A CRM APPLICATION FOR THE GAS FILLING STATION

By

P.chandramouli

Pandrankichandramouli@gmail.com

Abstract

This project, titled "A CRM Application for the Gas Filling Station," aims to develop a comprehensive Customer Relationship Management (CRM) system using Salesforce to streamline and enhance the operations of a Gas Filling Station. The application will integrate various Salesforce features The gas filling station project will integrate several Salesforce features to enhance operational efficiency, customer experience, and data-driven decision-making. Salesforce Service Cloud will manage customer support, handling inquiries and resolving issues efficiently, while Sales Cloud will track B2B sales, fuel orders, and customer accounts. Field Service will be used to schedule and monitor on-site maintenance and repair tasks, ensuring minimal downtime for pumps and equipment. With Salesforce Marketing Cloud, the station will deliver personalized promotions and communications to customers based on their fueling habits and preferences. The Customer 360 Platform will provide a holistic view of customer data, enabling tailored offers and loyalty rewards. Salesforce Analytics (Tableau CRM) will provide insights into station performance and customer patterns, while Salesforce IoT will monitor pump and fuel tank health for predictive maintenance. Finally, custom applications built on the Salesforce Lightning Platform will further optimize daily operations like refueling schedules and staff management, ensuring the station runs smoothly and efficiently.

INDEX PAGE

Objects

To manage the various entities involved in the Gas station operations, we will create three Supplier objects in Salesforce Buyer, Gas Station, and Supplier.

Supplier Object

The Supplier object in Salesforce for a gas filling station would be critical for maintaining smooth supply chain operations, ensuring the availability of fuel and related products, and managing vendor relationships effectively.

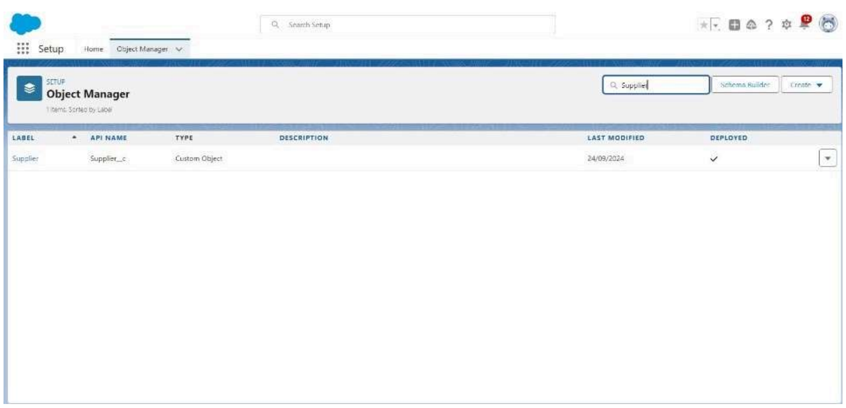
Gas Station

The Gas Station object would act as the central node for managing all aspects of the station's operations, from fuel and sales to staff and equipment, enabling efficient management and optimization of the gas filling station business.

Supplier Object

The Supplier object in Salesforce for a gas filling station is crucial for managing relationships with suppliers, tracking orders and deliveries, monitoring performance, and ensuring smooth procurement of fuel and related products to keep the station operational.

In a gas filling station using Salesforce, the **Supplier** object manages the station's procurement needs, ensuring an efficient supply chain. The **Buyer** object focuses on managing sales and relationships with customers or corporate clients, tracking contracts and purchases. Meanwhile, the **Gas Station** object manages on-site operations, including inventory, staff, sales, and compliance, acting as the central hub for the station's daily activities. Together, these objects streamline the station's operations, from procurement to customer service, ensuring efficiency and customer satisfaction.



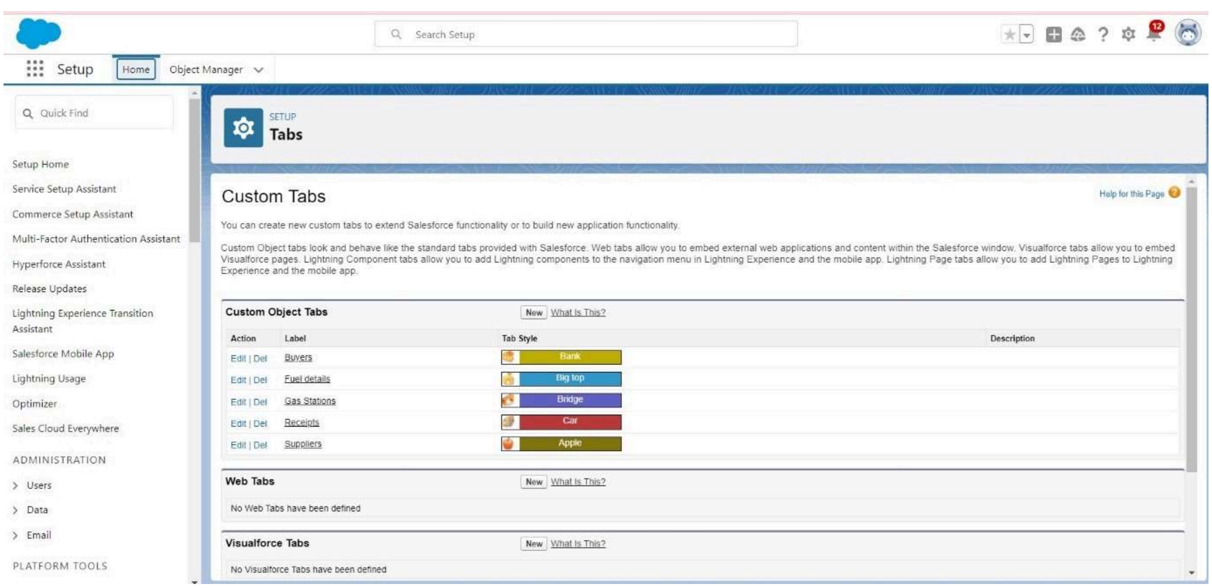
Tabs

Creating Tabs for Custom Objects

To enhance the functionality and usability of your gas filling station project in Salesforce, you can create custom tabs for the core objects—Gas Station, Buyer, and Fuel Details. These tabs will allow users to easily access and manage the relevant data for each object directly from the Salesforce interface.

To start, navigate to Setup in Salesforce, and search for the Tabs option. For each custom object (Gas Station, Buyer, and Fuel Details), create a new tab by selecting the object from the dropdown list. You can then choose a Tab Style to visually distinguish each tab, either by selecting from predefined icons or uploading a custom image.

Next, assign visibility of the tabs to different profiles by determining whether each tab will be Default On (visible), Default Off (hidden but accessible), or Tab Hidden (not available) for specific user roles. You will also choose which Salesforce applications (e.g., Sales, Service, or any custom app) will display these tabs to streamline user navigation.



Gas Station Tab

The Gas Station tab in Salesforce provides a comprehensive platform for managing all aspects of individual gas stations, from inventory and sales tracking to maintenance and staffing. It streamlines operations and supports efficient management, improving overall station performance and customer satisfaction.

Buyer Tab

The Buyer tab in Salesforce is essential for managing customer relationships in the gas filling station context. It enables personalized service, efficient contract management, sales tracking, and effective communication, ultimately leading to improved customer satisfaction and loyalty.

Rice Details Tab

The Fuel Details tab in Salesforce is essential for managing all aspects of fuel inventory and sales at the gas filling station. It streamlines inventory management, enhances customer service, ensures regulatory compliance, and provides actionable insights that contribute to efficient operations and profitability.

Custom object Tab

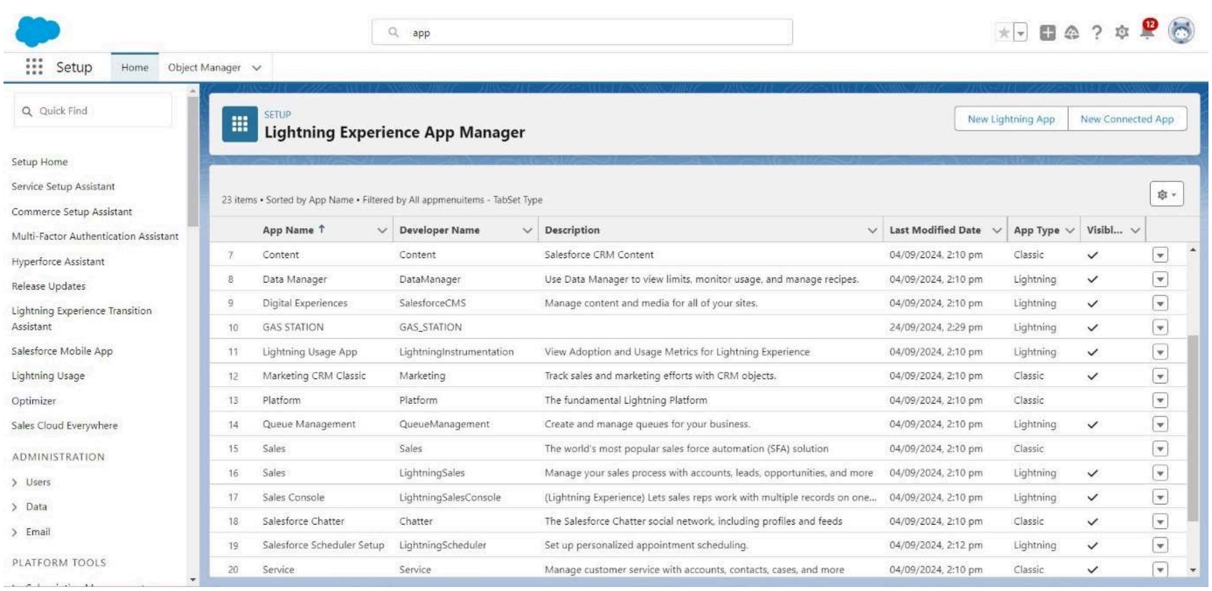
Custom object tabs in Salesforce provide a powerful way to manage specialized data for your gas filling station operations. They enhance user experience, facilitate tailored reporting, automate processes, and ensure effective relationship management, ultimately contributing to improved operational efficiency and customer satisfaction.

The Lightning App

The "GAS STATION" Lightning app is designed to optimize the management of Gas filling station operations by providing a streamlined and customized interface. This app integrates essential functionalities and data to enhance user productivity and efficiency.

Key Features:

The Lightning app in Salesforce offers a modern, user-friendly interface specifically designed to enhance the management of gas filling station operations. Its customizable home page allows users to access relevant dashboards, reports, and key performance indicators (KPIs) quickly, improving productivity. The component-based architecture enables the creation of reusable components, facilitating a modular design for various processes like fuel inventory tracking and sales management. Enhanced dashboards and reporting tools provide real-time insights into critical metrics, aiding data-driven decision-making. Integration with Lightning Flow automates complex business processes, such as fuel ordering and supplier contracts, further streamlining operations.



Fields

When we talk about Salesforce, Fields represent the data stored in the columns of a relational database. It can also 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.

Junction Object

Junction object is a custom object that serves as a bridge between two related objects in a many-to-many relationship. It allows you to create a relationship between records of two different objects by creating a many-to-many relationship model.

Master-Detail Relationship

Master-detail relationship is a type of relationship between two objects where the master object controls certain behaviors and settings of the detail object. Here are a few use cases that demonstrate the use of master-detail relationships.

The Roll-up Summary

A rollup summary field is a field that summarizes data from a child object to a parent object that share a master-detail relationship. Rollup summary fields can use the COUNT, SUM, MIN, and MAX functions. For example, you could use a rollup summary field to display the total value (amount of fuel supplied) from Fuel details on a related Supplier.

Formula Field in Gas Station Object

A **formula field** is a custom field that can be used to calculate or display data on a Salesforce record.

Formula fields can be used to perform a variety of tasks, such as:

- Calculating totals or averages
- Creating custom fields that display data from other fields
- Validating data entry

Cross Object Formula Field in Buyer Object

A cross-object formula field is a formula field that references fields from another object in Salesforce. This type of formula allows users to calculate and display data from multiple objects on a single record.

Fields in consumer object

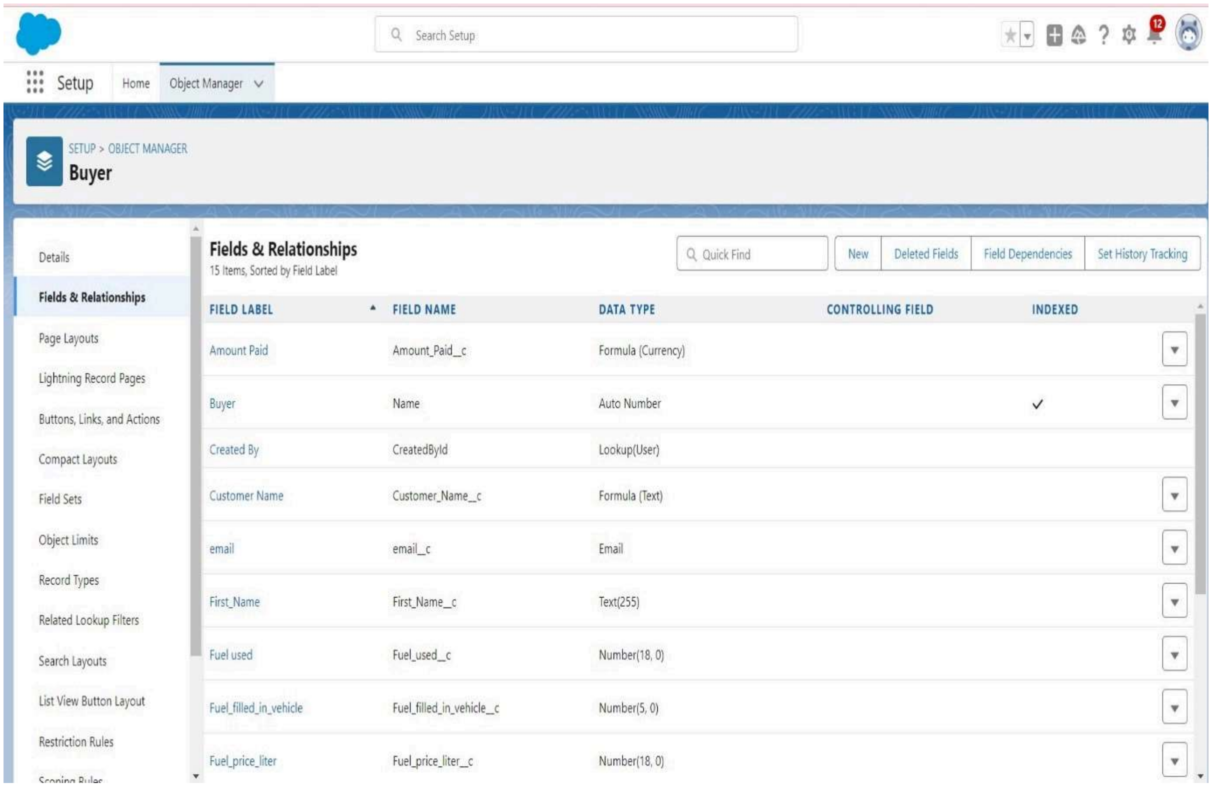
Adding the following fields to the **Consumer** object in Salesforce enhances the management of customer information and interactions:

- **First Name**: Captures the consumer's first name, essential for personalized communication and record-keeping.
- **Last Name**: Records the consumer's last name, completing the contact information and aiding in detailed identification.
- **Phone Number**: Stores the consumer's phone number, facilitating direct contact and customer support.
- **Email**: Keeps the consumer's email address for electronic communication and marketing purposes.
- **Vehicle Type**: Identifies the specific types of vehicle the consumer is interested in or has purchased, aiding in inventory management and customer preferences.
- **Mode of Payment**: Records the method used by the consumer to pay for their purchases, helping in financial tracking and reporting.

Validation rules

Improve the quality of your data using validation rules. Validation rules verify that the data a user enters in a record meets the standards you specify before the user can save the record. A validation rule can contain a formula or expression that evaluates the data in one or more fields and returns a value of “True” or “False”. Validation rules also include an error message to display to the user when the rule returns a value of “True” due to an invalid value.

Creating a validation rule for the **Phone Number** field in the **Consumer** object ensures that phone numbers entered into the system meet specific formatting and data integrity requirements.



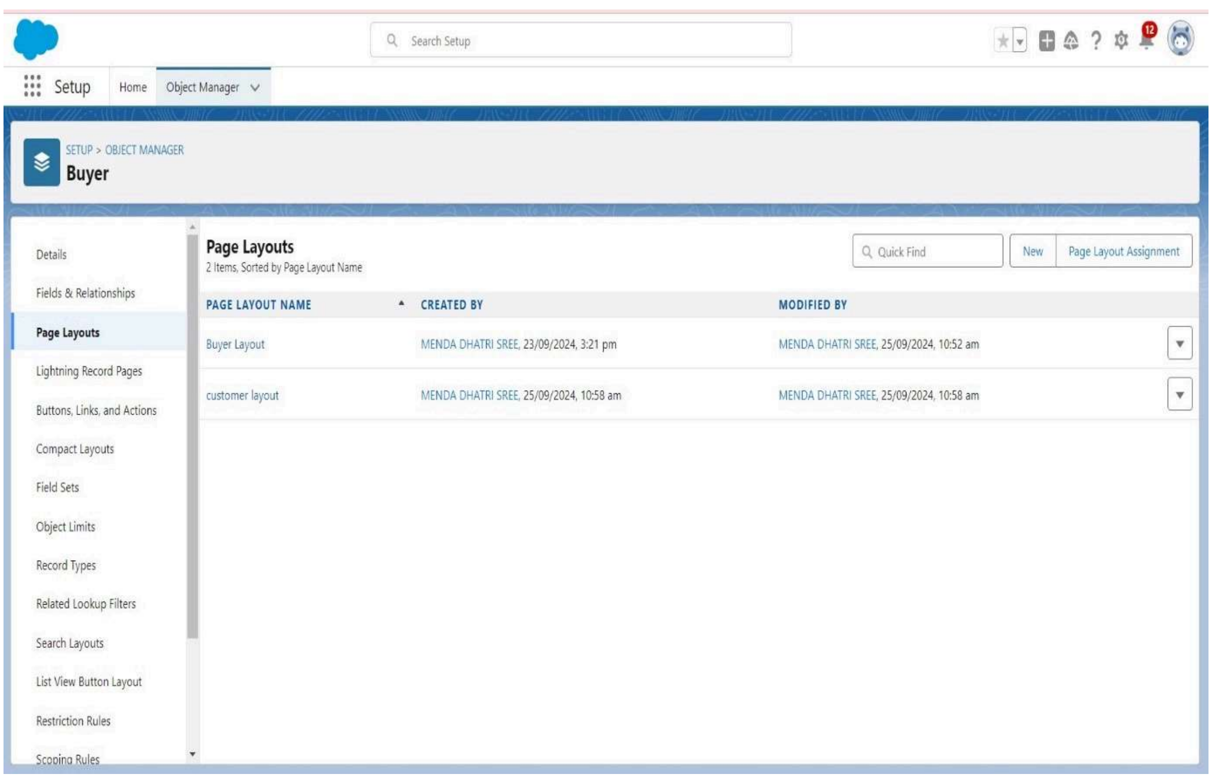
Page Layouts

Creating a Page Layout for the Consumer Object

The **Consumer Layout** page layout is designed to effectively organize and present key information within the Consumer object. It is structured into three distinct sections, each serving a specific purpose:

- **Personal Details**: This section captures essential personal information about the consumer. It includes fields such as **First Name**, **Last Name**, **Consumer Name**, **Phone Number**, **Email**, and **Vehicle name**. Organizing these fields together provides a comprehensive view of the consumer's identity and contact information.

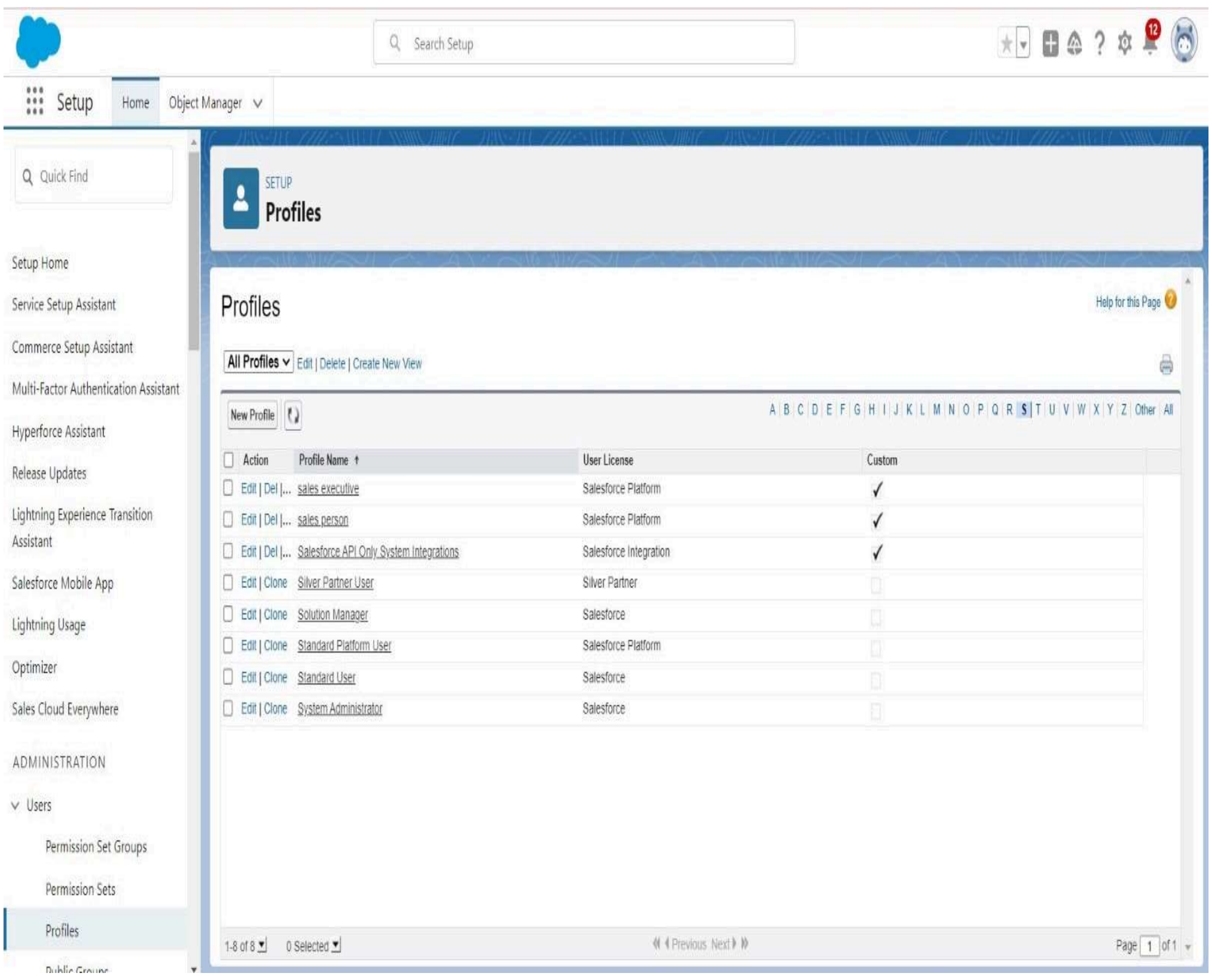
This structured layout enhances data entry efficiency and user experience by grouping related fields, making it easier for users to access and manage critical consumer information



Profiles

Creating the Owner Profile

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.



Role & Role Hierarchy

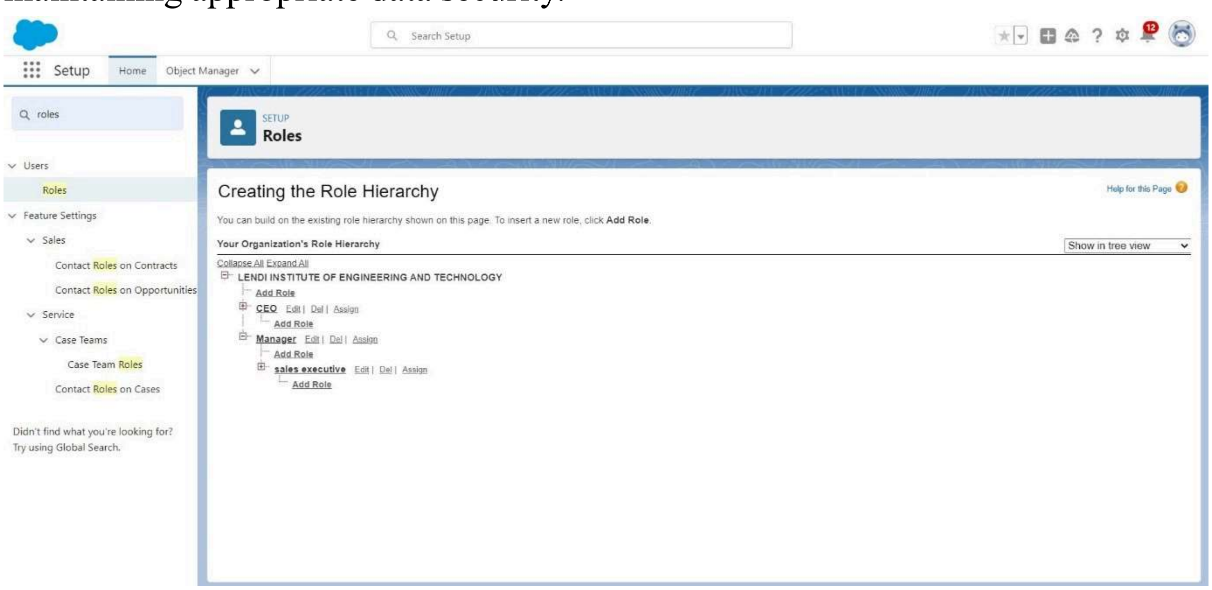
Creating the Owner Role

The Owner role is established to grant high-level visibility and access within Salesforce. This role provides top-tier permissions, allowing users designated as Owners to manage and oversee critical records and configurations across the Salesforce system.

Creating Employer and Worker Roles

To further refine access control, two additional roles are created under the Owner role:

- Employer: This role is positioned beneath the Owner and is designed for users who need to manage specific departments or functions within the organization. The Employer role provides a balanced level of access suitable for overseeing operations without the full administrative privileges of the Owner role.
- Worker: Created under the Employer role, the Worker role is intended for entry-level users. It offers limited access tailored to daily tasks and operations, ensuring that users can perform their duties effectively while maintaining appropriate data security.



Users

Creating Users

Activity 1: Create a User

Create a user with the following details:

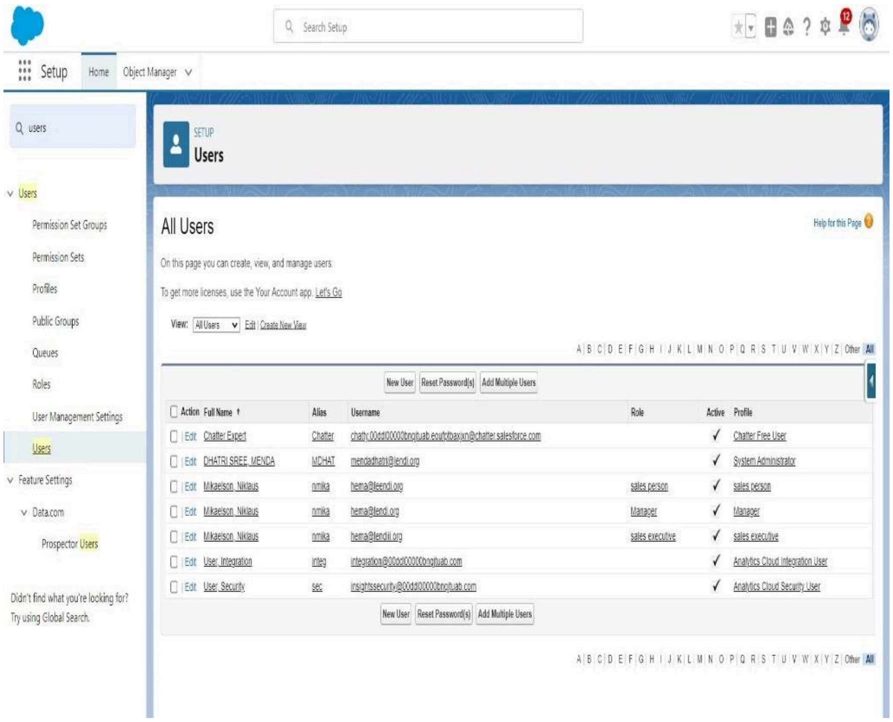
- First Name: Niklaus
- Last Name: Mikaelson
- Alias: [Provide an alias]
- Email ID: [Your personal email]
- Username: [Username in the format: text@text.text]
- Nickname: [Provide a nickname]
- Role: Manager
- User License: Salesforce
- Profile: Manager

Activity 2: Create Additional Users

Create two more users with the following details:

1. User 1:
   - First Name: Niklaus
   - Last Name: Mikaelson
   - Alias: [Provide an alias]
   - Email ID: [Your personal email]
   - Username: [Username in the format: text@text.text]
   - Nickname: [Provide a nickname]
   - Role: sales executive
   - User License: Salesforce Platform
   - Profile: sales executive
2. User 2:
   - First Name: Niklaus
   - Last Name: Mikaelson
   - Alias: [Provide an alias]

- Email ID: [Your personal email]
- Username: [Username in the format: text@text.text]
- Nickname: [Provide a nickname]
- Role: sales person
- User License: Salesforce Platform



Permission sets

A Permission Set is a collection of settings and permissions that grants users access to specific tools and functions, extending their capabilities beyond what is defined in their profiles. This flexibility allows for precise management of user permissions without altering profile settings.

Activity 1: Creating OWD Setting

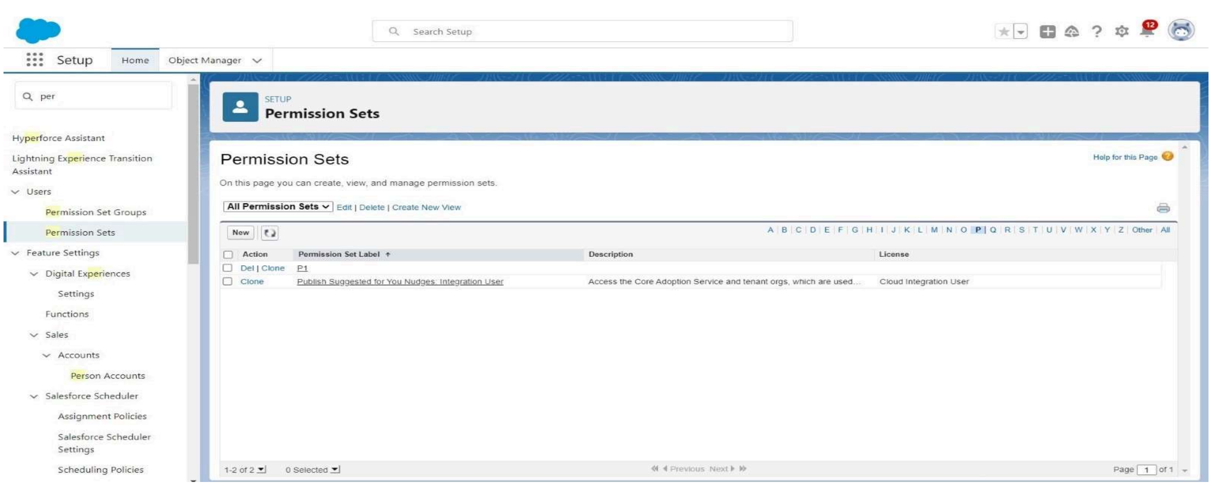
Configure the Organization-Wide Defaults (OWD) to set the default internal access for the Gas Station and Supplier objects to Public Read-Only. This setting ensures that users can view records but cannot edit them, while respecting the roles assigned within the organization.

In our configuration:

- Owner roles can access records of Employer and Worker roles.
- Employer roles can access records of Worker roles.

This setup maintains appropriate data visibility and control based on user roles, supporting effective permission management.

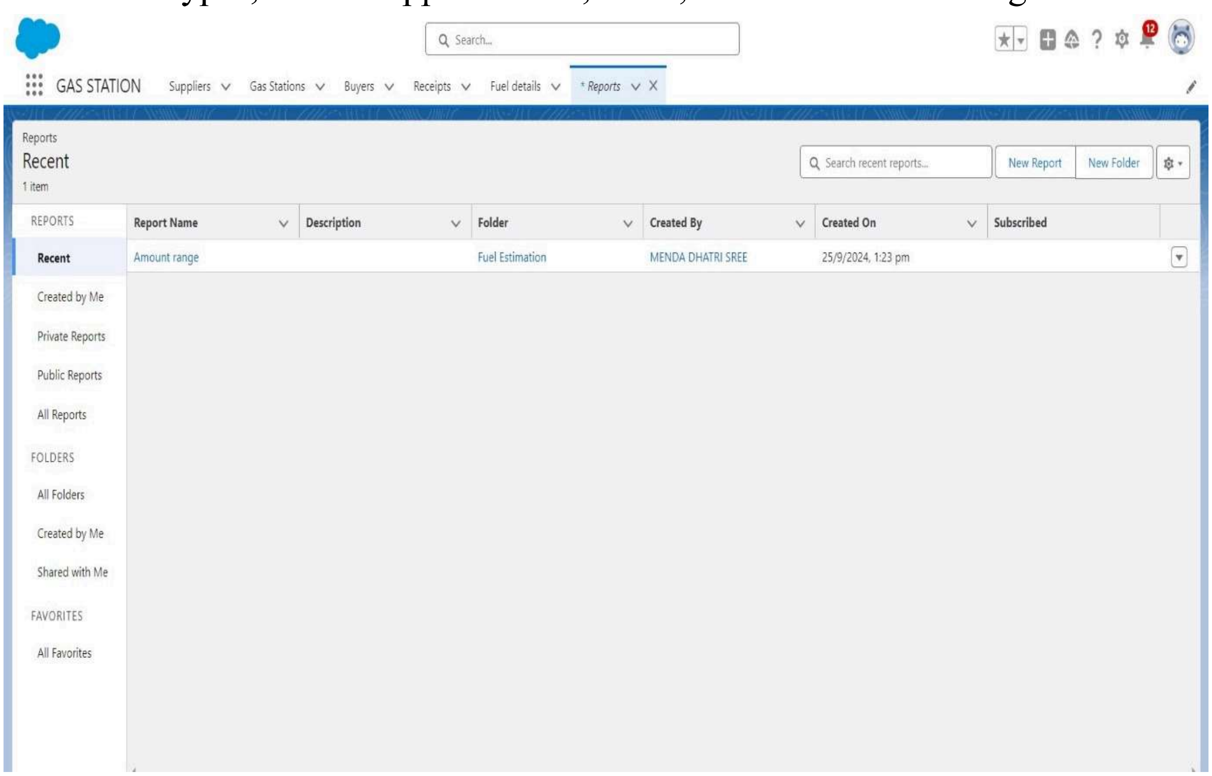
Note: To ensure comprehensive testing, create and fill out the latest 10 records in the Consumer object, making sure each field is populated. more thorough experience and evaluation of the permissions and access settings.



Reports

Reports in Salesforce provide a flexible and powerful way to analyze and visualize your data. They can be created in various styles to suit different needs, including:

- Tabular Reports: These reports offer a simple list of data without subtotals. Ideal for straightforward data presentation, such as lists of accounts, contacts, or opportunities.
- Summary Reports: These reports include groupings and subtotals, making them useful for hierarchical data analysis. For example, summarizing opportunities by sales stage and owner.
- Matrix Reports: These allow grouping by both rows and columns, which is helpful for comparing related totals across multiple dimensions, such as summarizing opportunities by month and account.
- Joined Reports: These reports combine multiple blocks of related data, each with its own columns, summaries, and filters. Useful for displaying diverse data types, such as opportunities, cases, and activities in a single view.



Dashboards

Dashboards provide a visual representation of your data, helping users identify trends and make data-driven decisions.

Activity1

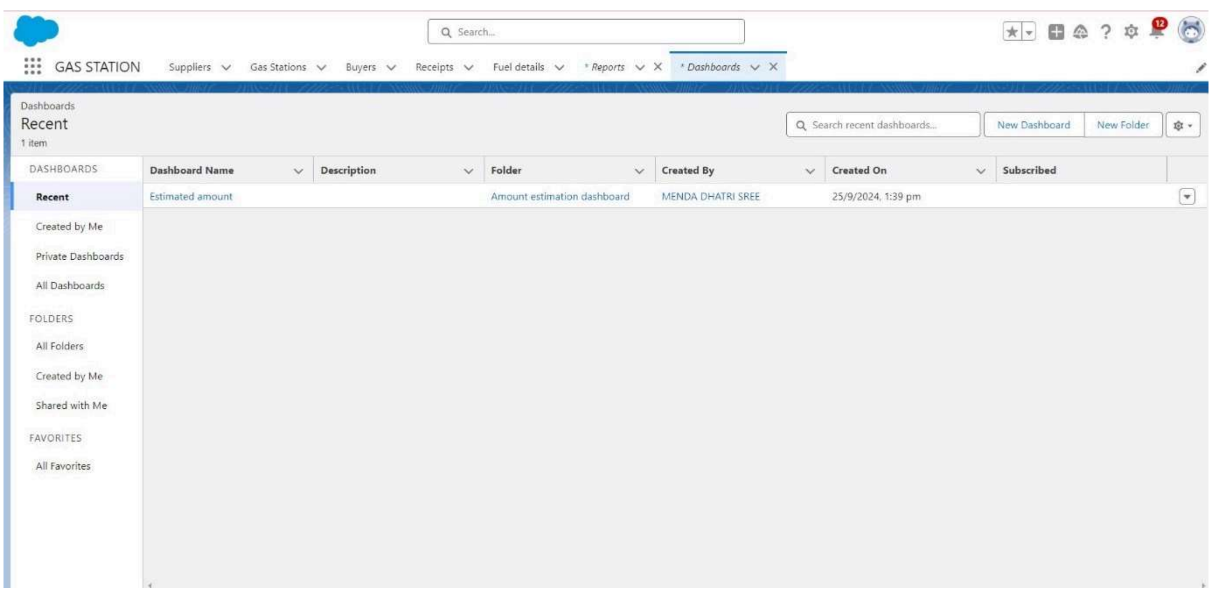
Create a new dashboard folder named **" Amount estimation dashboard"** to organize and manage dashboard components effectively.

Activity2:

Build a dashboard by adding components based on selected reports. Configure the components to display data in various formats:

- **Vertical Bar Chart**: Shows data with the X-axis as "Gas Taken by the Gas station" and Y-axis as the "Sum of Amount," sorted by "Gas Taken by Gas Station."
- **Donut Chart**: Displays the "Range of Amount Per Day," sorted by the "Sum of Amount."

Save and finalize the dashboard to visualize and analyze the data efficiently.



Flows

In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.