

VEHICLE MANAGEMENT SYSTEM APPLICATION USING SALESFORCE

INTRODUCTION

Vehicle Management is an application where a customer Details are stored in order to choose cars, bikes and commercial vehicles for travel with in the city. The data which is stored here is further used to remind them if any offers are provided during the seasons and any updates regarding vehicles are sent to them in the form of messages and mails.

1.1 Overview

A vehicle management system allows tracking the use of all fleet movements. Logistics companies can use the fleet management system to collect, monitor and record vehicle information. The information used in vehicle management software can be imported from external sources.

1.2 Purpose

- Improve fleet safety and working conditions
- Improve the behavior and performance of drivers and beat unsafe driving
- Schedule shifts and work hours
- Leverage driver retention
- Track vehicles, assets or professional equipment (even trailers and containers)

PROBLEM DEFINITION & DESIGN THINKING

Empathy Map

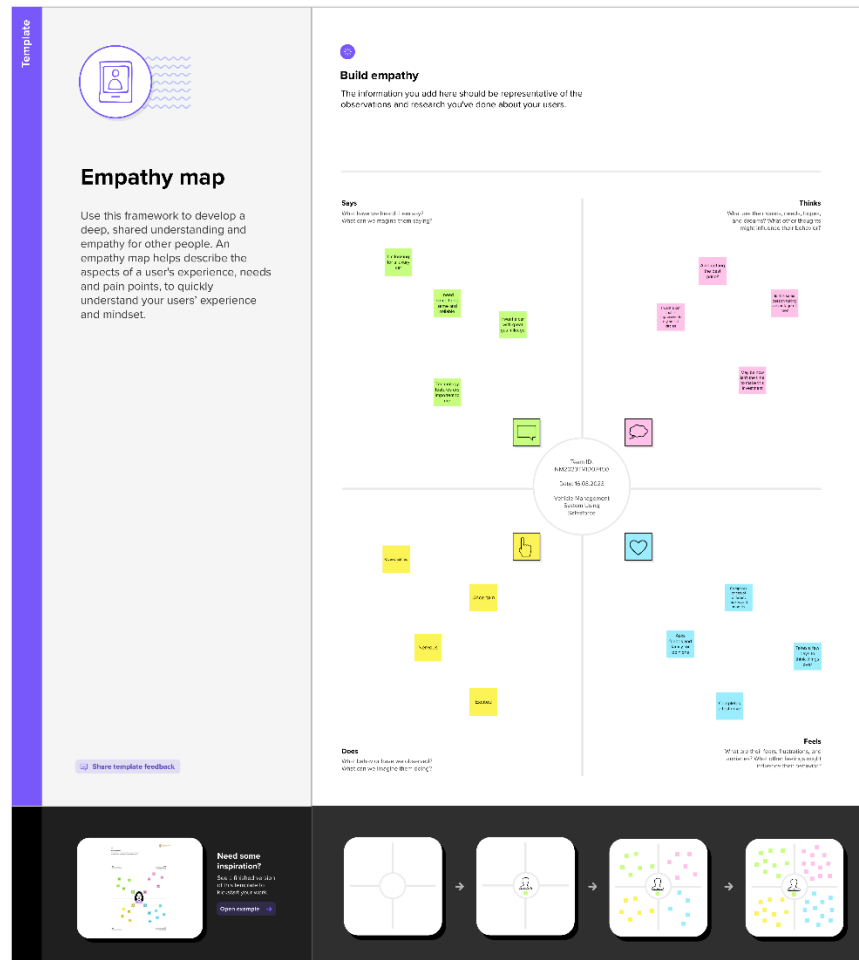


Figure 1- Empathy map on Vehicle System Management done by Our Team

Ideation & Brainstorming Map

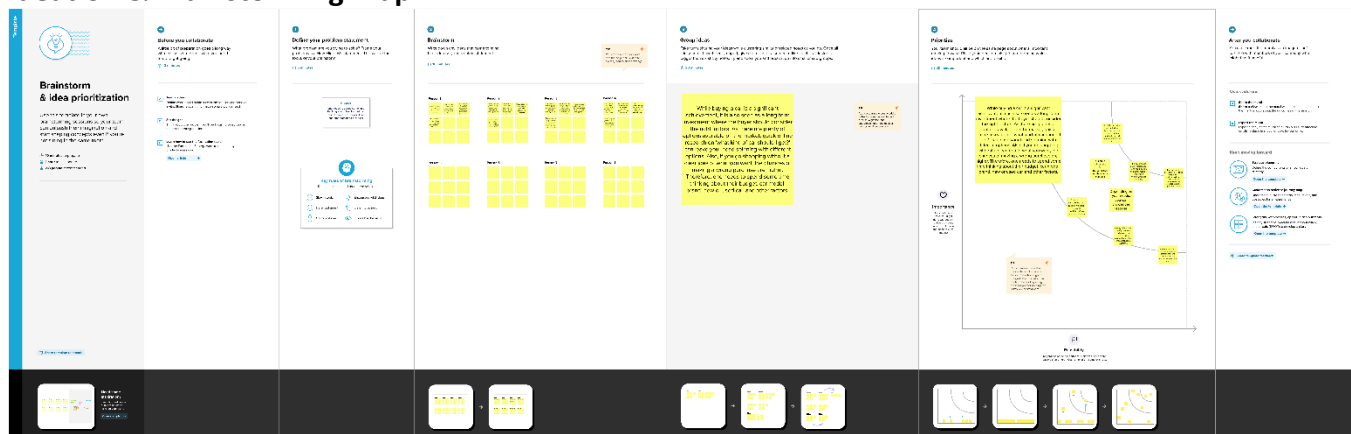


Figure 2 - Brainstorm map on Vehicle System Management done by Our Team

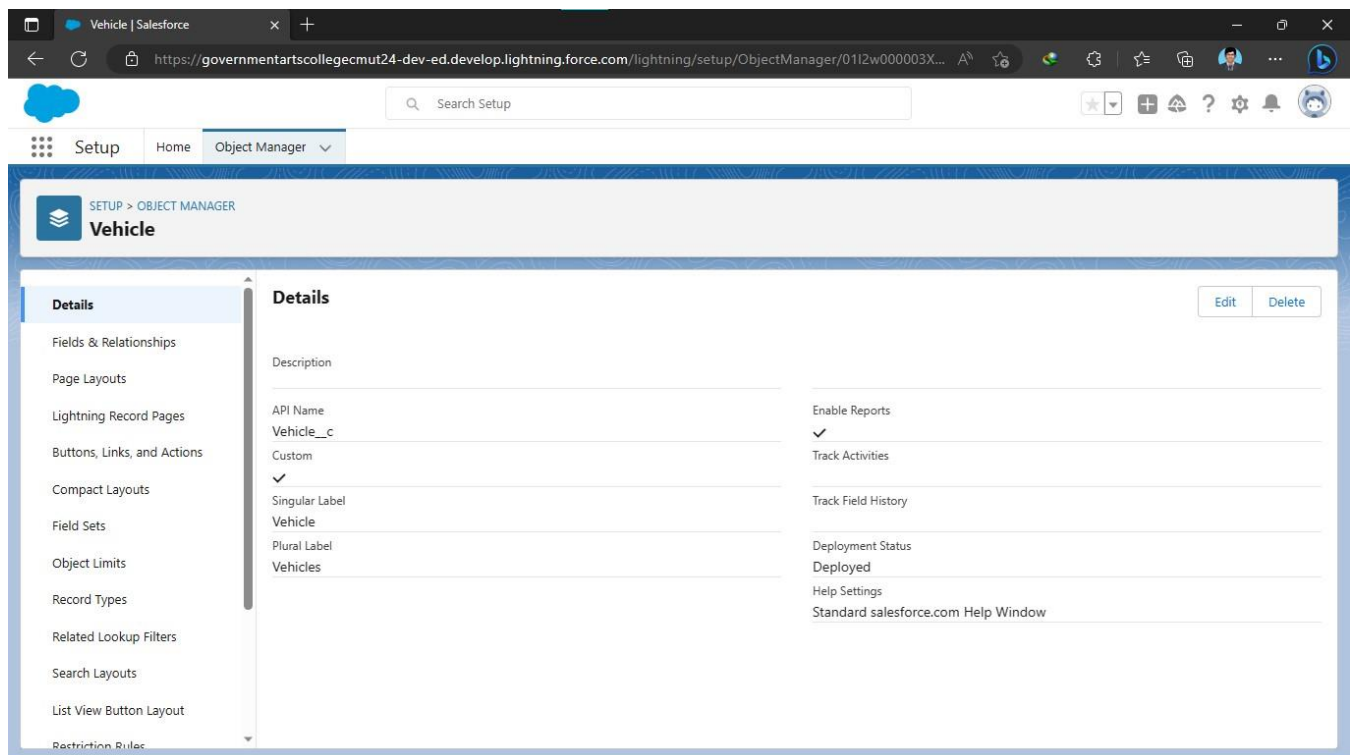
RESULT

Data Model:

Object name	Fields in the Object																																				
Vehicle	<table><tr><th>Field label</th><th>Data type</th></tr><tr><td>Customer Name</td><td>Text</td></tr><tr><td>Customer Mobile Number</td><td>Number</td></tr><tr><td>Vehicle Type</td><td>Picklist</td></tr><tr><td>1. 2 WHEELER 2. 4 WHEELER</td><td></td></tr><tr><td>2 WHEELERS</td><td>Picklist</td></tr><tr><td>1. HERO 2. HONDA 3. BAJAJ 4. ROYAL ENFIELD 5. TVS 6. KINETIC 7. OLA 8. JAWA 9. SD 10. BATTERY</td><td></td></tr><tr><td>4 WHEELERS</td><td>Picklist</td></tr><tr><td>1. RENAULT 2. SKONDA 3. HONDA 4. HYUNDAI 5. SUZUKI 6. MAHINDRA 7. VOLKSWAGEN 8. BENZ 9. AUDI 10. VOLVO</td><td></td></tr><tr><td>Vehicle Name</td><td>Text</td></tr><tr><td>Vehicle Number</td><td>Text</td></tr><tr><td>Chassic Number</td><td>Text</td></tr><tr><td>Colour</td><td>Text</td></tr><tr><td>Body Type</td><td>Text</td></tr><tr><td>Vehicle Includes</td><td>Multi Picklist</td></tr><tr><td>1. Fire Extenuation 2. First Aid Kit 3. Multi Charger Kit 4. Stepney 5. Stereo 6. Tool Kit 7. Tracking Device 8. Tyre Jack</td><td></td></tr><tr><td>Condition</td><td>Picklist</td></tr><tr><td>1. Good</td><td></td></tr></table>	Field label	Data type	Customer Name	Text	Customer Mobile Number	Number	Vehicle Type	Picklist	1. 2 WHEELER 2. 4 WHEELER		2 WHEELERS	Picklist	1. HERO 2. HONDA 3. BAJAJ 4. ROYAL ENFIELD 5. TVS 6. KINETIC 7. OLA 8. JAWA 9. SD 10. BATTERY		4 WHEELERS	Picklist	1. RENAULT 2. SKONDA 3. HONDA 4. HYUNDAI 5. SUZUKI 6. MAHINDRA 7. VOLKSWAGEN 8. BENZ 9. AUDI 10. VOLVO		Vehicle Name	Text	Vehicle Number	Text	Chassic Number	Text	Colour	Text	Body Type	Text	Vehicle Includes	Multi Picklist	1. Fire Extenuation 2. First Aid Kit 3. Multi Charger Kit 4. Stepney 5. Stereo 6. Tool Kit 7. Tracking Device 8. Tyre Jack		Condition	Picklist	1. Good	
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	2. Medium	
	3. Least	
	Mileage	Text
	Seats	Number
	Start Date	Date/Time
	End Date	Date/Time
	Opportunity	Look up (Opportunities)
Driver	Field label	Data type
	Driver Name	Text
	Licence Number	Text
	Mobile Number	Number
	Fair per Hour	Text
	Vehicle	Lookup (Vehicle)

ACTIVITY & SCREENSHOTS

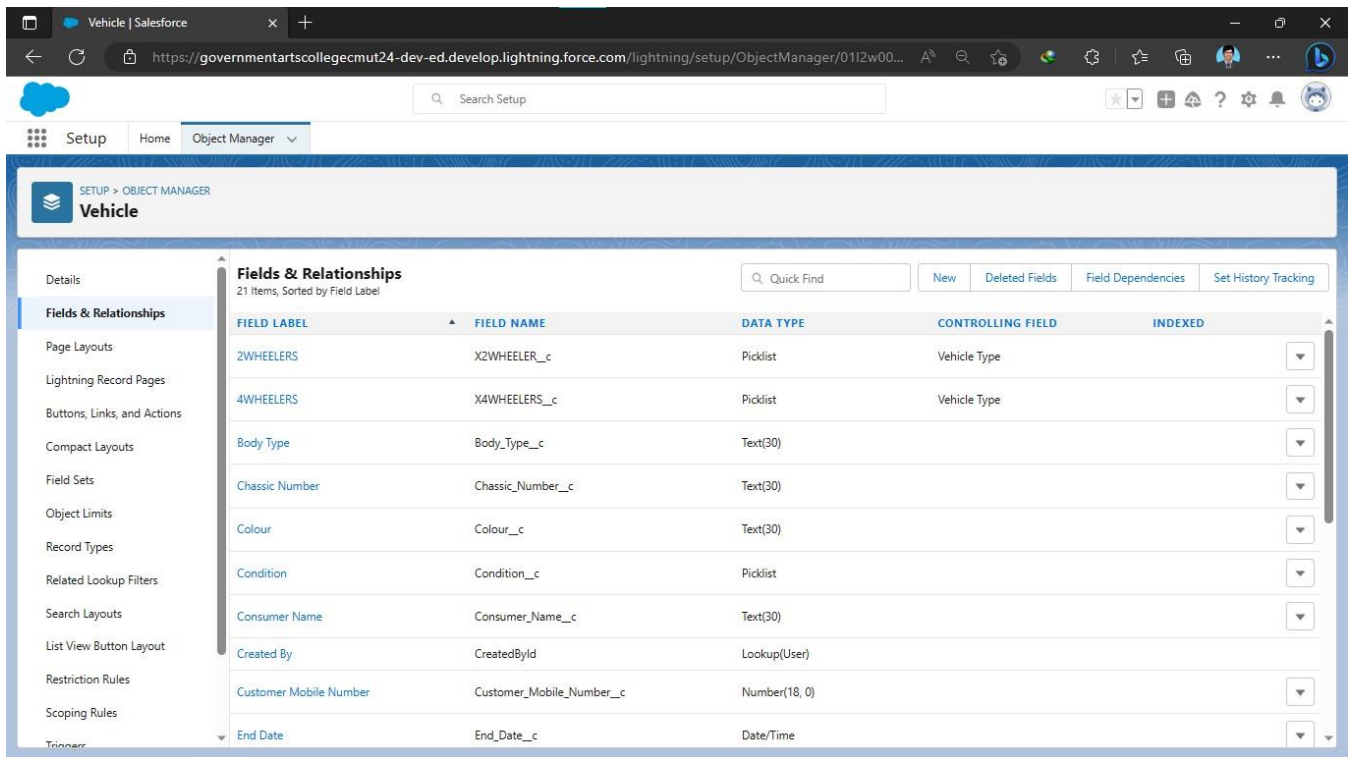


The screenshot shows the Salesforce Object Manager interface for the 'Vehicle' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, and Restriction Rules. The main content area is titled 'Vehicle' and includes a 'Details' section with the following information:

- Description:** (Empty field)
- API Name:** Vehicle__c
- Custom:** (Checked)
- Singular Label:** Vehicle
- Plural Label:** Vehicles
- Enable Reports:** (Checked)
- Track Activities:** (Checked)
- Track Field History:** (Checked)
- Deployment Status:** Deployed
- Help Settings:** Standard salesforce.com Help Window

At the top right of the details section, there are 'Edit' and 'Delete' buttons.

Figure 3 - the details of Object - Vehicle



Vehicle | Salesforce

https://governmentartscollegecmut24-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w00...

Setup Home Object Manager

SETUP > OBJECT MANAGER
Vehicle

Details

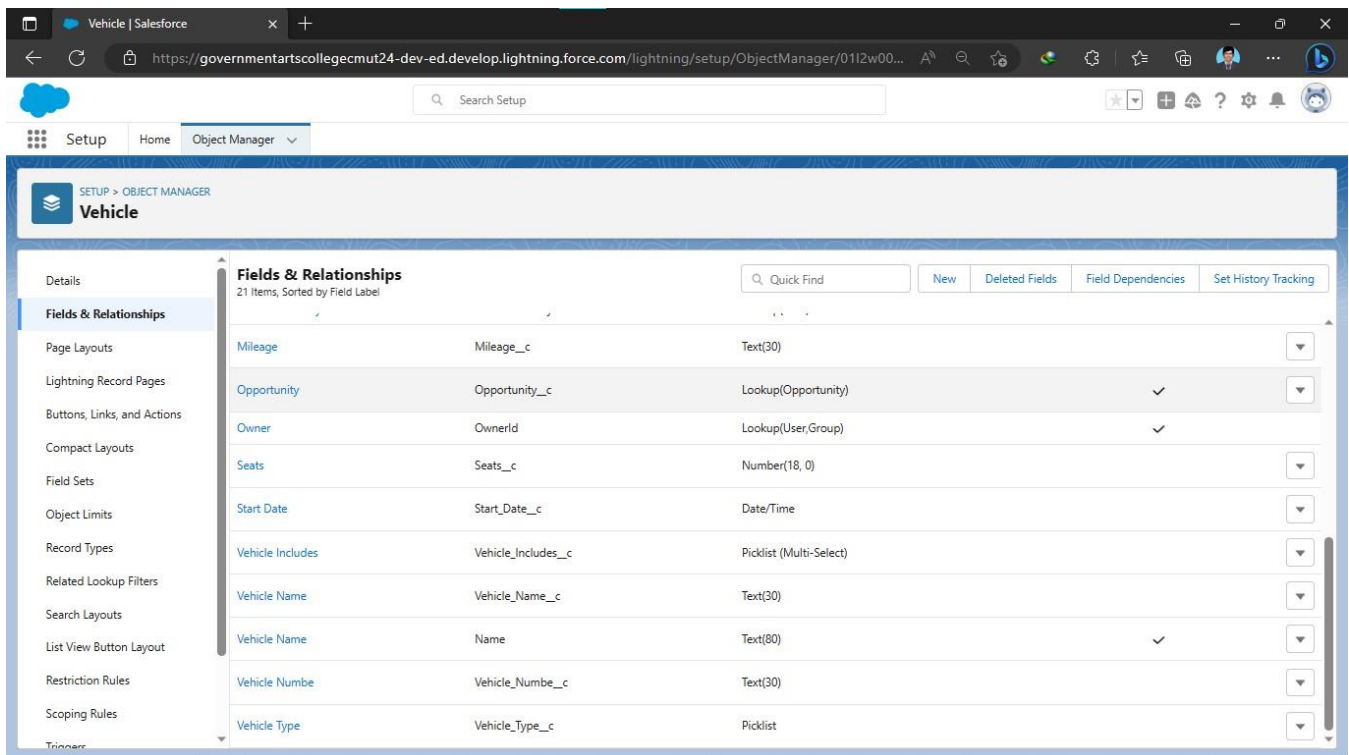
Fields & Relationships
21 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
2WHEELERS	X2WHEELER__c	Picklist	Vehicle Type	
4WHEELERS	X4WHEELERS__c	Picklist	Vehicle Type	
Body Type	Body_Type__c	Text(30)		
Chassic Number	Chassic_Number__c	Text(30)		
Colour	Colour__c	Text(30)		
Condition	Condition__c	Picklist		
Consumer Name	Consumer_Name__c	Text(30)		
Created By	CreatedById	Lookup(User)		
Customer Mobile Number	Customer_Mobile_Number__c	Number(18, 0)		
End Date	End_Date__c	Date/Time		

Page Layouts
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
Scoping Rules
Triggers

Figure 4 - the details of Fields and Relationships of Object - Vehicle



Vehicle | Salesforce

https://governmentartscollegecmut24-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w00...

Setup Home Object Manager

SETUP > OBJECT MANAGER
Vehicle

Details

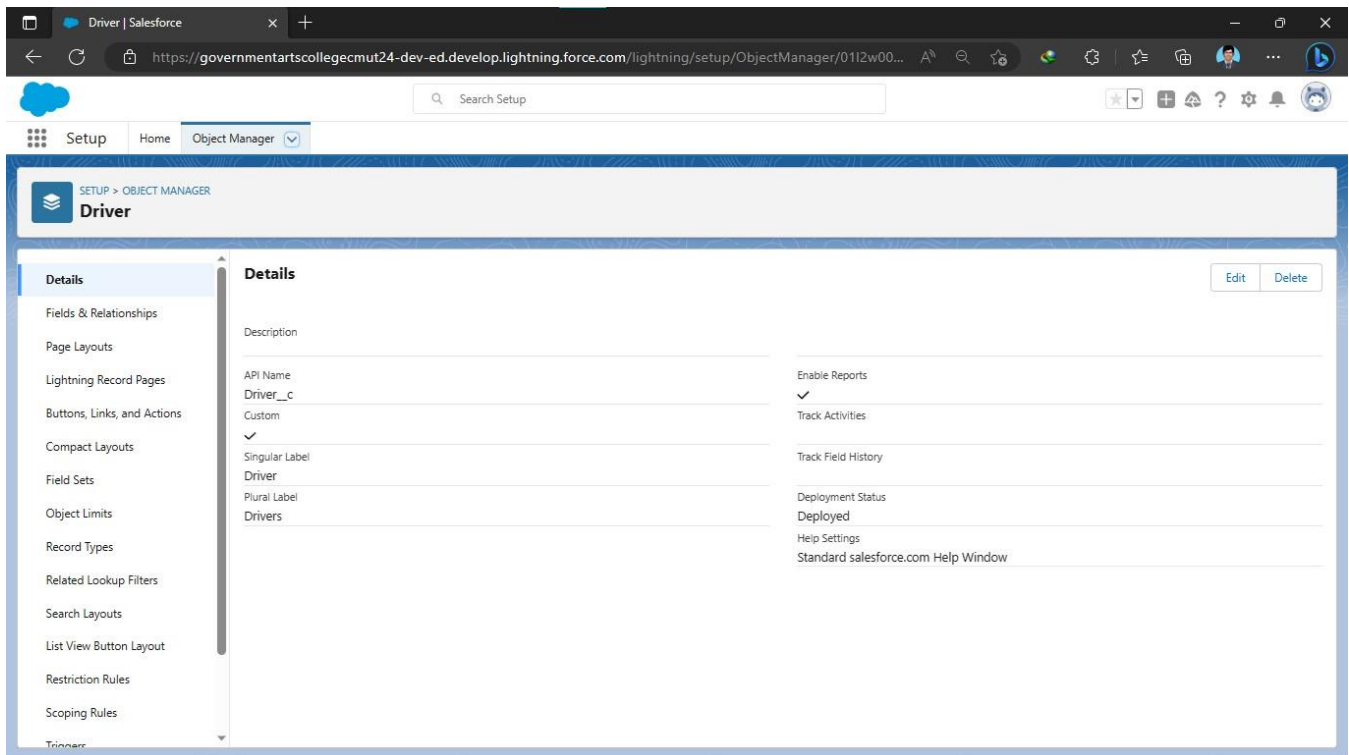
Fields & Relationships
21 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Mileage	Mileage__c	Text(30)		
Opportunity	Opportunity__c	Lookup(Opportunity)		✓
Owner	OwnerId	Lookup(User,Group)		✓
Seats	Seats__c	Number(18, 0)		
Start Date	Start_Date__c	Date/Time		
Vehicle Includes	Vehicle_Includes__c	Picklist (Multi-Select)		
Vehicle Name	Vehicle_Name__c	Text(30)		
Vehicle Name	Name	Text(80)		✓
Vehicle Numbe	Vehicle_Numbe__c	Text(30)		
Vehicle Type	Vehicle_Type__c	Picklist		

Page Layouts
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
Scoping Rules
Triggers

Figure 5- Fields and Relationships details of Object - Vehicle

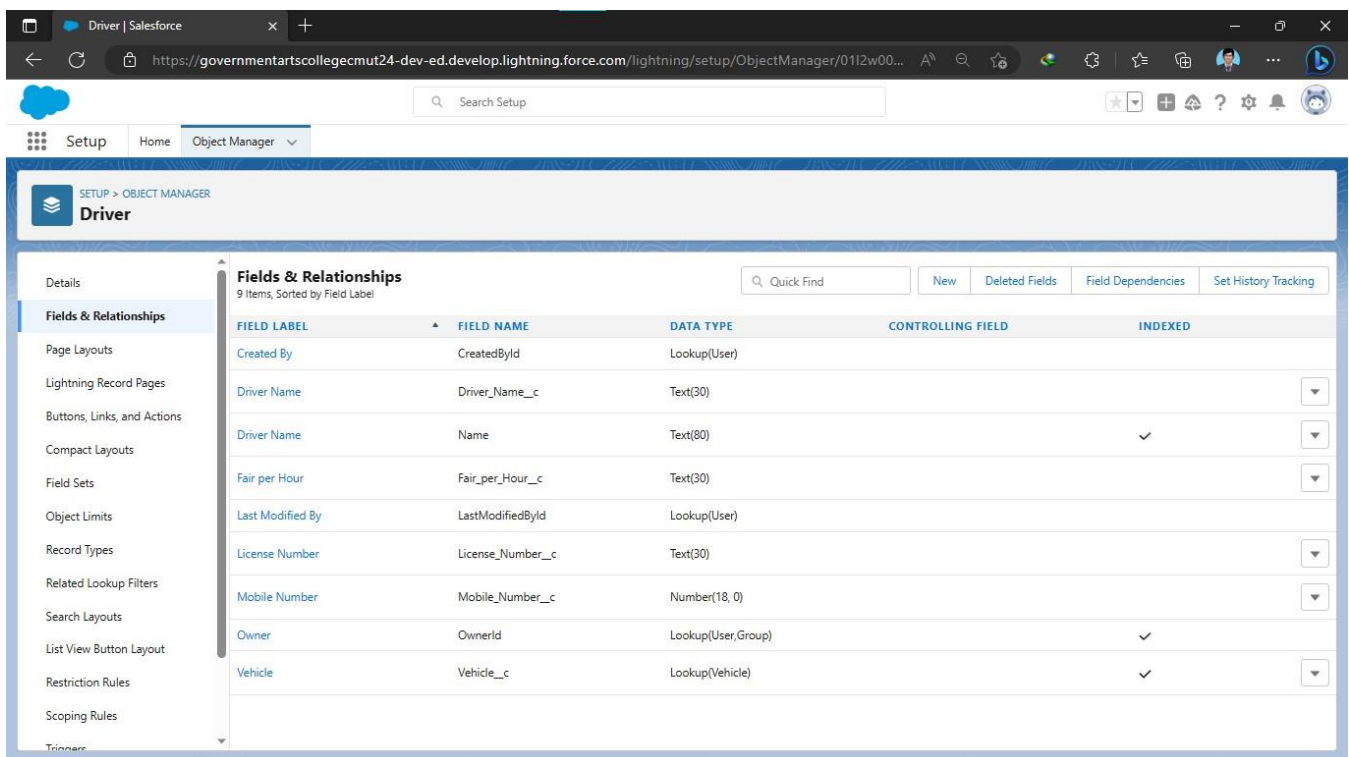


The screenshot shows the Salesforce Object Manager interface for the 'Driver' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Triggers. The 'Details' section is selected, showing the following information:

- Description:** (Empty text area)
- API Name:** Driver__c
- Custom:** Custom
- Singular Label:** Driver
- Plural Label:** Drivers
- Enable Reports:** ☒
- Track Activities:** ☒
- Track Field History:** ☐
- Deployment Status:** Deployed
- Help Settings:** Standard salesforce.com Help Window

Buttons for 'Edit' and 'Delete' are located in the top right corner of the details section.

Figure 6 - The details of Object - Driver



The screenshot shows the Salesforce Object Manager interface for the 'Driver' object, specifically the 'Fields & Relationships' section. The left sidebar is the same as in Figure 6, with 'Fields & Relationships' selected. The main content area displays a table of fields and relationships, sorted by Field Label. The table has columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. There are 9 items in total.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Driver Name	Driver_Name__c	Text(30)		
Driver Name	Name	Text(80)		<input checked="" type="checkbox"/>
Fair per Hour	Fair_per_Hour__c	Text(30)		
Last Modified By	LastModifiedById	Lookup(User)		
License Number	License_Number__c	Text(30)		
Mobile Number	Mobile_Number__c	Number(18, 0)		
Owner	OwnerId	Lookup(User,Group)		<input checked="" type="checkbox"/>
Vehicle	Vehicle__c	Lookup(Vehicle)		<input checked="" type="checkbox"/>

Buttons for 'New', 'Deleted Fields', 'Field Dependencies', and 'Set History Tracking' are located at the top right of the table.

Figure 7 - the details of Fields and Relationships of Object - Driver

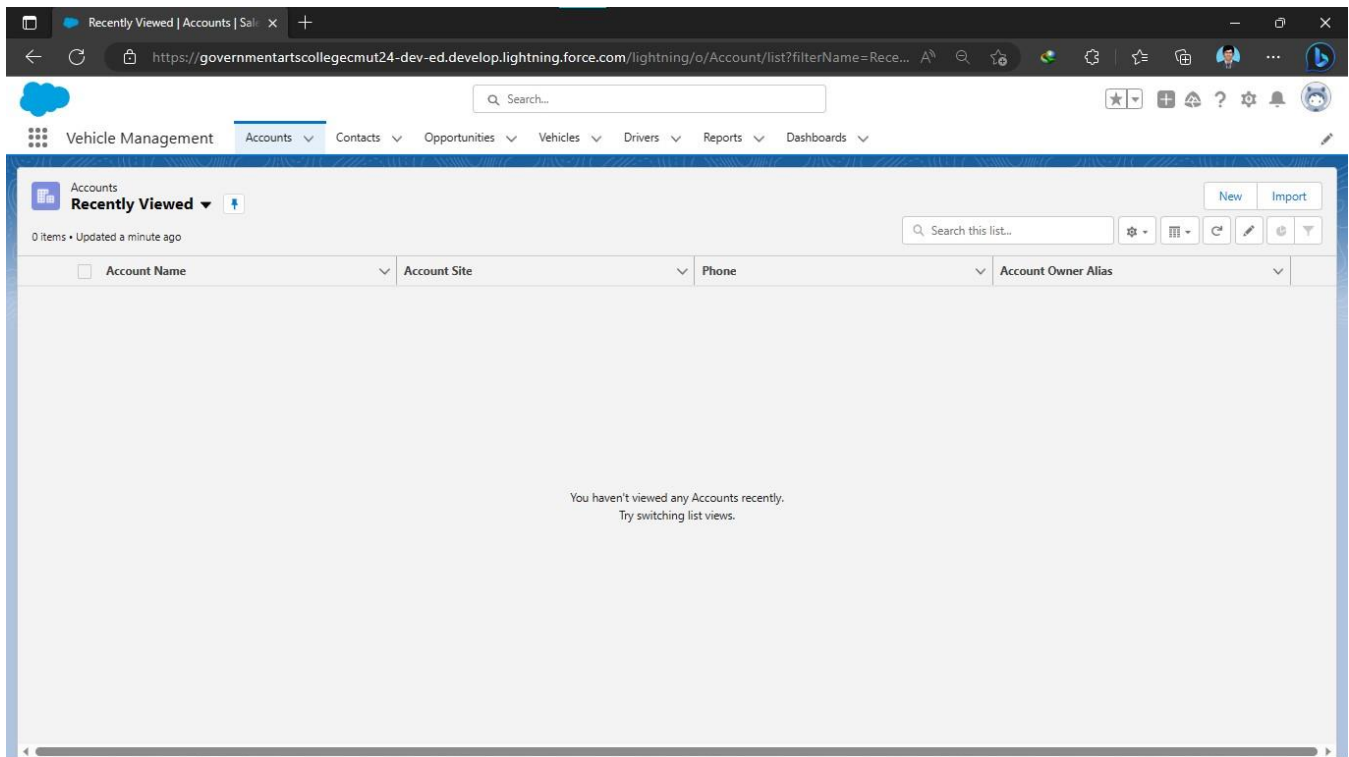


Figure 8 - the outline screen of the Application 'Vehicle Management' created by our team

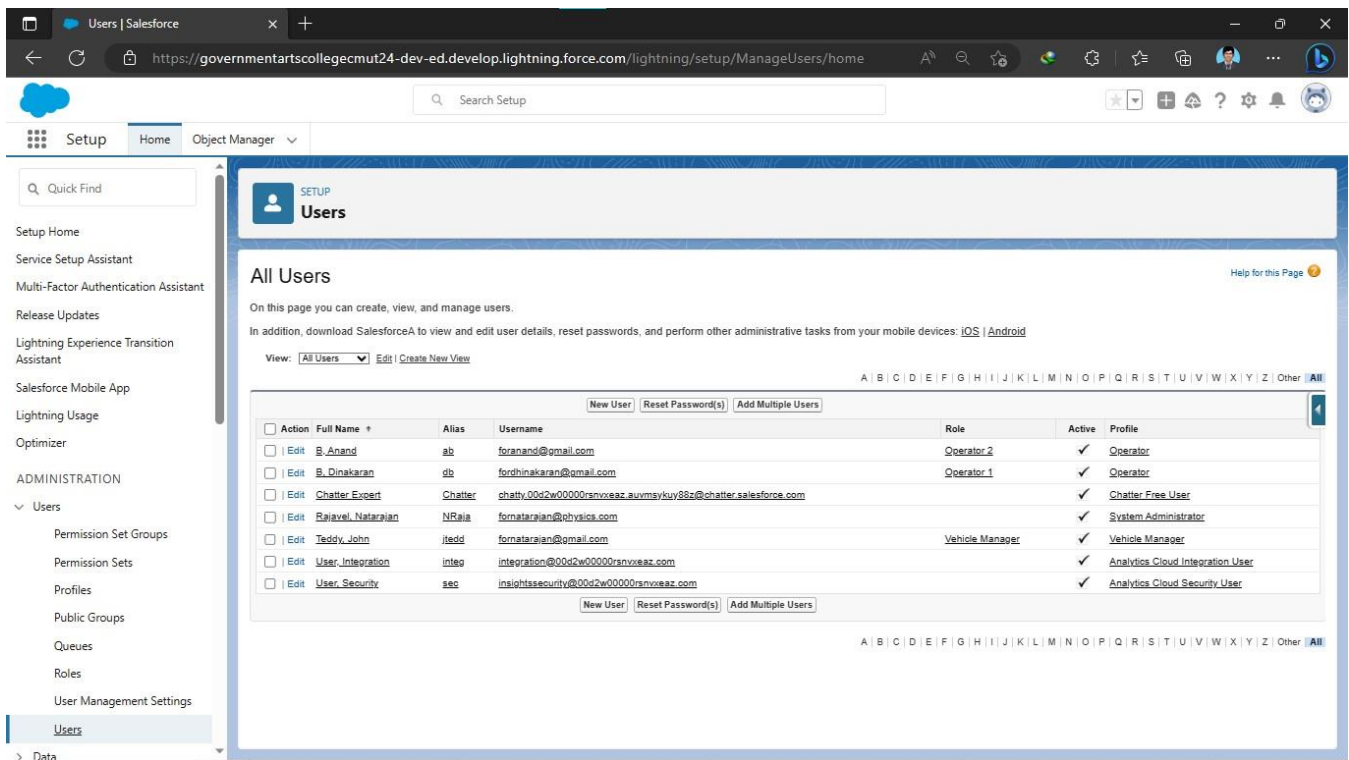
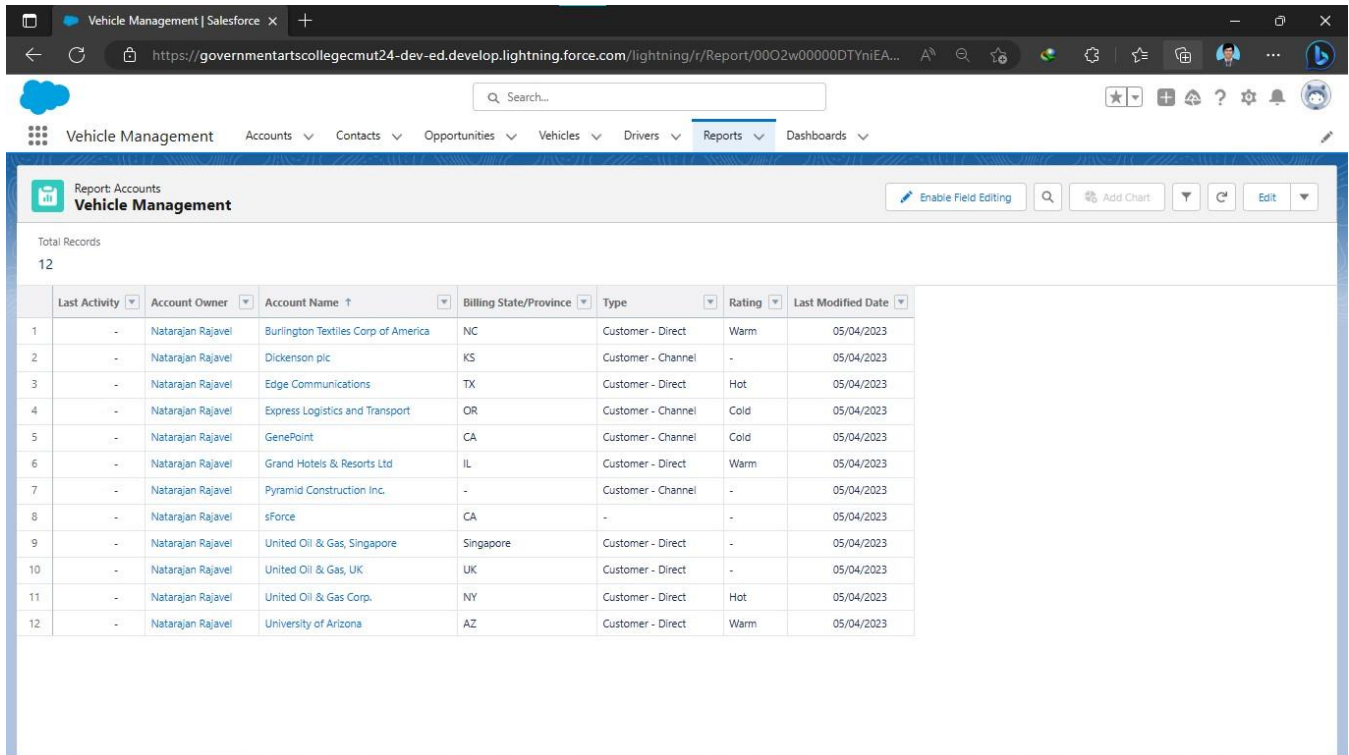


Figure 9 - the users and their assigned works



	Last Activity	Account Owner	Account Name	Billing State/Province	Type	Rating	Last Modified Date
1	-	Natarajan Rajavel	Burlington Textiles Corp of America	NC	Customer - Direct	Warm	05/04/2023
2	-	Natarajan Rajavel	Dickenson plc	KS	Customer - Channel	-	05/04/2023
3	-	Natarajan Rajavel	Edge Communications	TX	Customer - Direct	Hot	05/04/2023
4	-	Natarajan Rajavel	Express Logistics and Transport	OR	Customer - Channel	Cold	05/04/2023
5	-	Natarajan Rajavel	GenePoint	CA	Customer - Channel	Cold	05/04/2023
6	-	Natarajan Rajavel	Grand Hotels & Resorts Ltd	IL	Customer - Direct	Warm	05/04/2023
7	-	Natarajan Rajavel	Pyramid Construction Inc.	-	Customer - Channel	-	05/04/2023
8	-	Natarajan Rajavel	sForce	CA	-	-	05/04/2023
9	-	Natarajan Rajavel	United Oil & Gas, Singapore	Singapore	Customer - Direct	-	05/04/2023
10	-	Natarajan Rajavel	United Oil & Gas, UK	UK	Customer - Direct	-	05/04/2023
11	-	Natarajan Rajavel	United Oil & Gas Corp.	NY	Customer - Direct	Hot	05/04/2023
12	-	Natarajan Rajavel	University of Arizona	AZ	Customer - Direct	Warm	05/04/2023

Figure 10 - Finally, the Report created by our Team for Vehicle Management Application using Salesforce

TRAILHEAD PROFILE PUBLIC URL

- Team Lead - <https://trailblazer.me/id/fornatarajan>
- Team Member 1 - <https://trailblazer.me/id/moviya1>
- Team Member 2 - <https://trailblazer.me/id/m1403>
- Team Member 3 - <https://trailblazer.me/id/ppavithrapandian>

ADVANTAGES & DISADVANTAGES

Advantages

Cars are a great way to get around. They are also a source of great comfort, Allowing us to travel long distances in a short amount of time. They greatest advantage of cars is that they can be used for many purposes, such as transporting goods or people and even performing medical procedures.

- Then tracking and monitoring allows your Organisation to locate employees that may be impacted by a local incident

- Your people impacted are then able to receive the required care and support. Improved operating efficiency and vehicle safety.

Disadvantages

- It is difficult to track the occupancy.
- More manual hours need to generate required reports.
- It is tedious to track the details of cabs provided by third party.
- There is no possibility to track the approvals of requests.
- No Co-ordination between various department.

APPLICATIONS

- Easy to manage historical reports easily
- Improving traffic management
- Providing driver assistance
- Improving Fuel Efficiency
- Direction and Route Optimization
- Prevents possible crashes
- Security Risks
- Concerns of liability
- Privacy Issues.

CONCLUSION

May be these some disadvantages or other ways to select a car but in my opinion is Vehicle Management System through our demonstrated method is the best way.

FUTURE SCOPE

The surge of demand for parking spaces stems predominantly from two major trends the increase of car ownership and increasing urbanization. To understand the magnitude of parking lot problems municipal communities face when it comes to parking, take a look at the following statistics.

The growing scale of urbanization brings more challenges in terms of infrastructure planning and transportation network- including the rising demand for comfortable parking.

- Searching for parking results in considerable losses in productive time and money.
- Autonomous vehicles will likely present new demands to parking that have to be foreseen and analyzed.