

Vehicle Management System Using Salesforce

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Project Name	Vehicle Management System Using Salesforce
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Vehicle Management System Using Salesforce

1. INTRODUCTION

1.1 Overview

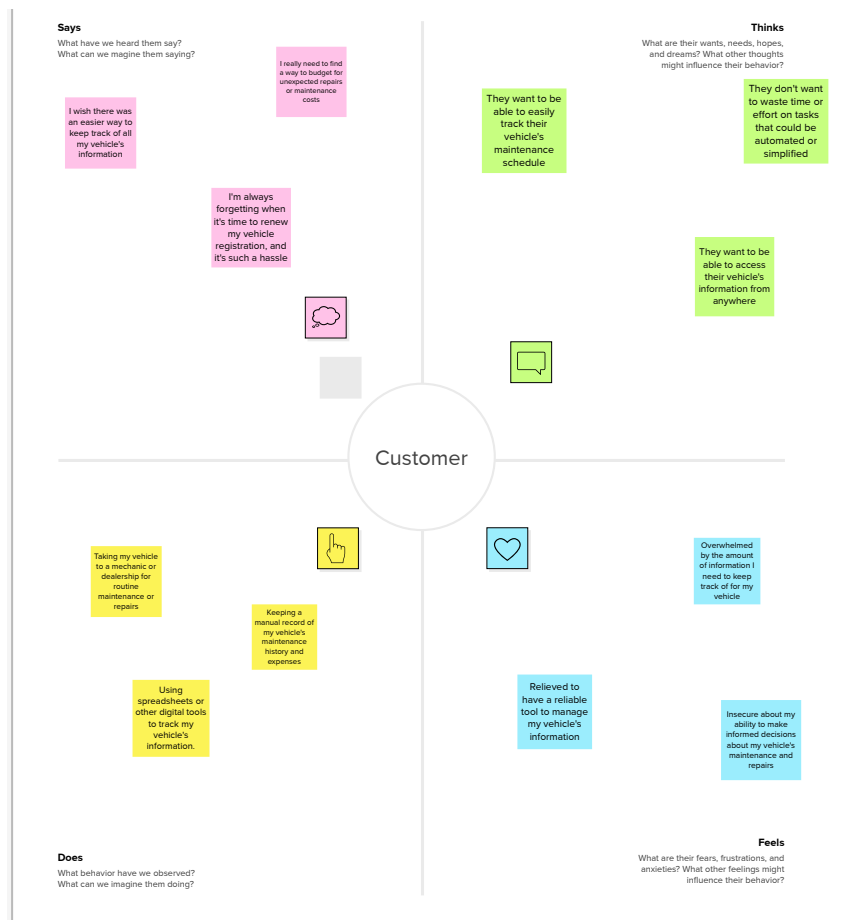
my project, the Vehicle Management System using Salesforce. This project aims to streamline the process of managing a fleet of vehicles by utilizing the power of Salesforce's platform. Through this system, users can easily track the status of their vehicles, monitor maintenance schedules, and generate reports for analysis.

1.2 Purpose

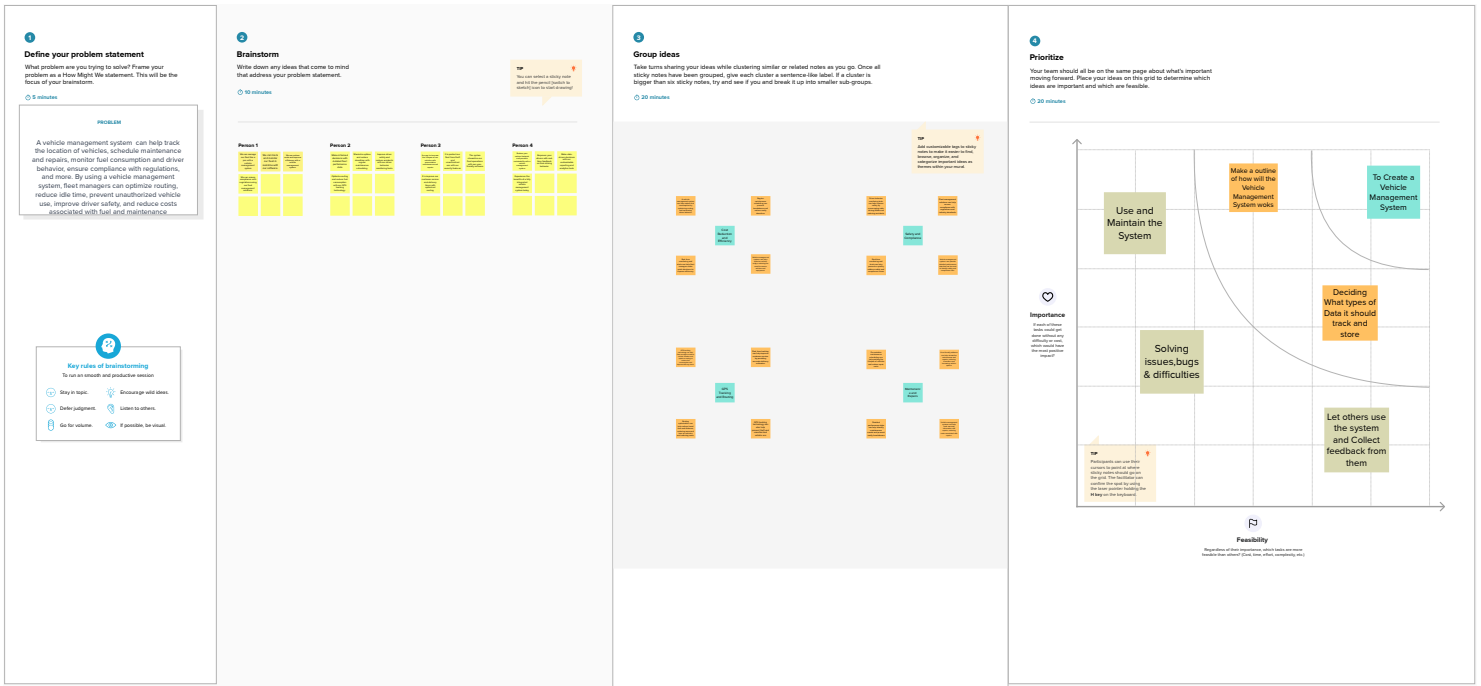
It enables users to easily access and update vehicle details, track driver assignments and schedules, monitor maintenance schedules, and generate reports. By using this system, organizations can improve their operational efficiency, reduce costs, and increase overall productivity

2. PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy Map



2.2 Ideation & Brainstorming Map



3. RESULT

3.1 Data Model:

Object name	Fields in the Object	
Vehicles	Field label	Data Types
	Customer Name	Text
	Customer Mobile No	Number
	Vehicle Type i)2 wheeler ii)4 wheeler	Picklist

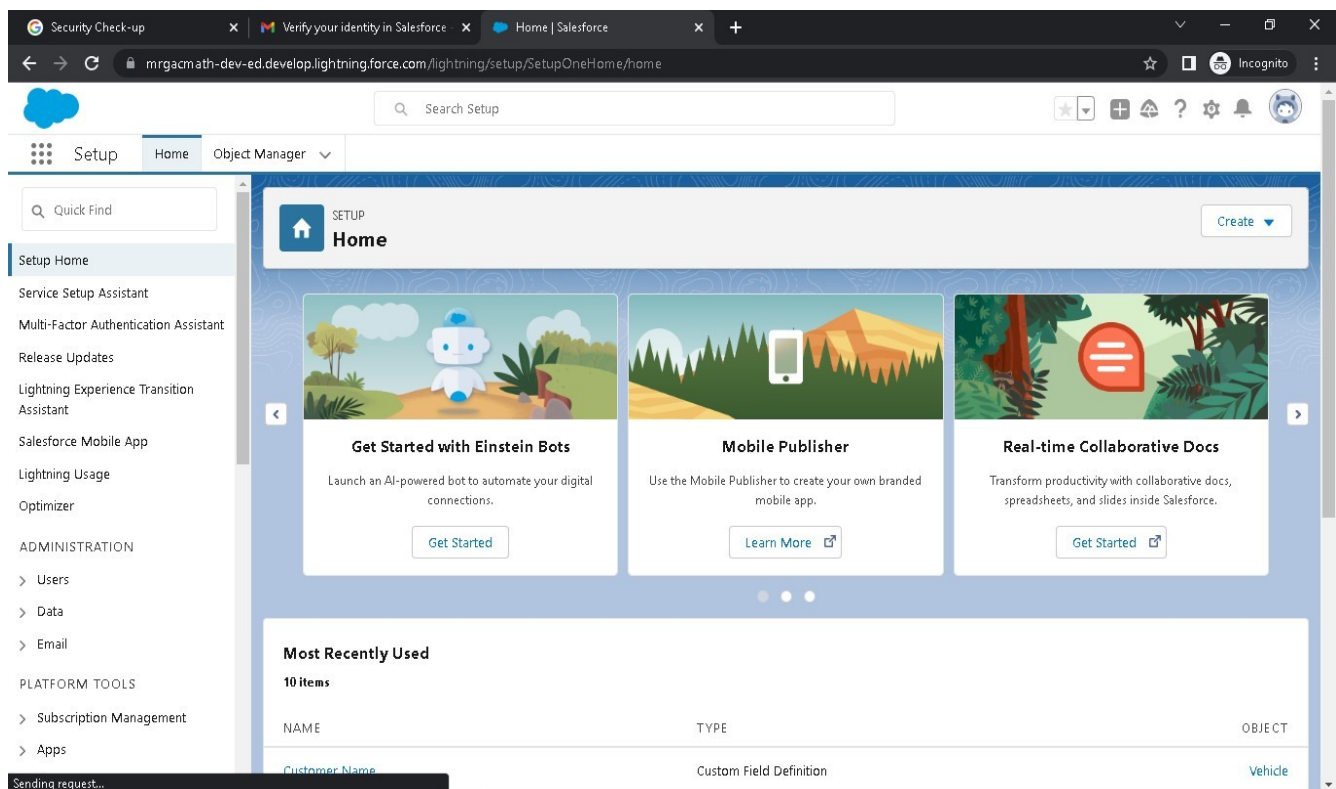
Object Name	Fields in the Object	
Vehicles (Continuation of previous Page)	Field Label	Data Type
	2WHEELERS i) HERO ii) HONDA iii) BAJAJ iv) ROYAL ENFIELD v) TVS vi) KINETIC vii) OLA viii) JAWA ix) SD x) BATTERY	Picklist
	4WHEELERS i) RENAULT ii) SKODA iii) HONDA iv) HYUNDAI v) SUZUKI Picklist vi) MAHINDRA vii) VOLKSWAGEN viii) BENZ ix) AUDI x) VOLVO	Picklist
	Vehicle Name	Text
	Vehicle No	Text
	Chassic No	Text
	Colour	Text
	Body Type	Text

Object Name	Fields in the Object	
Vehicles (Continuation of Previous Page)	Field Label	Data Type
	Vehicle Includes i)Fire Extenuation ii)First Aid Kit iii)Multi Charger kit iv)Stepney v)Stereo vi)Tool Kit vii)Tracking Device viii)Tyre Jack	Multi Picklist
	Condition i)Good ii)Medium iii)Least	Picklist
	Mileage	Text
	Seats	Number
	Start Date	Date/Time
	End Date	Date/Time
	Opportunity	Lookup(opportunities)

Object Name	Field in the Object	
Driver	Field Label	Data Type
	Driver Name	Text
	Licence No	Text
	Mobile No	Number
	Fair Per Hour	Text
	Vehicle	Lookup(Vehicle)

3.2 Activities & Screenshots:

Milestone 1: Creation of Salesforce Account



Milestone 2: Creating 'Vehicles , Driver' Objects

The screenshot shows the Salesforce Object Manager interface for the 'Vehicle' object. The browser address bar displays the URL: `mrgacmath-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w000004EdL3/Details/view`. The page header includes the Salesforce logo, a search bar, and navigation tabs for Setup, Home, and Object Manager. The left sidebar lists various configuration 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, and List View Button Layout. The main content area is titled 'Details' and contains the following information:

Field	Value
Description	
API Name	Vehicle__c
Custom	✓
Singular Label	Vehicle
Plural Label	Vehicles
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.

The screenshot shows the Salesforce Object Manager interface for the 'Driver' object. The browser address bar displays the URL: `mrgacmath-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w000004EdL8/Details/view`. The page header includes the Salesforce logo, a search bar, and navigation tabs for Setup, Home, and Object Manager. The left sidebar lists various configuration 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, and List View Button Layout. The main content area is titled 'Details' and contains the following information:

Field	Value
Description	
API Name	Driver__c
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.

Milestone 3: Creating Fields & Relationships in Vehicles

Naanmudi x Vehicle_M x NM_Arts_F x Vehicle an x Vehicle | S x New chat x Telegram x hemnath x New Tab x

mrgacmath-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w000004EdL3/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Vehicle

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

Fields & Relationships

22 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	TwoWheelers__c	Picklist	Vehicle Type	
4WHEELERS	FourWheelers__c	Picklist	Vehicle Type	
Account	Account__c	Lookup(Account)		✓
Body Type	Body_Type__c	Text(50)		
Chassic No	Chassic_No__c	Number(18, 0)		
Colour	Colour__c	Text(50)		
Condition	Condition__c	Picklist		
Contact	Contact__c	Lookup(Contact)		✓

Creating Fields & Relationships in Driver

Naanmudi x Vehicle_M x NM_Arts_F x Vehicle an x Driver | Sal x New chat x Telegram x hemnath x New Tab x

mrgacmath-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0112w000004EdL8/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Driver

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

Fields & Relationships

9 Items, Sorted by Field Label

Quick Find

New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Account	Account__c	Lookup(Account)		✓
Created By	CreatedById	Lookup(User)		
Driver Name	Name	Text(80)		✓
Fair Per Hour	Fair_Per_Hour__c	Text(50)		
Last Modified By	LastModifiedById	Lookup(User)		
Licence No	Licence_No__c	Text(50)		
Mobile No	Mobile_No__c	Number(18, 0)		
Owner	OwnerId	Lookup(User,Group)		✓
Vehicle	Vehicle__c	Lookup(Vehicle)		✓

Milestone 4: Creating ‘Vehicle Management’ Lightning App

Naanmudi x Vehicle_M x NM_Arts x Recently V x All Account x New chat x Telegram x hemnath x New Tab x +

mrgacmath-dev-ed.develop.lightning.force.com/lightning/o/Account/list?filterName=00B2w0000eSnGBEAK

Search...

Vehicle Management... Accounts Contacts Opportunities Vehicles Drivers Reports Dashboards

Accounts

All Accounts

New Import Printable View

13 items • Sorted by Account Name • Filtered by All accounts • Updated a few seconds ago

Search this list...

	Account Name	Account Site	Billing State/Provi...	Phone	Type	Account Owner AI...
1	Burlington Textiles Corp of America		NC	(336) 222-7000	Customer - Direct	Hemnath
2	Dickenson plc		KS	(785) 241-6200	Customer - Channel	Hemnath
3	Edge Communications		TX	(512) 757-6000	Customer - Direct	Hemnath
4	Express Logistics and Transport		OR	(503) 421-7800	Customer - Channel	Hemnath
5	GenePoint		CA	(650) 867-3450	Customer - Channel	Hemnath
6	Grand Hotels & Resorts Ltd		IL	(312) 596-1000	Customer - Direct	Hemnath
7	Pyramid Construction Inc.			(014) 427-4427	Customer - Channel	Hemnath
8	Sample Account for Entitlements					autoproc
9	sForce		CA	(415) 901-7000		Hemnath
10	United Oil & Gas Corp.		NY	(212) 842-5500	Customer - Direct	Hemnath
11	United Oil & Gas, Singapore		Singapore	(650) 450-8810	Customer - Direct	Hemnath
12	United Oil & Gas, UK		UK	+44 191 4956203	Customer - Direct	Hemnath
13	University of Arizona		AZ	(520) 773-9050	Customer - Direct	Hemnath

Milestone 5: Creating ‘Vehicle Manager’ Profile

Naanmudi x Vehicle_M x NM_Arts x Recently x Profiles x All Account x New chat x Telegram x hemnath x New Tab x +

mrgacmath-dev-ed.develop.lightning.force.com/lightning/setup/EnhancedProfiles/page?address=%2F00e2w000005wnCW

Search Setup

Setup Home Object Manager

profiles

Users Profiles

Didn't find what you're looking for? Try using Global Search.

SETUP Profiles

Profile Vehicle Manager

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail

Name Vehicle Manager

User License Salesforce

Description

Created By Hemnath Vedhaiyan, 14/04/2023, 4:30 pm

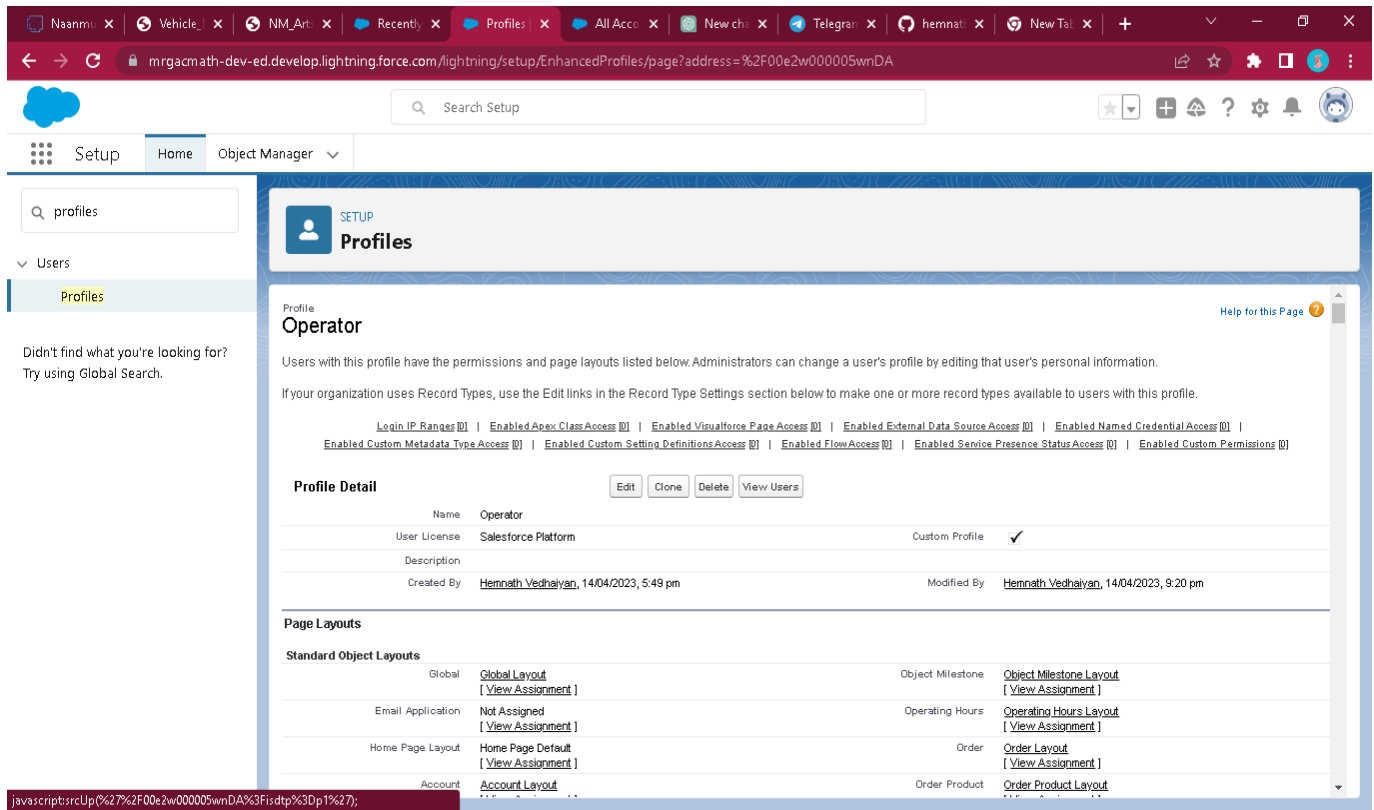
Modified By Hemnath Vedhaiyan, 14/04/2023, 9:20 pm

Custom Profile

Page Layouts

Standard Object Layouts	
Global	Global Layout [View Assignment]
Email Application	Not Assigned [View Assignment]
Home Page Layout	DE Default [View Assignment]
Account	Account Layout
Object Milestone	Object Milestone Layout [View Assignment]
Operating Hours	Operating Hours Layout [View Assignment]
Opportunity	Opportunity Layout [View Assignment]
Opportunity Product	Opportunity Product Layout

Creating 'Operator' Profile



The screenshot shows the Salesforce Setup interface for the 'Profiles' section. The left sidebar contains a search bar with 'profiles' and a list of navigation items: Users, Profiles (selected), and a message 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'SETUP Profiles' and includes a 'Profile' section for 'Operator'. Below this, there is a 'Profile Detail' section with fields for Name, User License, Description, Created By, and Modified By. The 'Page Layouts' section is also visible, showing a table of layouts for various objects like Global, Email Application, Home Page Layout, Account, Object Milestone, Operating Hours, Order, and Order Product.

Search Setup

profiles

Users

Profiles

Didn't find what you're looking for? Try using Global Search.

SETUP Profiles

Profile

Operator

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail

Edit Clone Delete View Users

Name Operator

User License Salesforce Platform Custom Profile ☒

Description

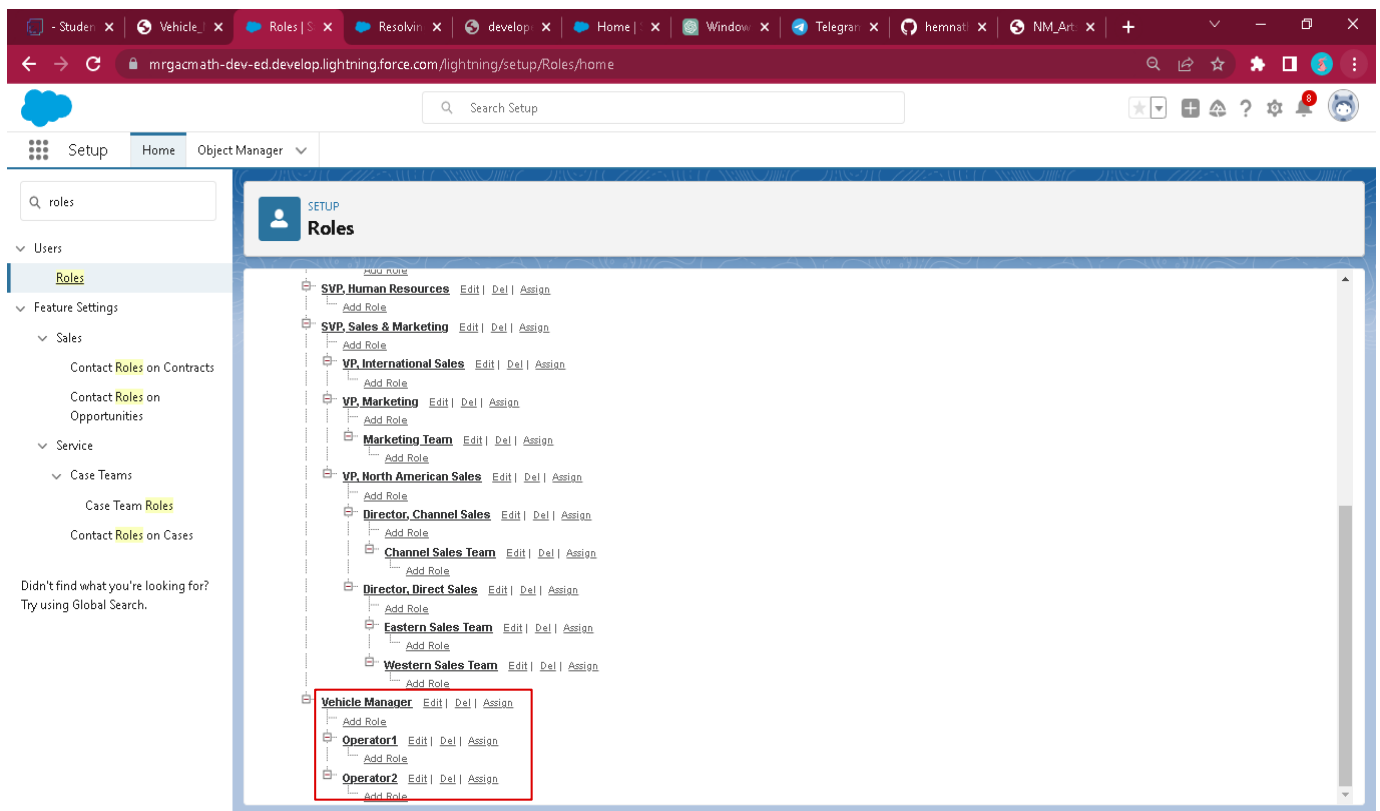
Created By Hemnath Vedhaiyan, 14/04/2023, 5:49 pm Modified By Hemnath Vedhaiyan, 14/04/2023, 9:20 pm

Page Layouts

Standard Object Layouts

Object	Layout	View Assignment
Global	Global Layout	[View Assignment]
Email Application	Not Assigned	[View Assignment]
Home Page Layout	Home Page Default	[View Assignment]
Account	Account Layout	[View Assignment]
Object Milestone	Object Milestone Layout	[View Assignment]
Operating Hours	Operating Hours Layout	[View Assignment]
Order	Order Layout	[View Assignment]
Order Product	Order Product Layout	[View Assignment]

Setting up 'Vehicle Manager, Operator 1, Operator 2' Roles



The screenshot shows the Salesforce Setup interface for the 'Roles' section. The left sidebar contains a search bar with 'roles' and a list of navigation items: Users, Roles (selected), Feature Settings, Sales, Service, and Case Teams. The main content area is titled 'SETUP Roles' and displays a hierarchical tree of roles. The roles are organized into a hierarchy starting with 'SVP, Human Resources' and 'SVP, Sales & Marketing'. The 'Vehicle Manager' role is highlighted with a red box, and it has two sub-roles, 'Operator1' and 'Operator2', which are also highlighted with a red box.

Search Setup

roles

Users

Roles

Feature Settings

Sales

Service

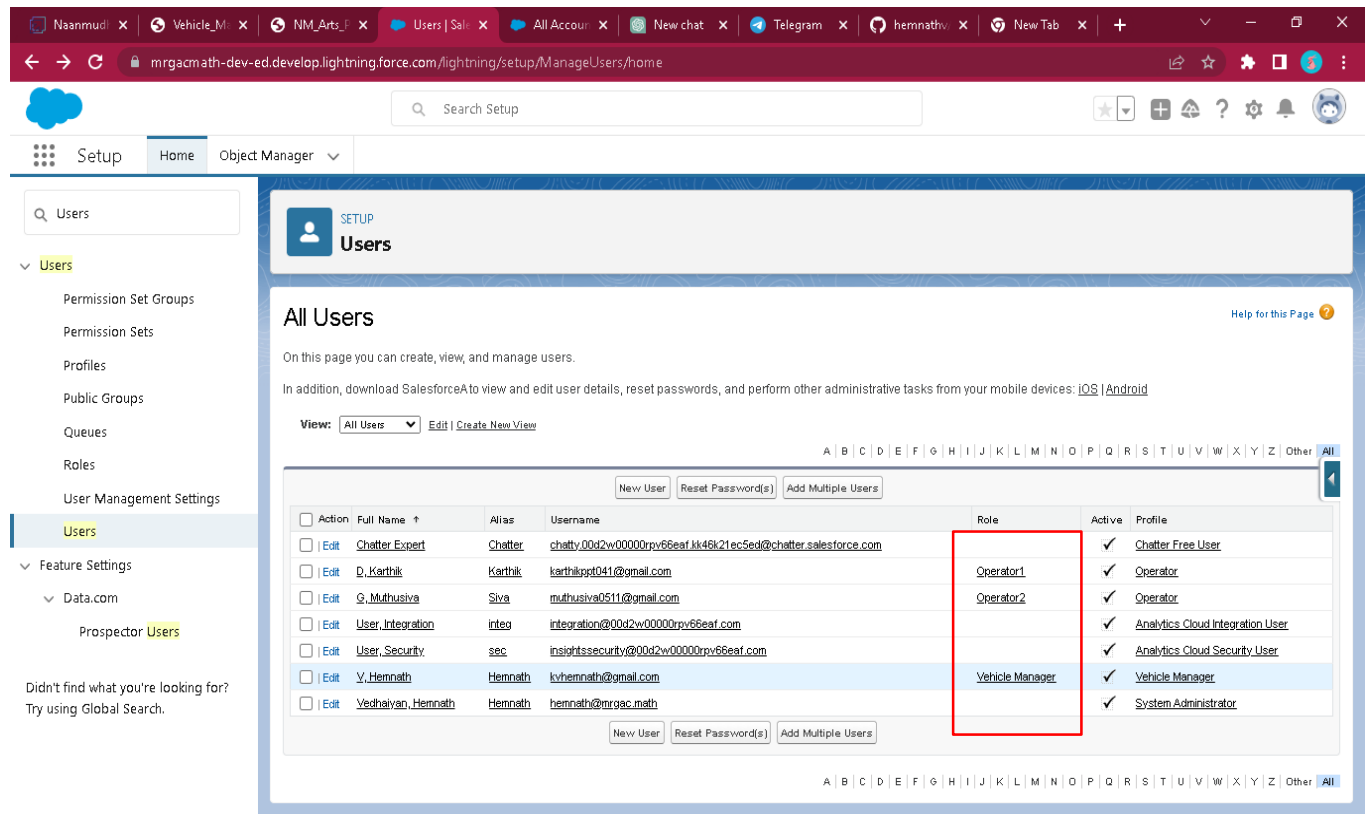
Case Teams

Didn't find what you're looking for? Try using Global Search.

SETUP Roles

- SVP, Human Resources Edit | Del | Assign
 - Add Role
- SVP, Sales & Marketing Edit | Del | Assign
 - Add Role
 - VP, International Sales Edit | Del | Assign
 - Add Role
 - VP, Marketing Edit | Del | Assign
 - Add Role
 - Marketing Team Edit | Del | Assign
 - Add Role
 - VP, North American Sales Edit | Del | Assign
 - Add Role
 - Director, Channel Sales Edit | Del | Assign
 - Add Role
 - Channel Sales Team Edit | Del | Assign
 - Add Role
 - Director, Direct Sales Edit | Del | Assign
 - Add Role
 - Eastern Sales Team Edit | Del | Assign
 - Add Role
 - Western Sales Team Edit | Del | Assign
 - Add Role
 - Vehicle Manager Edit | Del | Assign
 - Add Role
 - Operator1 Edit | Del | Assign
 - Add Role
 - Operator2 Edit | Del | Assign
 - Add Role

Milestone-6: Creating Users



The screenshot shows the Salesforce Setup interface for managing users. The left sidebar contains navigation options like Users, Permission Set Groups, and Feature Settings. The main content area is titled 'All Users' and includes a table of existing users. A red box highlights the 'Role' column, showing roles like 'Operator1', 'Operator2', and 'Vehicle Manager'. The 'Vehicle Manager' role is highlighted in blue.

Users

On this page you can create, view, and manage users.

In addition, download SalesforceA to view and edit user details, reset passwords, and perform other administrative tasks from your mobile devices: [iOS](#) | [Android](#)

View: All Users | Edit | Create New View

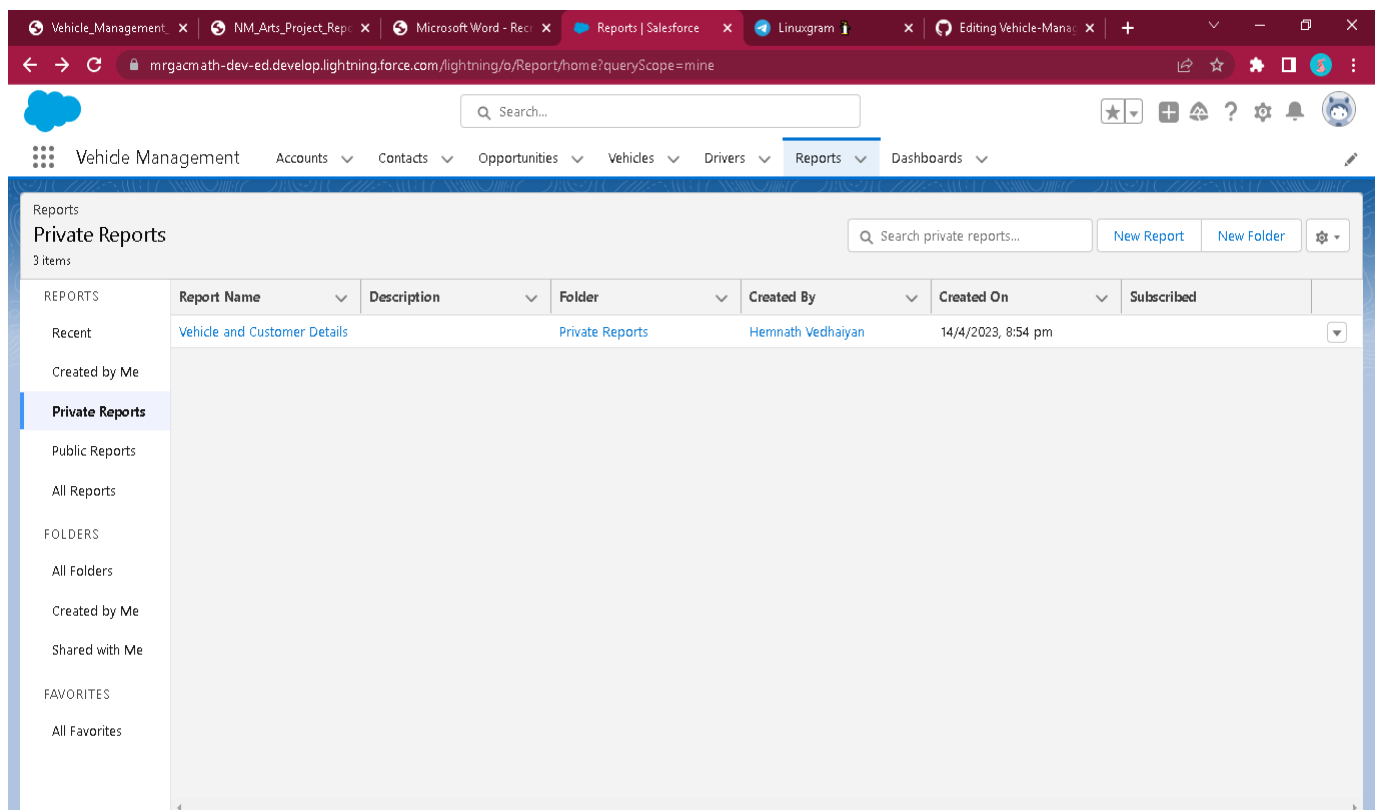
A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatter_00d2w00000rpv66eaf.kk46k21ec5ed@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/> Edit	D. Karthik	Karthik	karthikpt041@gmail.com	Operator1	<input checked="" type="checkbox"/>	Operator
<input type="checkbox"/> Edit	G. Muthusiva	Siva	muthusiva0511@gmail.com	Operator2	<input checked="" type="checkbox"/>	Operator
<input type="checkbox"/> Edit	User_Integration	integ	integration@00d2w00000rpv66eaf.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User_Security	sec	insightssecurity@00d2w00000rpv66eaf.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User
<input type="checkbox"/> Edit	V. Hennath	Hennath	vhennath@gmail.com	Vehicle Manager	<input checked="" type="checkbox"/>	Vehicle Manager
<input type="checkbox"/> Edit	Vedhaiyan, Hennath	Hennath	hennath@mrgac.math		<input checked="" type="checkbox"/>	System Administrator

New User | Reset Password(s) | Add Multiple Users

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | All

Milestone-7: Creating New Reports and Dashboard



The screenshot shows the Salesforce Reports interface. The left sidebar contains navigation options like Reports, Recent, Created by Me, and Private Reports. The main content area is titled 'Private Reports' and includes a table of reports. The 'Vehicle and Customer Details' report is highlighted in blue.

Reports

Search private reports...

New Report | New Folder | Settings

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Vehicle and Customer Details		Private Reports	Hennath Vedhaiyan	14/4/2023, 8:54 pm	

Created by Me

Private Reports

Public Reports

All Reports

FOLDERS

All Folders

Created by Me

Shared with Me

FAVORITES

All Favorites

Creating Dashboard:

The screenshot shows a Salesforce dashboard titled "Vehicle and Customer Details". The dashboard is viewed as "Hemnath Vedhaiyan" on "15-Apr-2023, 10:36 am". The dashboard contains a table with the following data:

Account Name ↑	Full Name	Vehicle Name	Contact ID	Customer Name
Burlington Textiles Corp of America	Jack Rogers	-	0032w000012aJM5	-
Dickenson plc	Andy Young	-	0032w000012aJM7	-
Edge Communications	Rose Gonzalez	-	0032w000012aJM3	-
Edge Communications	Sean Forbes	-	0032w000012aJM4	-
Express Logistics and Transport	Babara Levy	-	0032w000012aJMC	-
Express Logistics and Transport	Josh Davis	-	0032w000012aJMD	-
GenePoint	Edna Frank	-	0032w000012aJMJ	-
Grand Hotels & Resorts Ltd	John Bond	-	0032w000012aJM9	-
Grand Hotels & Resorts Ltd	Tim Barr	-	0032w000012aJM8	-
Pyramid Construction Inc.	Pat Stumuller	-	0032w000012aJM6	-

Below the table, there is a link: "View Report (Vehicle and Customer Details)".

4. TRAILHEAD PROFILE PUBLIC URL

Team lead : <https://trailblazer.me/id/hemnathv>

Team member 1: <https://trailblazer.me/id/karthikppt>

Team member 2: <https://trailblazer.me/id/nirosh21>

Team member 3: <https://trailblazer.me/id/muthusiva>

5. ADVANTAGES AND DISADVANTAGES

Advantages:

1. **Real-time tracking:** A VMS can provide real-time tracking of vehicles, enabling fleet managers to monitor their location, speed, and status at any given time.
2. **Reduced costs:** By optimizing routes and monitoring fuel consumption, a VMS can help reduce overall operating costs for a fleet.
3. **Enhanced customer service:** With real-time tracking and route optimization, a VMS can help improve on-time delivery and provide better customer service.

Disadvantages:

1. **Implementation costs:** Implementing a VMS can be expensive, requiring hardware, software, and personnel to set up and maintain the system.
2. **Training:** Fleet managers and drivers may require training to use the VMS effectively, which can add to the cost and time required for implementation.
3. **Maintenance:** A VMS requires regular maintenance and updates to ensure that it continues to function properly and provide accurate data. This can add to the ongoing cost of using the system.

6. APPLICATIONS

1. *Logistics and transportation:* VMS can be used by transportation companies, logistics providers, and delivery services.
2. *Public transportation:* VMS can be used by public transit agencies to manage buses, trains, and other vehicles, providing real-time information to passengers and optimizing schedules.
3. *Emergency Services:* VMS can be used by emergency services, such as police and fire departments, to manage and dispatch their vehicles in response to emergencies.
4. *Rental car companies:* VMS can be used by rental car companies to manage their fleets, track vehicle usage, and optimize maintenance schedules.

7. CONCLUSION

In Conclusion, Our system provides real-time tracking, route optimization, and driver behaviour monitoring, enabling fleet managers to reduce costs, improve safety, and enhance customer service

It has the potential to revolutionize fleet management.

This project provided valuable experience and insights into the potential of technology in transportation.

8. FUTURE SCOPE

Providing data analytics and reporting capabilities to help fleet managers make informed decisions and optimize operations.

The future scope for a vehicle management system is vast, with opportunities to incorporate new technologies and features to enhance fleet efficiency, safety, and sustainability. As new technologies emerge and businesses seek to optimize their operations, there will be continued demand for advanced vehicle management systems.