

A Salesforce CRM Solution for Streamlining Petroleum Station Operations (Developer)

Executive Summary:

This project addresses the challenge of efficiently managing customer interactions and daily operations at gas stations by developing a customized Salesforce CRM application to automate and streamline the gas fueling process. The system centralizes vital information by creating dedicated objects for customers, fuel, suppliers, and stations, making it easier to manage and ensuring transparency and reliability. The application also focuses on robust security and clear responsibilities by implementing user roles, profiles, and permissions, enhanced by features like password policies and access levels. Ultimately, this application demonstrates how Salesforce CRM can be adapted for a real-world business, simplifying daily tasks for staff and improving the customer experience at gas filling stations.

Core Objectives:

This Salesforce CRM project for petroleum stations is designed to improve both customer service and station management. Its key objectives are:

- **Improve Operational Efficiency** by centralizing the management of all customer, fuel, supplier, and station data on a single CRM platform.
- **Enhance Customer Management** by maintaining accurate records of customer details, vehicles, and transaction receipts.
- **Implement Role-Based Security** by securely assigning roles to users, such as Manager, Executive, and Salesperson.
- **Automate Key Processes** to reduce manual work and human error by automating tasks like managing buyer data, fuel entries, and payment processing.
- **Strengthen Data Protection** by safeguarding sensitive information using defined policies and permissions.
- **Ensure Future Growth** by supporting future needs with the ability to create new reports and dashboards.

Technological Foundation:

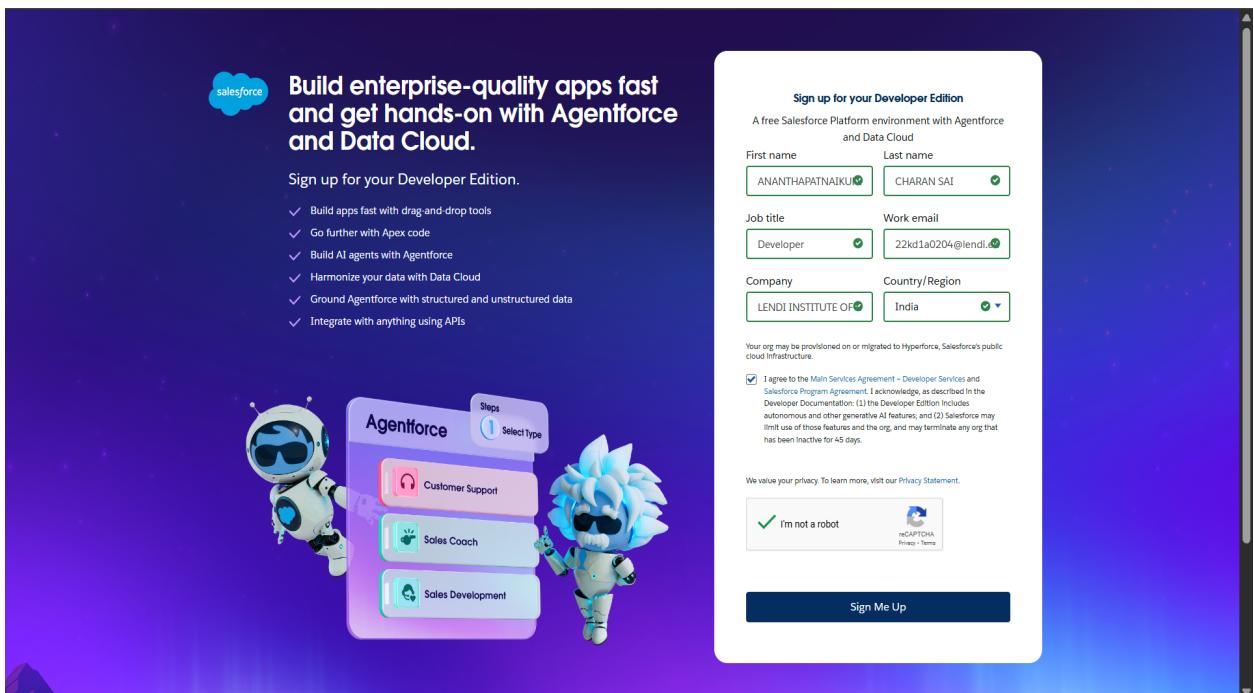
The project is built on the Salesforce platform, a cloud-based CRM solution that provides tools for managing customer relationships, streamlining operations, and securely storing data. Key components utilized in this project include:

- **Custom Objects** User-defined database tables that store business-specific information. For this project, custom objects were created for Buyers, Fuel Details, Gas Stations, and Suppliers.
- **Tabs** User interface elements that provide quick access to custom objects and apps.
- **Lightning App** A collection of objects, tabs, and utilities bundled together to serve a specific business function, providing a branded and user-friendly interface.
- **Page Layouts** Tools for organizing fields and sections on a record page to make data entry more structured and user-friendly.
- **Profiles & Permissions** Profiles define a user's permissions and access, while permission sets grant additional access rights without altering a user's profile.
- **Roles & Hierarchy** Control record-level access based on a user's position in the organizational structure.
- **Organization-Wide Defaults (OWD)** Sets the baseline level of access users have to records they do not own, which is crucial for data security.
- **Reports & Dashboards** Provide visual insights and summaries of business data to help track performance and analyze trends.
- **Flows** Automation tools that reduce manual effort by updating and managing data based on user actions or record changes.
- **Apex Triggers** Custom code that automates complex business logic by executing before or after specific record events.

Project Implementation:

The implementation of the Gas Station CRM application followed a structured process:

1. **Salesforce Developer Environment Setup** A free Developer Org was created to serve as the development environment.



We have received a mail to our registered email ID.

A screenshot of an email from support@salesforce.com. The subject is "Welcome to Salesforce: Reset your password". The email body starts with "Hi ANANTHAPATNAIKUNI," and says "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." It then instructs the user to "There's just one more step. Use the following link to reset the password for your Developer Edition. This link expires in 24 hours." A "Reset Password" button is provided. Below it, the URL "https://orgfarm-8e1fff867a-dev-ed.develop.my.salesforce.com" is given. The email also provides the developer edition username "22kd1a0204239@agentforce.com". It ends with "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." and "Again, welcome to Salesforce! Developer Relations". At the bottom, a copyright notice reads "© Copyright 2000-2025 salesforce.com, Inc. All rights reserved. Various trademarks held by their respective owners."

2. Custom Object Development Four custom objects—Buyer, Fuel Details, Gas Station, and Supplier—were created to store and manage key business data.

Buyer:

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes a cloud icon, Setup, Home, and Object Manager. The main header says "SETUP > OBJECT MANAGER" and "Buyer". On the left, a sidebar lists various configuration options: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The main panel displays the "Details" section for the Buyer object. It shows the API Name as "Buyer_c", which is highlighted in blue. Other details include: Custom (selected), Singular Label ("Buyer"), Plural Label ("Buyers"), Enable Reports (unchecked), Track Activities (unchecked), Track Field History (unchecked), Deployment Status ("Deployed"), and Help Settings ("Standard salesforce.com Help Window").

Fuel Details:

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes a cloud icon, Setup, Home, and Object Manager. The main header says "SETUP > OBJECT MANAGER" and "Fuel details". On the left, a sidebar lists various configuration options: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout. The main panel displays the "Details" section for the Fuel_details object. It shows the API Name as "Fuel_details_c", which is highlighted in blue. Other details include: Custom (selected), Singular Label ("Fuel details"), Plural Label ("Fuel details"), Enable Reports (unchecked), Track Activities (unchecked), Track Field History (unchecked), Deployment Status ("Deployed"), and Help Settings ("Standard salesforce.com Help Window").

Gas Station:

The screenshot shows the Salesforce Object Manager interface for the 'Gas Station' object. The top navigation bar includes a cloud icon, 'Setup', 'Home', and 'Object Manager'. A search bar says 'Search Setup' and a toolbar has icons for star, plus, question mark, gear, and refresh.

The main area shows the 'Details' tab selected. On the left is a sidebar with links: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout.

The right panel displays the object's details:

Description	Value
API Name	Gas_Station__c
Custom	✓
Singular Label	Gas Station
Plural Label	Gas Stations
Enable Reports	✓
Track Activities	
Track Field History	✓
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Buttons 'Edit' and 'Delete' are at the bottom right.

Supplier:

The screenshot shows the Salesforce Object Manager interface for the 'Supplier' object. The top navigation bar includes a cloud icon, 'Setup', 'Home', and 'Object Manager'. A search bar says 'Search Setup' and a toolbar has icons for star, plus, question mark, gear, and refresh.

The main area shows the 'Details' tab selected. On the left is a sidebar with links: Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, and List View Button Layout.

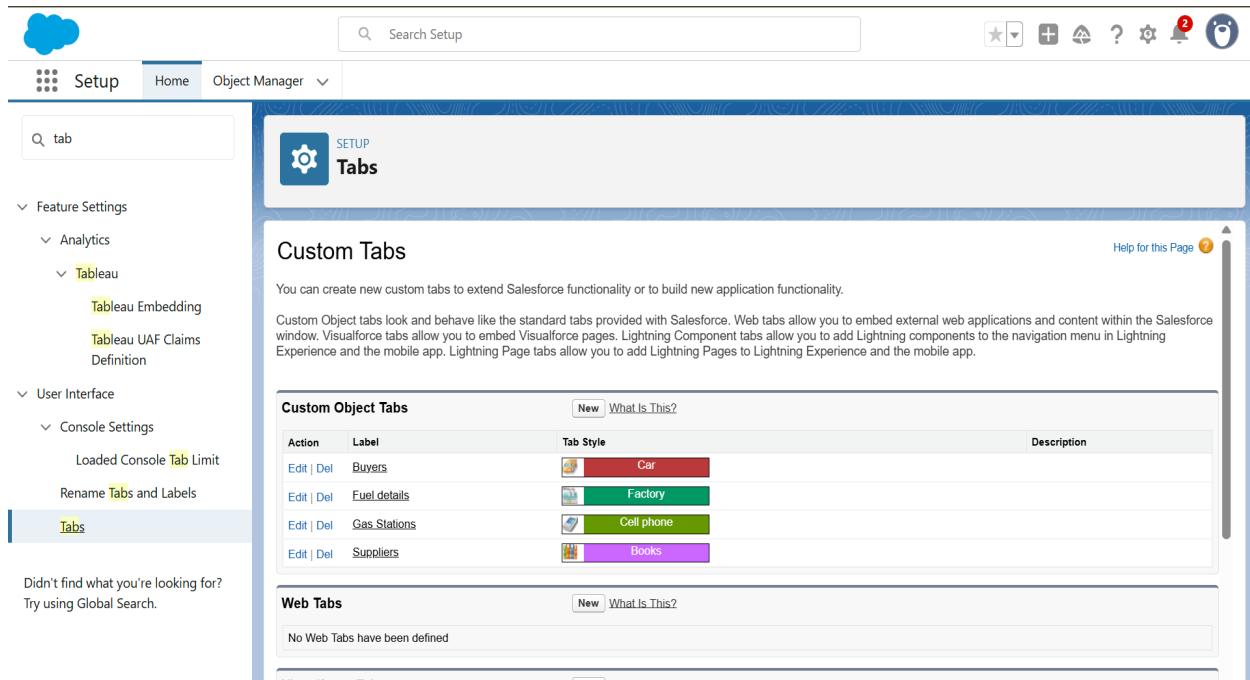
The right panel displays the object's details:

Description	Value
API Name	Supplier__c
Custom	✓
Singular Label	Supplier
Plural Label	Suppliers
Enable Reports	✓
Track Activities	
Track Field History	✓
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Buttons 'Edit' and 'Delete' are at the bottom right.

3. Custom Tabs Creation

Tabs were created for each custom object to allow easy navigation within the Lightning App.



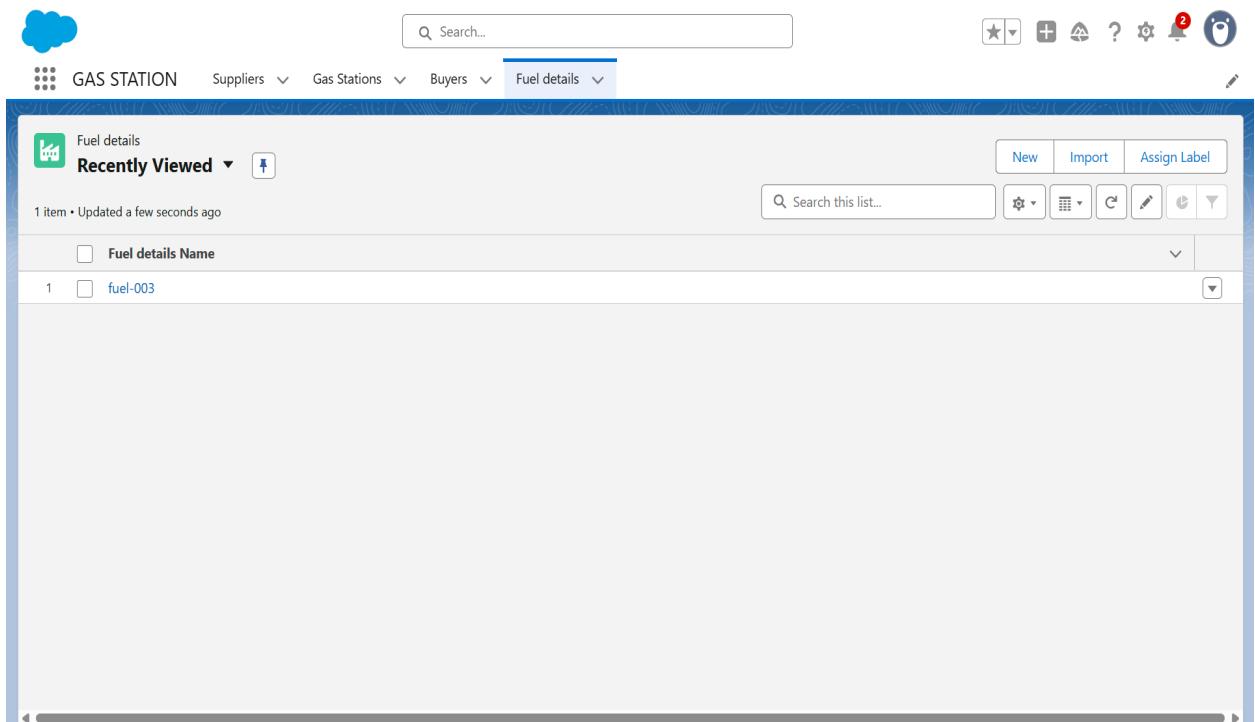
The screenshot shows the Salesforce Setup interface under the 'Tabs' section. On the left, there's a sidebar with categories like Feature Settings, Analytics, Tableau Embedding, Tableau UAF Claims Definition, User Interface, Console Settings, and Tabs. The 'Tabs' item is selected and highlighted in yellow. The main content area is titled 'Custom Tabs' and contains a table of existing custom object tabs:

Action	Label	Tab Style	Description
Edit Del	Buyers	Car	
Edit Del	Fuel_details	Factory	
Edit Del	Gas Stations	Cell phone	
Edit Del	Suppliers	Books	

Below this table is a section for 'Web Tabs' which currently displays the message 'No Web Tabs have been defined'.

4. Application Configuration

A Lightning App named "GAS STATION" was created and configured with the custom objects and fields to manage the CRM operations.



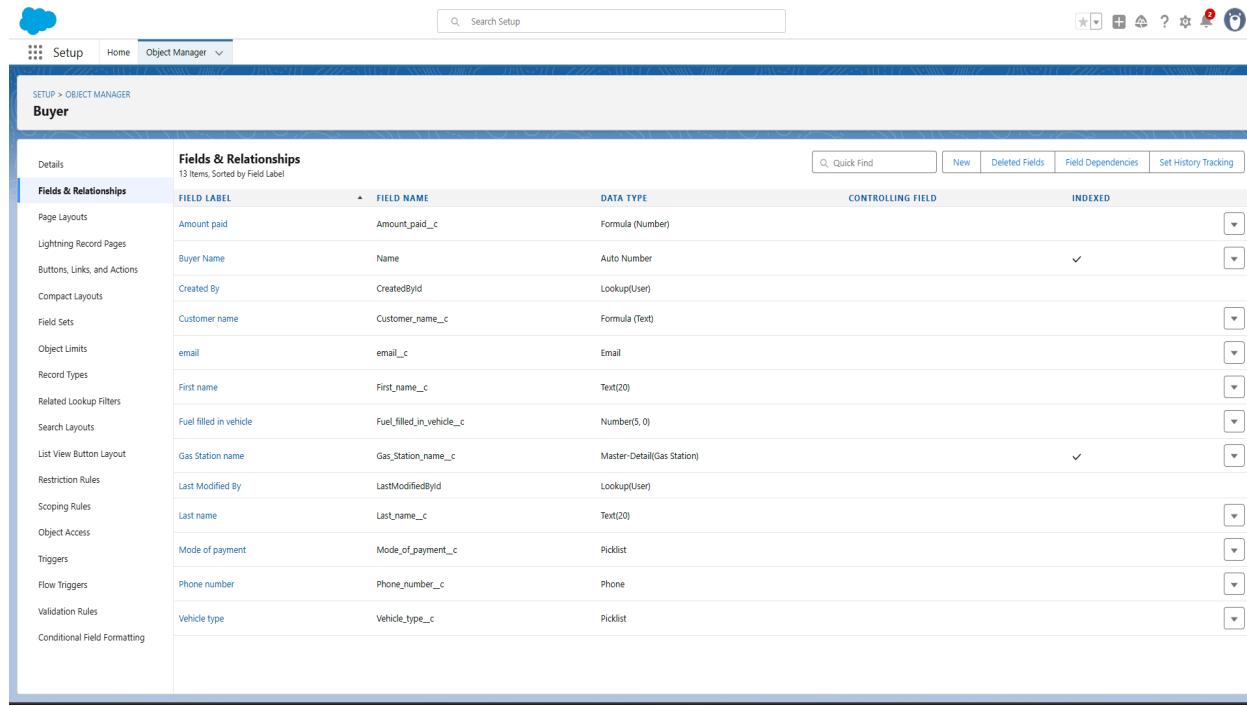
The screenshot shows the 'Fuel details' list view within the 'GAS STATION' Lightning App. At the top, there are tabs for Suppliers, Gas Stations, Buyers, and Fuel details, with 'Fuel details' being the active tab. The main area shows a table with one item:

	Fuel details Name
1	<input type="checkbox"/> fuel-003

There are also 'New', 'Import', and 'Assign Label' buttons at the top right of the list view.

5. Fields & Relationships Creation

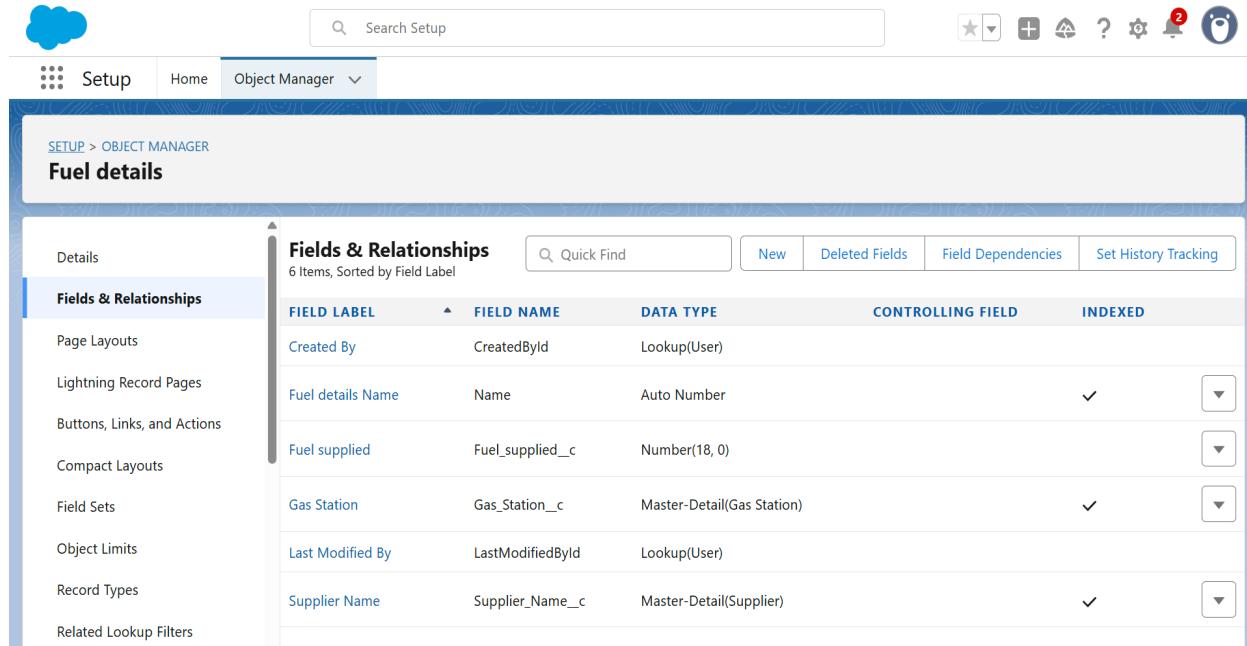
- **Buyer_c:** First Name, Last Name, Customer Name (Formula), Phone Number, Email, Vehicle Type (Picklist), Fuel Filled in Vehicle, Mode of Payment (Picklist), Amount Paid (Formula).



The screenshot shows the Salesforce Object Manager for the 'Buyer' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area displays the 'Fields & Relationships' section with 13 items. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount paid	Amount_paid_c	Formula (Number)		
Buyer Name	Name	Auto Number		
Created By	CreatedBy	Lookup(User)		
Customer name	Customer_name_c	Formula (Text)		
email	email_c	Email		
First name	First_name_c	Text(20)		
Fuel filled in vehicle	Fuel_filled_in_vehicle_c	Number(5, 0)		
Gas Station name	Gas_Station_name_c	Master-Detail(Gas Station)		
Last Modified By	LastModifiedBy	Lookup(User)		
Last name	Last_name_c	Text(20)		
Mode of payment	Mode_of_payment_c	Picklist		
Phone number	Phone_number_c	Phone		
Vehicle type	Vehicle_type_c	Picklist		

- **Fuel_details_c:** Fuel Supplied (Number), Supplier Name (Master-Detail), Gas Station (Master-Detail).



The screenshot shows the Salesforce Object Manager for the 'Fuel details' object. The left sidebar lists various setup options. The main area displays the 'Fields & Relationships' section with 6 items. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Fuel details Name	Name	Auto Number		
Fuel supplied	Fuel_supplied_c	Number(18, 0)		
Gas Station	Gas_Station_c	Master-Detail(Gas Station)		
Last Modified By	LastModifiedBy	Lookup(User)		
Supplier Name	Supplier_Name_c	Master-Detail(Supplier)		

- **Gas_Station__c**: Fuel Price per Liter (Number), Fuel Supplied to Bunk (Roll-up Summary), Fuel Used (Roll-up Summary), Fuel Available in Bunk (Formula).

SETUP > OBJECT MANAGER
Gas Station

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Details	Page Layouts	Created By	CreatedById	Lookup(User)		
	Lightning Record Pages	Fuel available in bunk	Fuel_available_in_bunk__c	Formula (Number)		
	Buttons, Links, and Actions	Fuel Price/litre	Fuel_Price_litre__c	Number(5, 0)		
	Compact Layouts	Fuel supplied to bunk	Fuel_supplied_to_bunk__c	Roll-Up Summary (SUM Fuel details)		
	Field Sets	Fuel used	Fuel_used__c	Roll-Up Summary (SUM Buyer)		
	Object Limits	Gas Station Name	Name	Auto Number		✓
	Record Types	Last Modified By	LastModifiedById	Lookup(User)		
	Related Lookup Filters	Owner	OwnerId	Lookup(User,Group)		✓
	Search Layouts					
List View Button Layout						

- **Supplier__c**: Sum of Fuel Supplied (Roll-up Summary).

SETUP > OBJECT MANAGER
Supplier

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIEL...	INDEXED
Details	Page Layouts	Created By	CreatedById	Lookup(User)		
	Lightning Record Pages	Last Modified By	LastModifiedById	Lookup(User)		
	Buttons, Links, and Actions	Owner	OwnerId	Lookup(User,Group)		✓
	Compact Layouts	Sum of fuel supplied	Sum_of_fuel_supplied__c	Roll-Up Summary (SUM Fuel details)		
	Field Sets	Supplier Name	Name	Text(80)		✓
Object Limits						
Record Types						

6. Page Layout Design

Page layouts were created for each object with organized sections and fields to improve usability.

The screenshot shows the Salesforce Object Manager interface for the 'Buyer' object. The left sidebar lists various configuration options: Details, Fields & Relationships, Page Layouts (which is selected), Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main area displays the 'Buyer Detail' page layout. It includes sections for 'Personal details' (First name: Sample Text, Last name: Sample Text, Customer name: Sample Text, Phone number: 1-415-555-1212, email: sarah.sample@company.com, Gas Station name: Sample Text), 'Vehicle info' (Fuel filled in vehicle: 2.480, Vehicle type: Sample Text), and 'Receipt details' (Mode of payment: Sample Text, Amount paid: 782.24). A toolbar at the top provides options like Save, Quick Save, Preview As..., Cancel, Undo, Redo, and Layout Properties. A 'Quick Find' field is also present.

7. Profile Creation

Profiles were cloned from existing ones to create new profiles for Manager, Sales Executive, and Sales Person, ensuring proper access control and data security.

The screenshot shows the Salesforce Setup Profiles page. The left sidebar has a search bar with 'prof' typed in and a 'Users' section with a 'Profiles' link (which is selected). Below the sidebar, a message says 'Didn't find what you're looking for? Try using Global Search.' The main area is titled 'Profiles' and shows a table of 'All Profiles'. The table includes columns for 'Action', 'Profile Name', 'User License', and 'Custom'. The profiles listed are: Manager (User License: Salesforce, Custom: checked), Marketing User (User License: Salesforce, Custom: unchecked), Minimum Access - API Only Integrations (User License: Salesforce Integration, Custom: unchecked), and Minimum Access - Salesforce (User License: Salesforce, Custom: unchecked). A navigation bar at the bottom indicates '1-4 of 4' and '0 Selected'. A page footer shows 'Page 1 of 1'.

Custom Object Permissions

Object	Basic Access					Data Administration		
	Read	Create	Edit	Delete	View All Records	Modify All Records	View All Fields	
Buyers	<input checked="" type="checkbox"/>							
Fuel details	<input checked="" type="checkbox"/>							
Gas Stations	<input checked="" type="checkbox"/>							
Suppliers	<input checked="" type="checkbox"/>							

Session Settings

Session Times Out After: 8 hours of inactivity

Session Security Level Required at Login: None

Password Policies

- User passwords expire in: Never expires
- Enforce password history: 3 passwords remembered
- Minimum password length: 8
- Password complexity requirement: Must include alpha and numeric characters
- Password question requirement: Cannot contain password
- Maximum invalid login attempts: 10
- Lockout effective period: 15 minutes
- Obscure secret answer for password resets
- Require a minimum 1 day password lifetime
- Don't immediately expire links in forgot password emails

Buttons: Save, Save & New, Cancel

8. Role & Hierarchy Definition Roles for Manager, Sales Executive, and Sales Person were created to establish a clear reporting hierarchy.

Understanding Roles

Set up your Role Hierarchy to control how your organization reports on and accesses data.

Sample Role Hierarchy

View other sample Role Hierarchies: Territory-based Sample

```

graph TD
    ExecutiveStaff[Executive Staff] --> CEO[CEO]
    ExecutiveStaff --> President[President]
    ExecutiveStaff --> CFO[CFO]
    ExecutiveStaff --> VPSales[VP Sales]
    CEO --> WesternSalesDir[Western Sales Director]
    CEO --> EasternSalesDir[Eastern Sales Director]
    CEO --> InternationalSalesDir[International Sales Director]
    WesternSalesDir --> WesternRep1[Western Sales Rep]
    WesternSalesDir --> WesternRep2[OR Sales Rep]
    WesternSalesDir --> WesternRep3[CA Sales Rep]
    EasternSalesDir --> EasternRep1[NY Sales Rep]
    EasternSalesDir --> EasternRep2[MA Sales Rep]
    InternationalSalesDir --> InternationalRep1[Asian Sales Rep]
    InternationalSalesDir --> InternationalRep2[European Sales Rep]
  
```

Role Descriptions:

- Executive Staff**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- CEO**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- President**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- CFO**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- VP Sales**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- Western Sales Director**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- Eastern Sales Director**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- International Sales Director**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- Western Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- OR Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- CA Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- NY Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- MA Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- Asian Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.
- European Sales Rep**: View & edit data, roll up forecasts, & generate reports for all users below. Can't access data of other Executive Staff.

Buttons: Set Up Roles, Don't show this page again

The screenshot shows the Salesforce Setup interface under the 'Roles' section. On the left, a sidebar lists various setup categories like 'Setup Home', 'Salesforce Go', and 'ADMINISTRATION'. Under 'ADMINISTRATION', 'Users' is expanded, showing 'Roles' which is selected. The main content area displays a hierarchical tree titled 'Your Organization's Role Hierarchy'. The hierarchy starts with 'LENDI INSTITUTE OF ENGINEERINGG AND TECHNOLOGY' and branches into 'CEO', 'COO', 'Manager', 'sales executive', 'sales person', 'SVP_Customer Service & Support', 'Customer Support, International', 'Customer Support, North America', 'Installation & Repair Services', 'SVP_Human Resources', and 'SVP_Sales & Marketing'. Each node has 'Edit', 'Del', and 'Assign' buttons.

9. User Provisioning

Individual user accounts were created for each role, with permissions and roles assigned based on their responsibilities.

The screenshot shows the Salesforce Setup interface under the 'Users' section. The left sidebar is identical to the previous screenshot. The main content area is titled 'All Users' and displays a table of existing users. The table columns include Action, Full Name, Alias, Username, Role, Active, and Profile. The data is as follows:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	challa_dinesh	dchar	22kd1a02188@lendi.edu.in	sales person	✓	sales person
<input type="checkbox"/>	CHARAN SAI ANANTHAPATNAIKUNI	22k	22kd1a0204239@agentforce.com		✓	System Administrator
<input type="checkbox"/>	Chatter Expert	Chatter	chatly00dgk0000ajbuuual.sx0lkwznr8@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/>	EPIC_OrgFarm	QEPIIC	epic.0437se757a6b@orgfarm.salesforce.com		✓	System Administrator
<input type="checkbox"/>	Mikaelson Niklaus	nmika	niklausmik@123.blue.com	Manager	✓	Manager
<input type="checkbox"/>	sai_sanju	ssai	22kd1a0249@lendi.edu.in	sales executive	✓	sales executive
<input type="checkbox"/>	User_Integration	integ	integration@00dgk0000ajbuuual.com		✓	Analytics Cloud Integration User
<input type="checkbox"/>	User_Security	sec	insightsecurity@00dgk0000ajbuuual.com		✓	Analytics Cloud Security User

• Michelson, Nicklaus – Manager

User Edit
Niklaus Mikaelson

General Information

First Name	Niklaus	Role	Manager
Last Name	Mikaelson	User License	Salesforce
Alias	nmiika	Profile	Manager
Email	22kd1a0204@lendi.edu.in	Active	<input checked="" type="checkbox"/>
Username	niklausmik@123blue.com	Marketing User	<input type="checkbox"/>
Nickname	nimi	Offline User	<input type="checkbox"/>
Title		Knowledge User	<input type="checkbox"/>
Company		Flow User	<input type="checkbox"/>
Department		Service Cloud User	<input type="checkbox"/>
Division		Site.com Contributor User	<input type="checkbox"/>

Data.com User Type: -None--

Data.com Monthly Addition Limit: 300

Accessibility Mode (Classic Only):

High-Contrast Palette on Charts:

Load Lightning Pages While Scrolling:

Debug Mode:

Make Setup My Default Landing Page:

• Exec Sales – Sales Executive

User Edit
sanju sai

General Information

First Name	sanju	Role	Sales executive
Last Name	sai	User License	Salesforce Platform
Alias	ssai	Profile	Sales executive
Email	22kd1a0204@lendi.edu.in	Active	<input checked="" type="checkbox"/>
Username	22kd1a0249@lendi.edu.in	Marketing User	<input type="checkbox"/>
Nickname	User175698011759717708	Offline User	<input type="checkbox"/>
Title		Knowledge User	<input type="checkbox"/>
Company		Flow User	<input type="checkbox"/>
Department		Service Cloud User	<input type="checkbox"/>
Division		Site.com Contributor User	<input type="checkbox"/>

Data.com User Type: -None--

Data.com Monthly Addition Limit: 300

Accessibility Mode (Classic Only):

High-Contrast Palette on Charts:

Load Lightning Pages While Scrolling:

Debug Mode:

Make Setup My Default Landing Page:

• Person, Sales – Sales Person

User Edit
dinesh challa

General Information

First Name	dinesh
Last Name	challa
Alias	dchal
Email	22kd1a0204@lendi.edu.in
Username	22kd1a02180@lendi.edu.in
Nickname	User175698021991221549
Title	
Company	
Department	
Division	

Advanced Settings

Role	sales person
User License	Salesforce Platform
Profile	sales person
Active	<input checked="" type="checkbox"/>
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>
Flow User	<input type="checkbox"/>
Service Cloud User	<input type="checkbox"/>
Site.com Contributor User	<input type="checkbox"/>
Site.com Publisher User	<input type="checkbox"/>
WDC User	<input type="checkbox"/>
Data.com User Type	-None-
Data.com Monthly Addition Limit	300
Accessibility Mode (Classic Only)	<input type="checkbox"/>
High-Contrast Palette on Charts	<input type="checkbox"/>
Load Lightning Pages While Scrolling	<input checked="" type="checkbox"/>
Debug Mode	<input type="checkbox"/>
Make Setup My Default Landing Page	<input type="checkbox"/>

10. Permission Set Assignment A permission set was created and assigned to the Sales Executive to grant additional access rights without modifying their profile.

SETUP > PERMISSION SETS > P1

Permission Sets

API Name	License	Created By	Last Modified By
P1	--	ANANTHAPATNAKUNI CHARAN SAI	ANANTHAPATNAKUNI CHARAN SAI
Namespace Prefix	Session Activation Required	Created Date	Last Modified Date
--	Not Required	9/4/2025, 3:08 AM	9/4/2025, 3:12 AM
Related Permission Set Groups	Assigned Users		
0	1		
Description	--		

Permission Set Information

See the permissions enabled for this permission set and the permission set groups it's added to.

Object Permissions											
Label	Object API Na...	Read	Create	Edit	Delete	View All Records	Modify All Rec...	View All Fields			
Fuel details	Fuel_details_c	✓	✓	✗	✗	✗	✗	✗			
Gas Station	Gas_Station_c	✓	✗	✗	✗	✗	✗	✗			
Supplier	Supplier_c	✓	✗	✗	✗	✗	✗	✗			

11. Organizational-Wide Defaults (OWD) Configuration

OWD settings for the Gas Station and Supplier objects were set to 'Public Read-Only' to define the baseline level of data access.

Object	Default Internal Access	Default External Access	Grant Access Using Hierarchies
Lead	Public Read/Write/Transfer	Private	<input checked="" type="checkbox"/>
Account and Contract	Public Read/Write	Private	<input checked="" type="checkbox"/>
Order	Controlled by Parent	Controlled by Parent	<input checked="" type="checkbox"/>
Contact	Controlled by Parent	Controlled by Parent	<input checked="" type="checkbox"/>
Asset	Controlled by Parent	Controlled by Parent	<input checked="" type="checkbox"/>
Opportunity	Public Read/Write	Private	<input checked="" type="checkbox"/>
Case	Public Read/Write/Transfer	Private	<input checked="" type="checkbox"/>
Campaign	Public Full Access	Private	<input checked="" type="checkbox"/>
Campaign Member	Controlled by Campaign	Controlled by Campaign	<input checked="" type="checkbox"/>
User	Public Read Only	Private	<input checked="" type="checkbox"/>
Individual	Public Read/Write	Private	<input checked="" type="checkbox"/>
Voice Call	Private	Private	<input checked="" type="checkbox"/>
Activity	Private	Private	<input checked="" type="checkbox"/>
Calendar	Hide Details and Add Events	Hide Details and Add Events	<input checked="" type="checkbox"/>
Price Book	Use	Use	<input checked="" type="checkbox"/>
Product	Public Read/Write	Public Read/Write	<input checked="" type="checkbox"/>
Agent Work	Public Read Only	Private	<input checked="" type="checkbox"/>
Alternative Payment Method	Private	Private	<input checked="" type="checkbox"/>
Analytics User Attribute Function Token	Public Read Only	Private	<input checked="" type="checkbox"/>

Object	Default Internal Access	Default External Access	Grant Access Using Hierarchies
Service Resource	Public Read/Write	Private	<input checked="" type="checkbox"/>
Service Territory	Public Read/Write	Private	<input checked="" type="checkbox"/>
Shift	Private	Private	<input checked="" type="checkbox"/>
Shipment	Private	Private	<input checked="" type="checkbox"/>
Shipping Carrier	Public Read Only	Private	<input checked="" type="checkbox"/>
Shipping Carrier Method	Public Read Only	Private	<input checked="" type="checkbox"/>
Shipping Configuration Set	Public Read Only	Private	<input checked="" type="checkbox"/>
Streaming Channel	Public Read/Write	Private	<input checked="" type="checkbox"/>
Tableau Host Mapping	Public Read Only	Private	<input checked="" type="checkbox"/>
User Presence	Public Read Only	Private	<input checked="" type="checkbox"/>
Waitlist	Private	Private	<input checked="" type="checkbox"/>
Web Cart Document	Private	Private	<input checked="" type="checkbox"/>
Work Order	Private	Private	<input checked="" type="checkbox"/>
Work Plan	Private	Private	<input checked="" type="checkbox"/>
Work Plan Template	Private	Private	<input checked="" type="checkbox"/>
Work Step Template	Private	Private	<input checked="" type="checkbox"/>
Work Type	Private	Private	<input checked="" type="checkbox"/>
Work Type Group	Public Read/Write	Private	<input checked="" type="checkbox"/>
Gas Station	Public Read Only	Private	<input checked="" type="checkbox"/>
Supplier	Public Read Only	Private	<input checked="" type="checkbox"/>

Other Settings

Standard Report Visibility Manual User Record Sharing Manager Groups Secure guest user record access Require permission to view record names in lookup fields

12. Record Management The intuitive layouts, roles, and profiles ensured smooth user adoption, allowing users to easily create, view, and delete records.

Create:

New Fuel details

* = Required Information

Information

Fuel details Name

*Supplier Name
HP

*Gas Station
Gas-001

Fuel supplied
100,500

Cancel Save & New Save

View:

GAS STATION Suppliers Gas Stations Buyers Fuel details

Search...

Fuel details
fuel-003

New Contact Edit New Opportunity

Related Details

Fuel details Name
fuel-003

Supplier Name
bharat

Gas Station
Gas-001

Fuel supplied
100,000

Created By
 ANANTHAPATNAIKUNI CHARAN SAI, 9/6/2025, 7:39 AM

Last Modified By
 ANANTHAPATNAIKUNI CHARAN SAI, 9/6/2025, 7:39 AM

Delete:

The screenshot shows a software application window titled "Fuel details". In the top navigation bar, there are links for "Suppliers", "Gas Stations", "Buyers", and "Fuel details". Below the navigation, a search bar contains the placeholder "Search...". On the right side of the header, there are several icons: a star, a plus sign, a question mark, a gear, a bell with a red notification count (2), and a user profile icon.

The main content area displays a list of fuel details. The first item in the list is "fuel-003". To the right of the list, a context menu is open, containing options like "New", "Import", "Assign Label", "Edit", and "Delete". The "Delete" option is highlighted with a blue border.

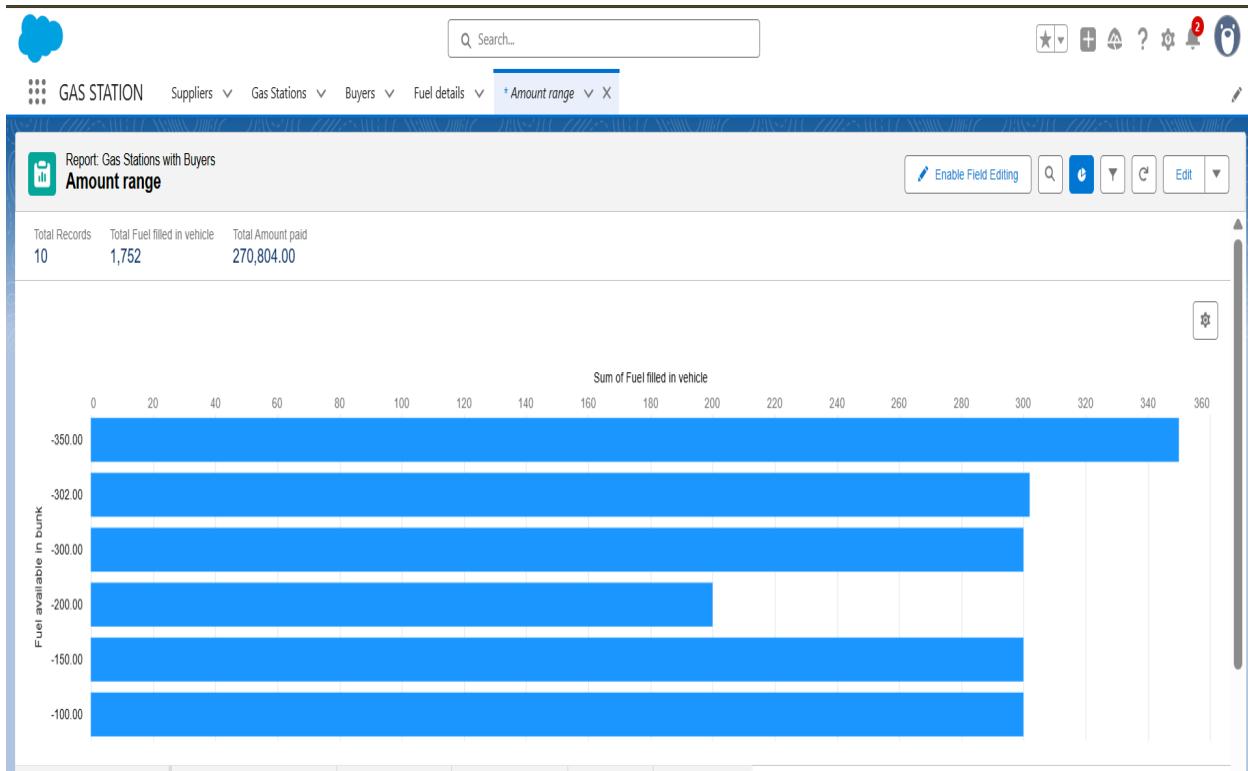
13. Report Generation Custom reports were created to track fuel usage, customer activity, and sales to aid in decision-making.

The screenshot shows a software application window titled "Report: Gas Stations with Buyers Amount range". The top navigation bar includes "Suppliers", "Gas Stations", "Buyers", "Fuel details", and a dropdown for "Amount range". The search bar at the top has the placeholder "Search...". On the right, there are icons for "Enable Field Editing", "Add Chart", and "Edit".

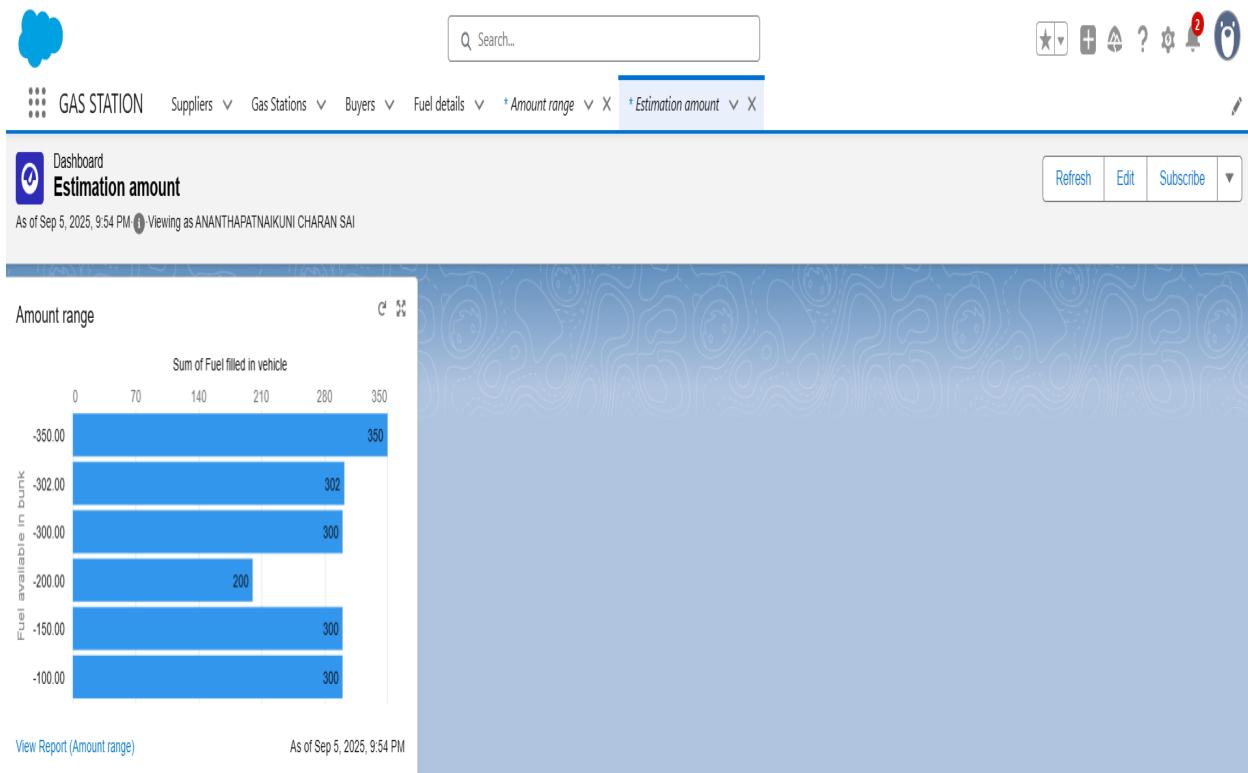
The main area is a table with the following data:

Total Records	Total Fuel filled in vehicle	Total Amount paid
10	1,752	270,804.00
<input type="checkbox"/> Fuel available in bunk		
	Gas Station: Gas Station Name	Buyer: Buyer Name
		Fuel filled in vehicle
		Amount paid
		Customer name
<input type="checkbox"/> -350.00 (1)	Gas-009	Buyer-009
		350
		52,500.00
	Subtotal	
		350
<input type="checkbox"/> -302.00 (2)	Gas-003	Buyer-003
		200
		20,400.00
	Gas-003	Buyer-002
		102
		10,404.00
	Subtotal	
		302
		30,804.00
<input type="checkbox"/> -300.00 (1)	Gas-008	Buyer-008
		300
		45,000.00
	Subtotal	
		300
		45,000.00
<input type="checkbox"/> -200.00 (1)	Gas-007	Buyer-007
		200
		40,000.00
	Subtotal	
		200
		40,000.00
<input type="checkbox"/> -150.00 (2)	Gas-004	Buyer-004
		150
		45,000.00
	Gas-010	Buyer-010
		150
		22,500.00
	Subtotal	
		300
		67,500.00
<input type="checkbox"/> -100.00 (3)	Gas-002	Buyer-001
		100
		10,000.00
	Gas-005	Buyer-005
		100
		10,000.00
	Gas-006	Buyer-006
		100
		15,000.00
	Subtotal	
		300
		35,000.00
Total (10)		1,752
		270,804.00

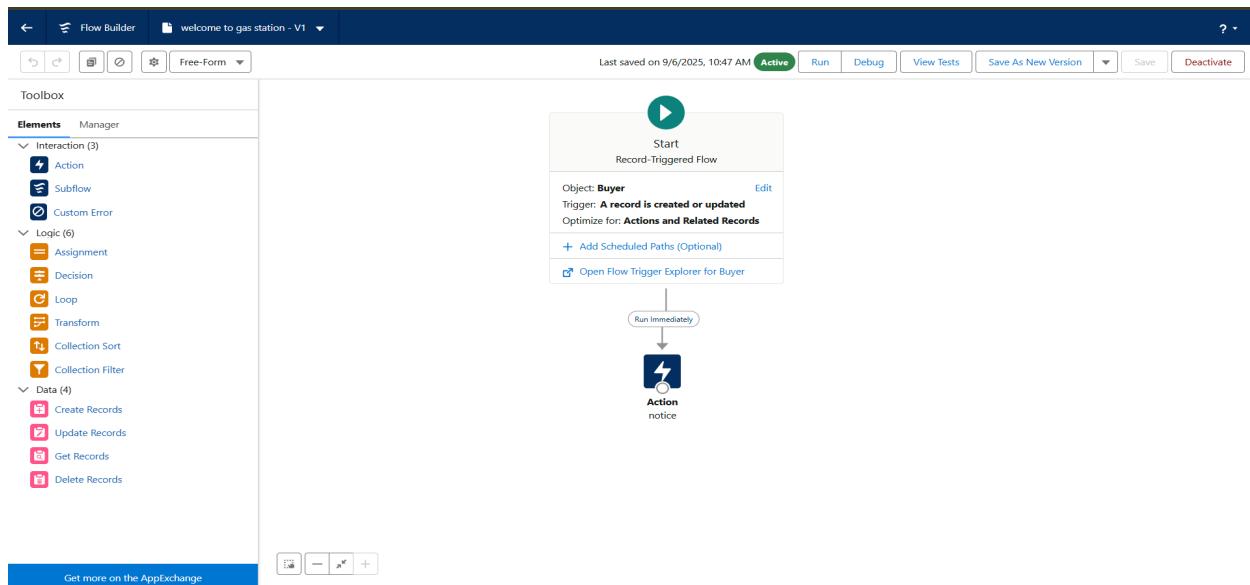
At the bottom, there are checkboxes for "Row Counts", "Detail Rows", "Subtotals", and "Grand Total".



14. Dashboard Creation Dashboards were created to visually display key metrics and provide insights into fuel estimates, sales, and customer activity.



15. Flow Automation A record-triggered flow was implemented on the Buyer object to automatically send an email receipt to the customer after a transaction, reducing manual effort.



16. Apex Trigger Development Apex triggers were coded to prevent the deletion of fuel detail records and to validate fuel prices upon record creation, ensuring data accuracy.

Apex class of Fuel Record Handler:

```

1 public class FuelRecordHandler {
2
3     public static void beforeDeleteInfo(list<Fuel_details__c> fuellist){
4
5         //fuellist = [select Id from Fuel_details__c];
6
7         for(Fuel_details__c ful : fuellist){
8
9             if(ful.Fuel_supplied__c > 500){
10
11                 ful.addError('you cannot delete the fuel details record because it is associated with supplier and Gas sta');
12
13             }
14
15         }
16     }
}

```

The screenshot shows the Salesforce Developer Console. At the top, there's a menu bar with 'File', 'Edit', 'Debug', 'Test', 'Workspace', 'Help', and tabs for 'FuelRecordHandler.apxc', 'beforeDelete.apxt', and 'beforeInsert.apxt'. Below the menu is a code editor window displaying the provided Apex code. At the bottom of the screen is a log viewer titled 'Logs' with tabs for 'Logs', 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The log table shows three entries from the user 'ANANTHAPATNAKUNI CHARAN...' at different times on 9/6/2025, all of which are 'Success' status and 'Unread' status, with sizes ranging from 524 bytes to 529 bytes.

Apex Trigger of Gas Station:

The screenshot shows the Salesforce IDE interface with the following details:

- File Bar:** File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
- Project:** FuelRecordHandler.apxc
- Trigger:** beforeDelete.apxt
- Code Coverage:** None
- API Version:** 64
- Code:**

```
1 trigger beforeDelete on Fuel_details__c (before Delete) {  
2  
3     if(trigger.isbefore && trigger.isDelete){  
4  
! 5         FuelRecordHandler.beforeDeleteInfo(trigger.old);  
6  
7     }  
8  
9 }  
10  
11 }
```

- Logs Tab:** Shows log entries for three different users (ANANTHAPATNAKUNI CHARAN...) performing operations like /udd/PermissionSet/viewPermis... at 9/6/2025, 8:25:59 PM, 8:25:54 PM, and 8:25:49 PM. All entries are marked as Success and Unread.
- Filter:** Click here to filter the log list

Apex Trigger of Fuel Details:

The screenshot shows the Salesforce IDE interface with the following details:

- File Bar:** File ▾ Edit ▾ Debug ▾ Test ▾ Workspace ▾ Help ▾ < >
- Project:** FuelRecordHandler.apxc
- Trigger:** beforeInsert.apxt
- Code Coverage:** None
- API Version:** 64
- Code:**

```
1 trigger beforeInsert on Gas_Station__c (before insert ) {  
2  
3     if(trigger.isbefore && trigger.isinsert){  
4  
! 5         FuelRecordHandler.beforeDeleteGas(trigger.new);  
6  
7     }  
8  
9 }  
10  
11 }
```

- Logs Tab:** Shows log entries for three different users (ANANTHAPATNAKUNI CHARAN...) performing operations like /udd/PermissionSet/viewPermis... at 9/6/2025, 8:25:59 PM, 8:25:54 PM, and 8:25:49 PM. All entries are marked as Success and Unread.
- Filter:** Click here to filter the log list

Potential System Enhancements:

To further improve the application, several Salesforce Einstein features could be integrated:

- **Einstein Chatbots** Implement AI-powered chatbots to answer customer questions and automatically generate transaction receipts.
- **Einstein Next Best Action** Provide personalized offers and discounts to customers based on their past fuel purchase history.
- **Einstein Activity Capture** Automatically log customer communications like emails to improve tracking and engagement.
- **Einstein Analytics Dashboard** Utilize advanced analytics to visualize and analyze sales trends, supplier performance, and customer demand.
- **Einstein Prediction Builder** Predict customer return behavior to help with targeted marketing strategies.

Conclusion:

The Salesforce CRM project for gas stations successfully addresses core operational and customer management challenges. By leveraging Salesforce's capabilities to create custom objects, profiles, and page layouts, the application ensures organized data and secure access for all users, including managers, sales executives, and salespersons. The implementation of automated flows for customer receipts and Apex triggers for data validation has significantly improved efficiency and data accuracy. Furthermore, the use of reports and dashboards provides valuable insights for performance monitoring and strategic decision-making. This project effectively demonstrates how Salesforce can be a powerful tool for improving efficiency, reducing manual work, and enhancing the customer experience in the petroleum industry.