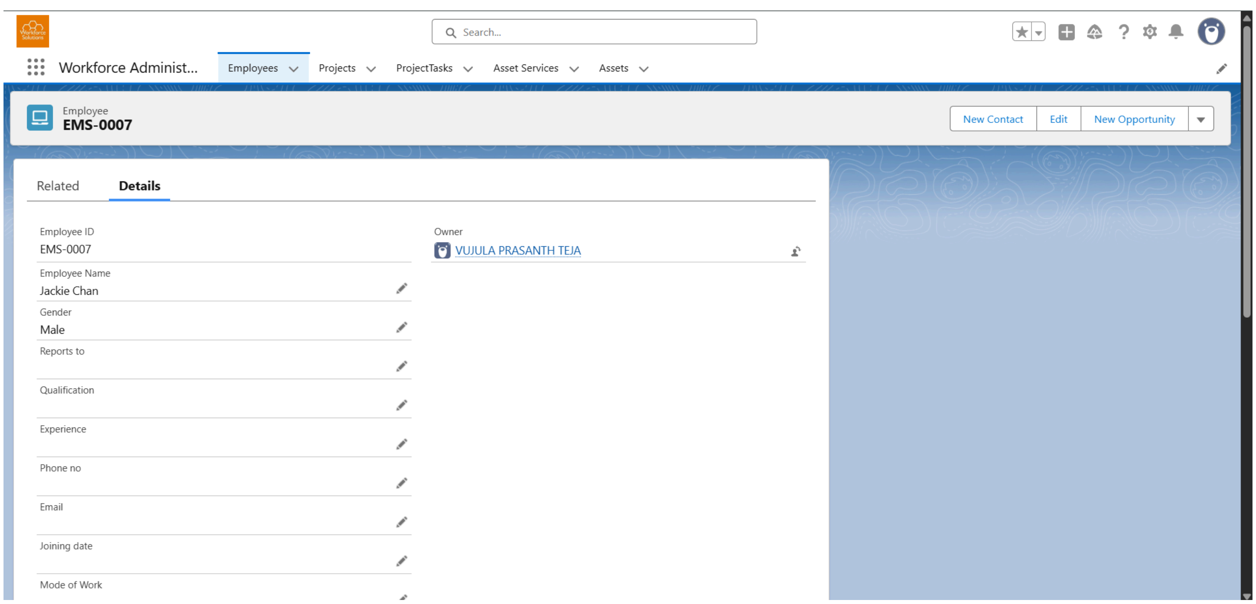
- In this project, creating roles, profiles, permission sets, and intuitive layouts ensured smooth usage and higher adoption of the Gas Station CRM application.



• **View record**



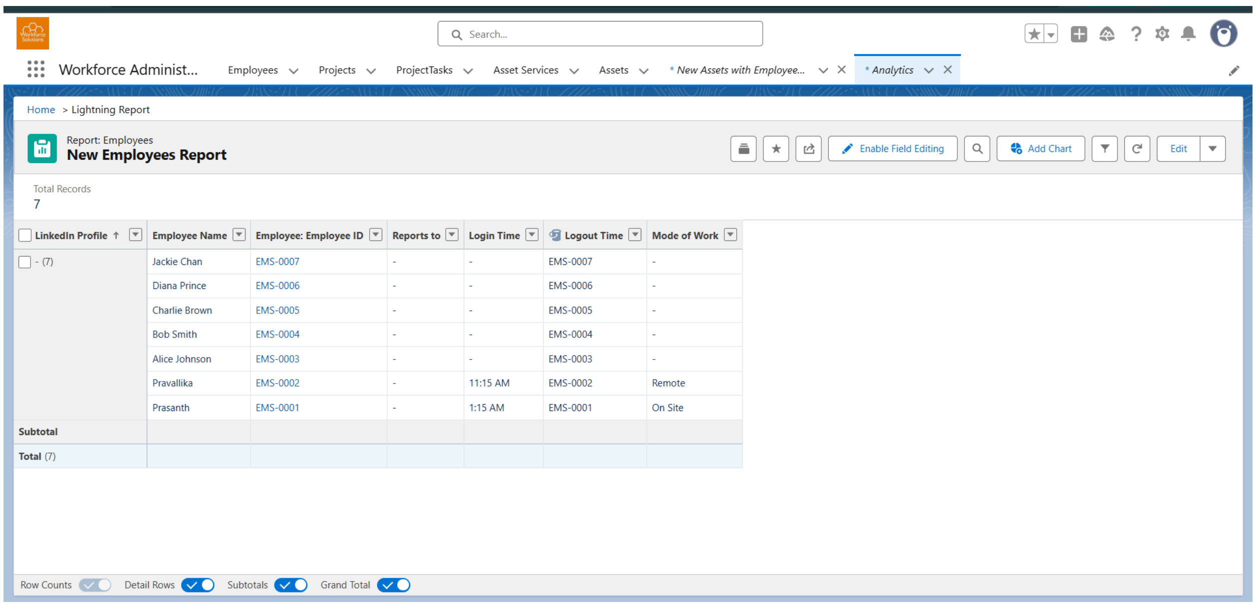
• **Delete record**

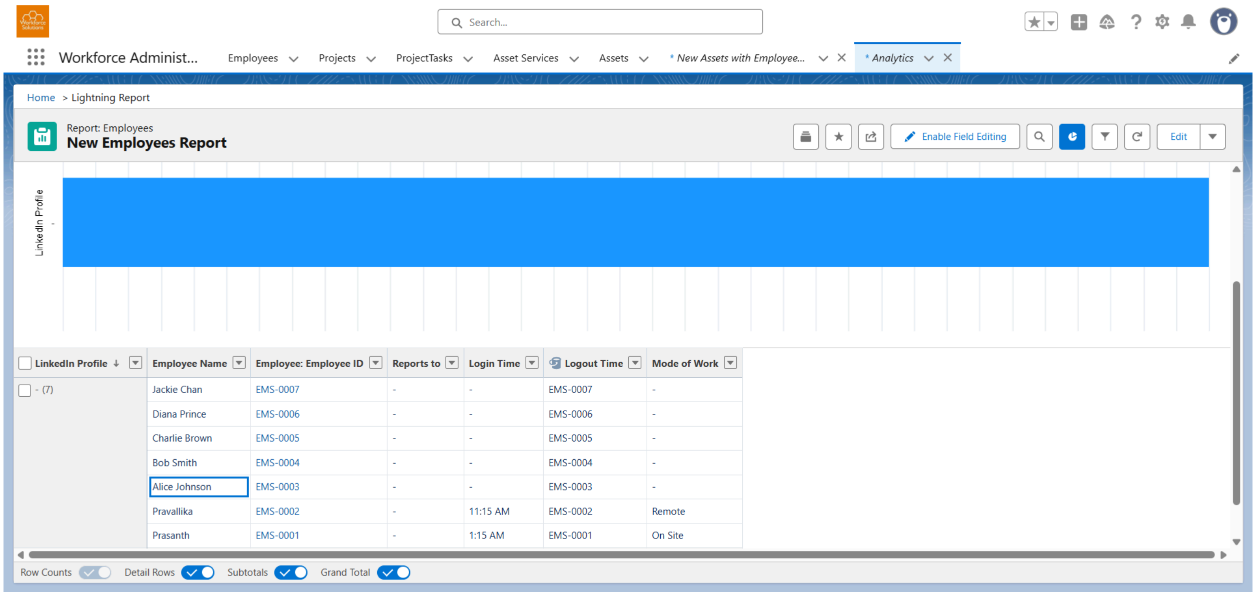


12. Creating Reports:

Reports are used to analyse and display Salesforce data in a structured format.

- In this project, custom reports were created to track fuel usage, customer activity, and sales for better decision-making.

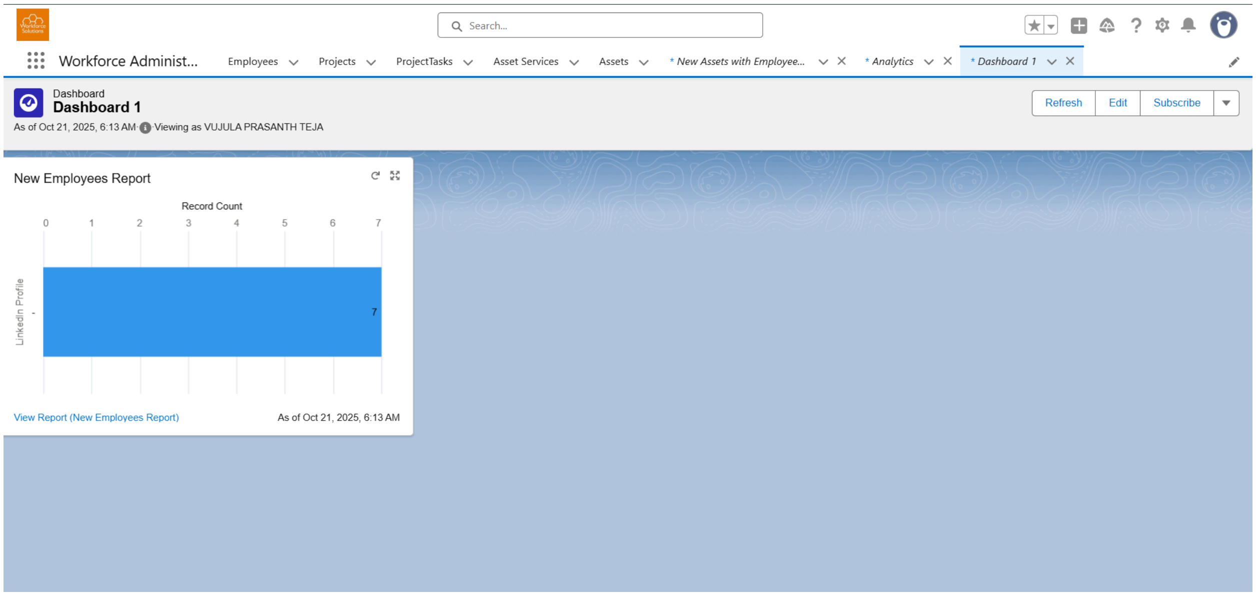




<u>13. Creating Dashboards :</u>

Dashboards visually display key metrics and report data in charts and graphs.

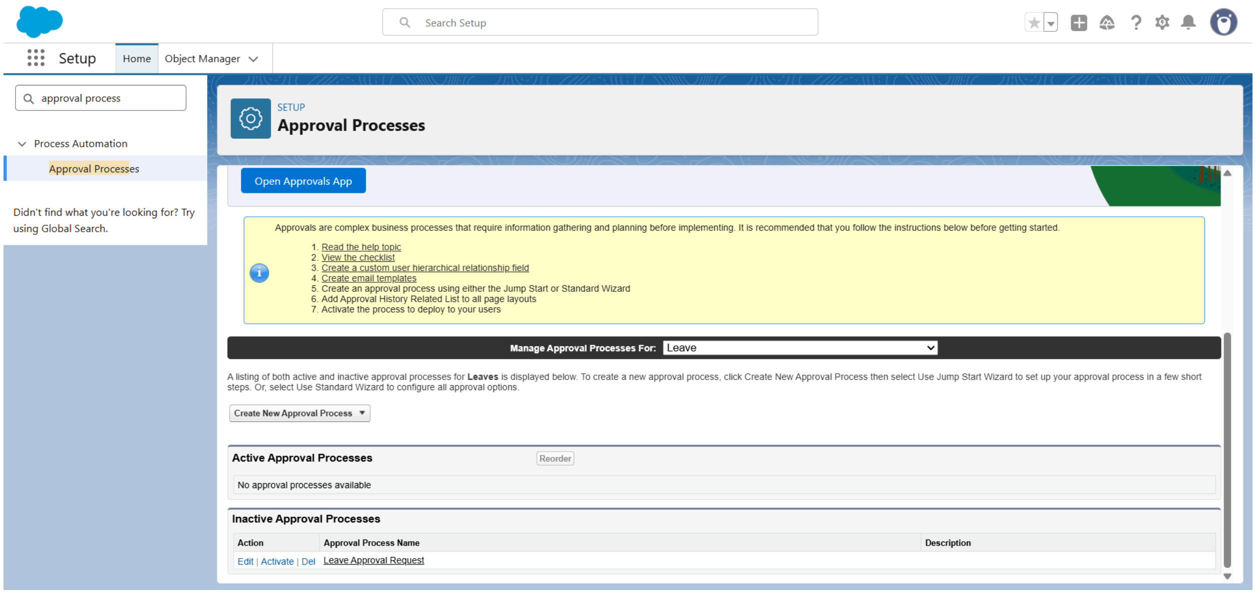
- In this project, dashboards were created to provide insights on fuel estimation, sales, and customer activity

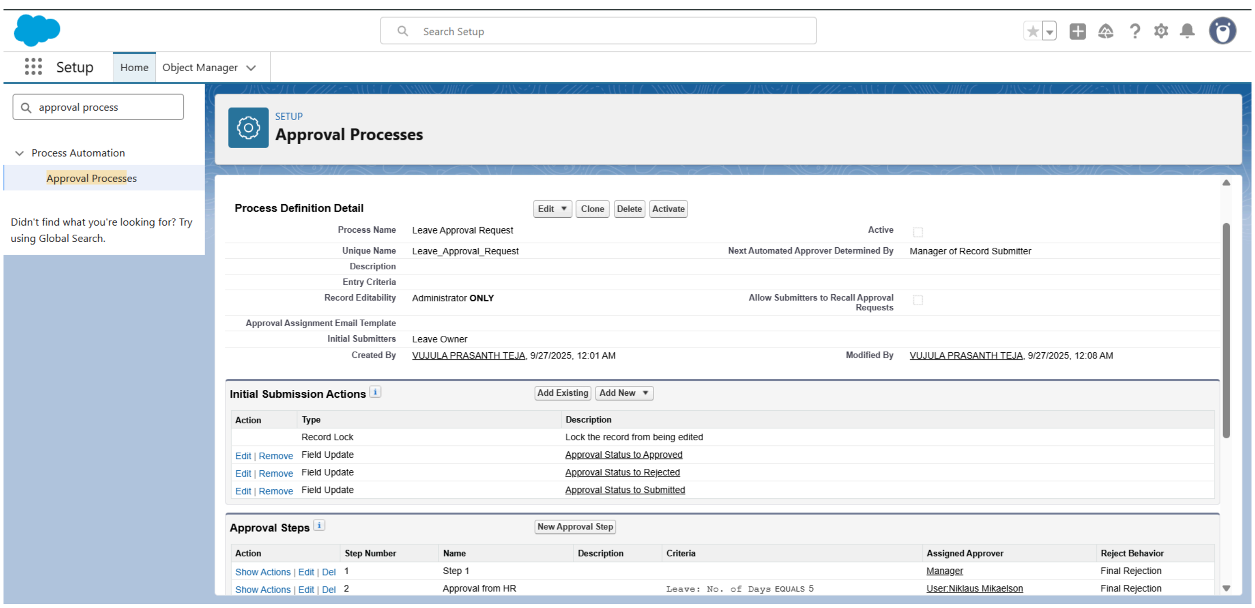


14.Approval Process:

The approval process helps streamline HR tasks like leave requests, shift changes, and employee updates. It ensures that each request goes through the right levels of review before being finalized.

- Employees submit requests for HR actions like leave, shift changes, or updates.
- Each request goes through a structured approval workflow with designated reviewers.
- Notifications keep approvers and requesters informed of progress and decisions.
- All approvals are tracked for transparency, compliance, and reporting.

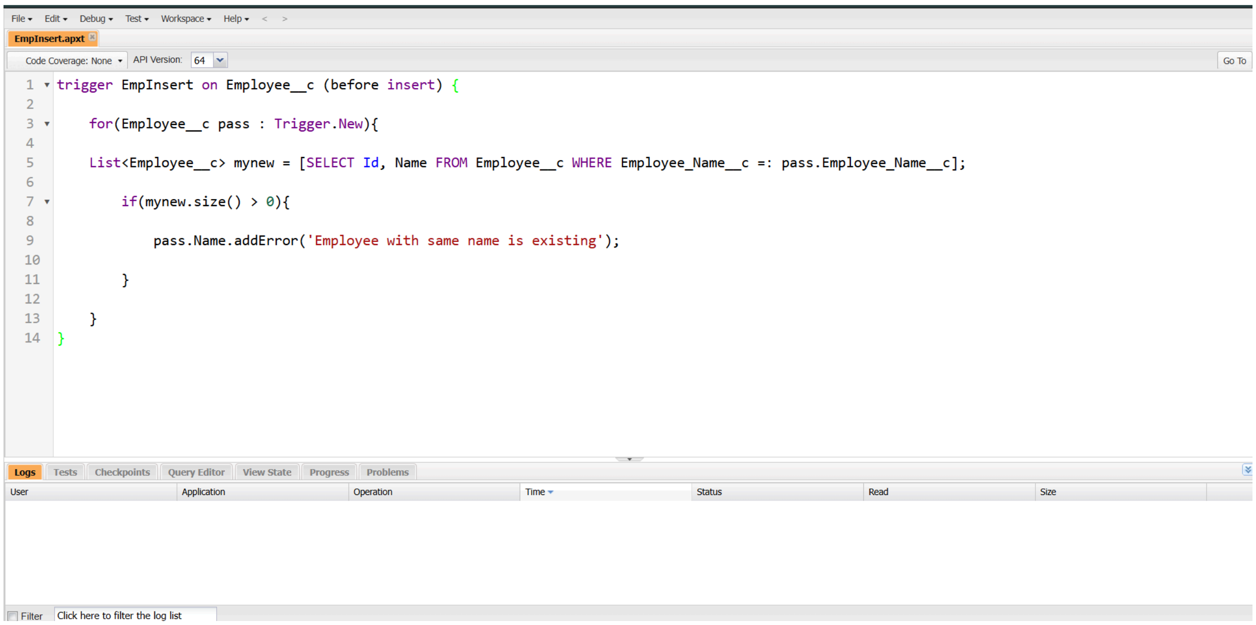




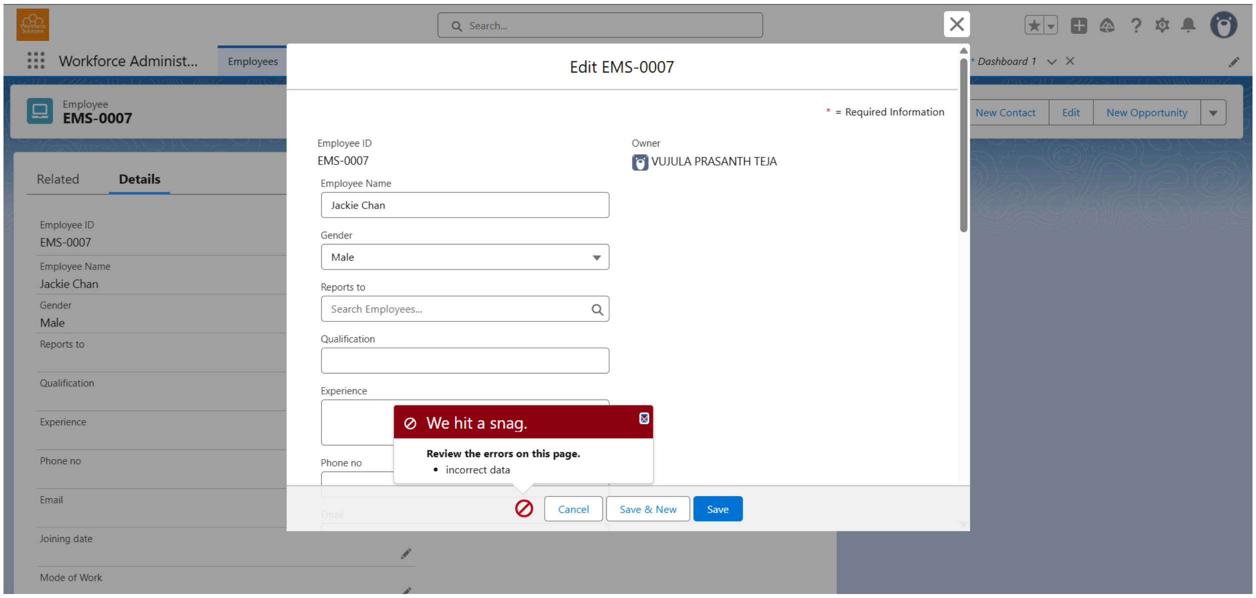
15. Creating Apex Triggers:

Apex triggers are custom code that execute before or after events on records. Handler (EmpInsert.apxc)

Validates before inserting the employee record creation.



To prevent duplicate entries in the Workforce Administration Solution (Dev), a validation rule checks for existing employee names before saving a new record. If a name like “Jackie Chan” already exists, the system blocks the creation of another record with the same name. This helps maintain clean and consistent employee data across the platform.

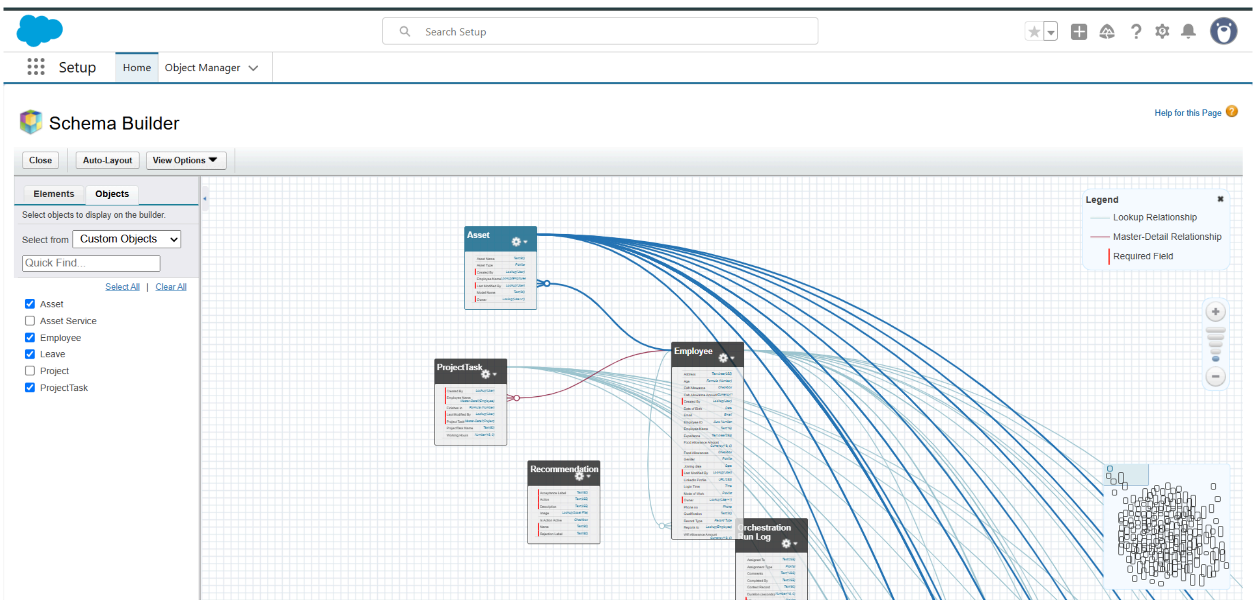


Feature Enhancements for Workforce Administration Solution (Dev)

- **Intuitive Dashboard Improvements**
  - Enhanced visual layout for better navigation and data visibility.
  - Real-time updates on employee status, project assignments, and asset usage.
- **Automated Asset Management**
  - Tracks assignment and return of company assets (e.g., laptops, ID cards).
  - Reduces manual errors and improves accountability.
- **Employee Performance Monitoring**
  - Integrated tools to log and review employee performance metrics.
  - Supports goal tracking and feedback loops for HR and managers.
- **Project Involvement Tracking**
  - Displays which employees are assigned to which projects.
  - Helps managers allocate resources more efficiently.
- **Approval Workflow Enhancements**
  - Multi-level approval routing based on role and department.
  - Notifications and audit trails for transparency and compliance.
- **Data Management and Reporting**
  - Exportable reports for HR analytics and workforce planning.
  - Filters and search options for quick access to employee records.

- **Improved Efficiency:** Reduces time spent on manual tracking and approvals.
- **Greater Transparency:** Clear audit trails and performance logs.
- **Scalability:** Easily adapts to growing teams and evolving HR policies.
- **User-Friendly Interface:** Simplifies access to key workforce data.

<u>Additional Screenshots:</u>



Conclusion:

The Workforce Administration Solution (Dev), built on Salesforce CRM, is a comprehensive platform designed to streamline and automate HR operations across an organization. By leveraging Salesforce's robust features like custom objects, approval workflows, Apex triggers, and real-time dashboards, this solution enables efficient management of employee records, leave requests, performance tracking, and asset allocation. It ensures data accuracy through validation rules and prevents duplication with smart error handling, such as blocking repeated employee names. The approval process is structured to route requests through multiple levels, ensuring transparency and compliance. Enhanced reporting tools allow HR teams to analyze workforce trends and make informed decisions. With recent feature upgrades, including intuitive dashboards and automated asset tracking, the solution supports scalability and adaptability for growing teams. Overall, it empowers HR departments to maintain a centralized, reliable, and user-friendly system for workforce administration.