

# **VEHICLE MANAGEMENT SYSTEM USING SALESFORCE**

## **INTRODUCTION**

### **1.1 Overview**

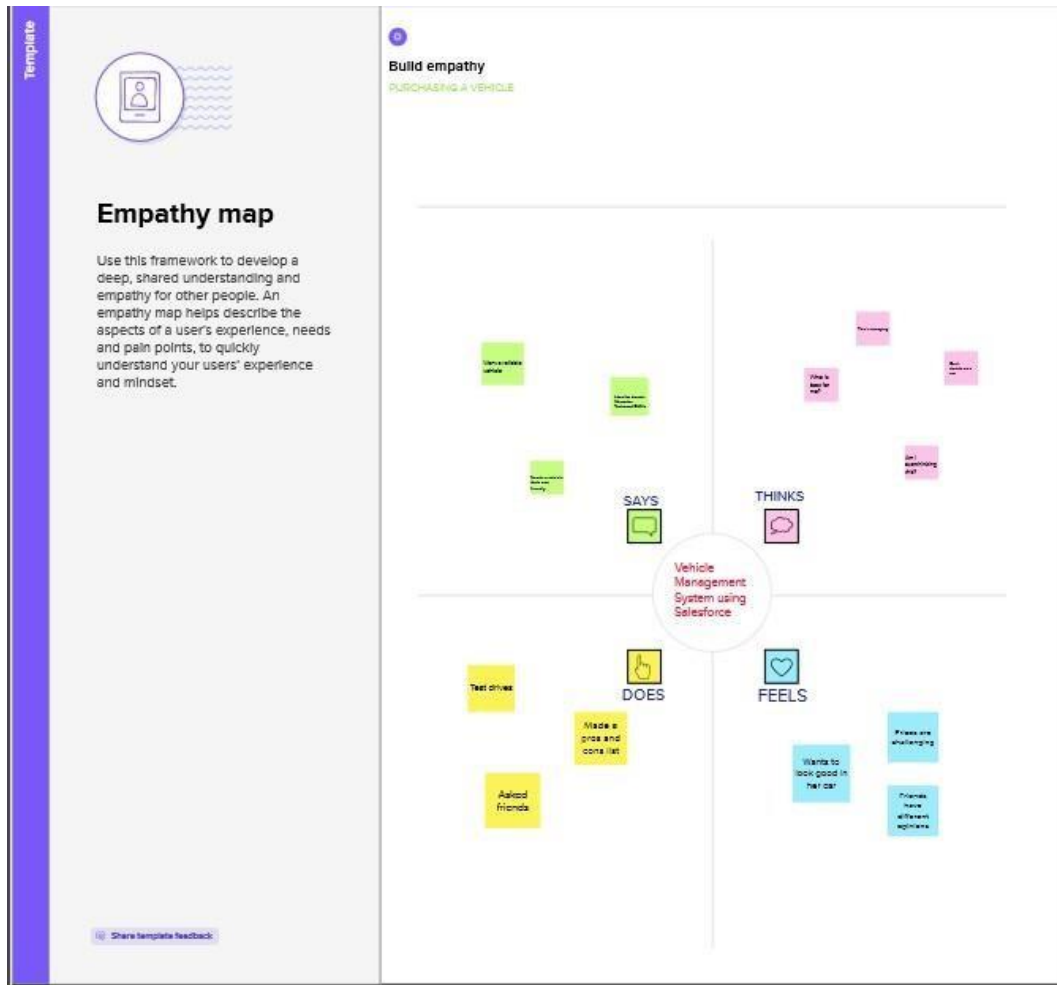
Vehicle management is an application where a customer details are stored in order to choose cars, bikes and commercial vehicles for travel with in the city

### **1.2 Purpose**

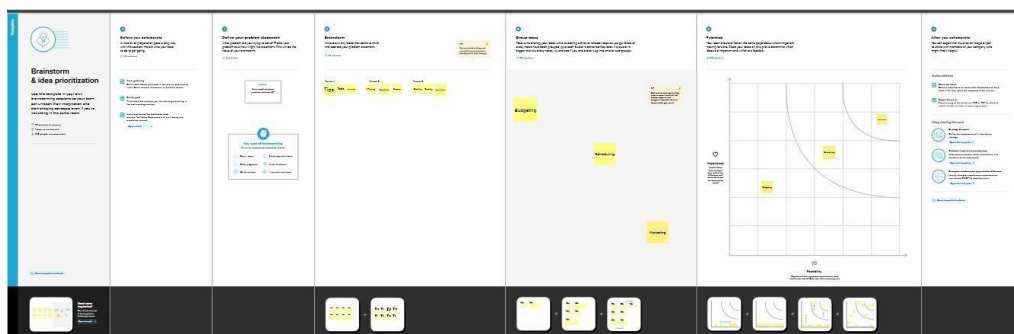
A vehicle management system is a software system – or platform – that serves to manage commercial fleets of vehicles, such as cars, vans or trucks – or even heavy equipment – to ensure they're utilized safely, efficiently and professionally, while making sure they're well maintained and high-performing.

## Problem Definition & Design Thinking

### 2.1 Empathy Map



### 2.2 Ideation & Brainstorming Map



## RESULT

### 3.1 Data Model:

Object name	Fields in the Object	
Vehicles		
	Field label	Data type
	Customer Name	Text
	Customer Mobile No	Number
	Vehicle Type i)2 wheeler ii)4 wheeler	Picklist
	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 vi)MAHINDRA vii)VOLKSWAGEN viii)BENZ ix) AUDI x)VOLVO	Picklist
	Vehicle Name	Text
	Vehicle No	Text
	Chassis No	Text
	Colour	Text
	Body Type	Text
	Vehicle Includes i)Fire Extenuation ii)First Aid Kit iii)Multi Charger kit	Multi Picklist

	iv)Stepney v)Stereo vi)Tool Kit vii) Tracking Device viii) Tyre Jack	
	Condition i)Good ii)Medium iii)Least	Picklist
	Mileage	Text
	Seats	Number
	Start Date	Date/Time
	End Date	Date/time
	Opportunity	Lookup(opportunities)
Drivers		
	Field label	Data type
	Driver Name	Text
	Licence No	Text
	Mobile No	Number
	Fair Per Hour	Text
	Vehicle	Lookup(Vehicle)

### 3.1 Activity & Screenshot

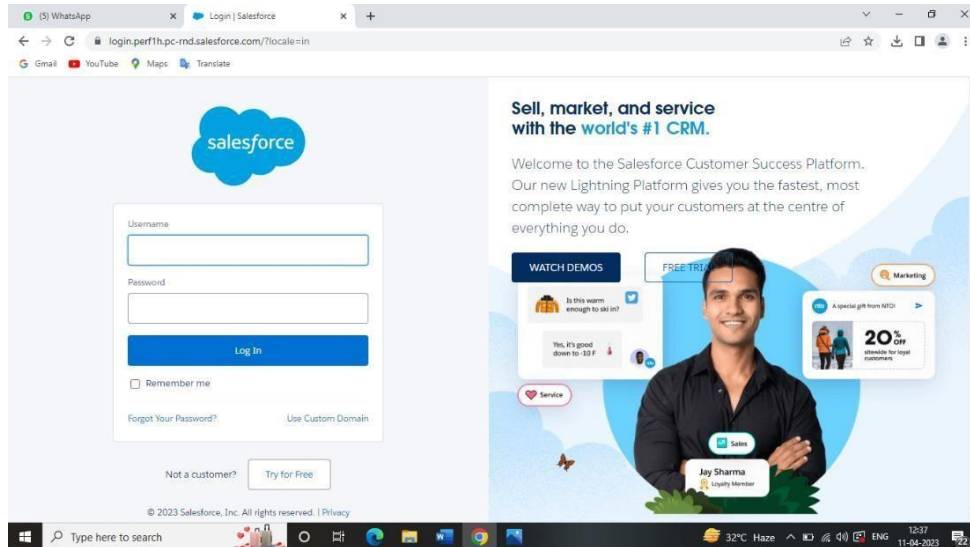
#### Activity-1:

##### **Creating Developer Account**

Creating a developer org in salesforce.

1. Go to  
[developers.salesforce.com/](https://developers.salesforce.com/)
2. Click on sign up.
3. On the sign up form, enter the following details :
  - a. First name & Last name
  - a. Email
  - b. Role : Developer
  - c. Company : College Name
  - d. County : India
  - e. Postal Code : pin code
  - f. Username : should be a combination of your name and company
  - g. This need not be an actual email id, you can give anything in the format : [username@organization.com](mailto:username@organization.com)

**Click on sign up after filling these.**



## **Activity 2:**

### **Account Activation**

Go to the inbox of the email that you used while signing up. Click on the verify account to activate your account. The email may take 5-10mins

### **Login To Your Salesforce Account**

1. Go to salesforce.com and click on login.
2. Enter the username and password that you just created.
3. After login this is the home page which you will see.

## **Activity 3:**

### **To Create an object:**

Creation of Objects for Vehicle Management, For this Vehicle Management we need to create 2 objects i.e Vehicles, Driver.

The below steps will assist you in creating those objects.

- Click on the gear icon and then select Setup.
- Click on the object manager tab just beside the home tab.

- After the above steps, have a look on the extreme right you will find a Create Dropdown click on that and select Custom Object.
- Creation of Vehicle Object

The screenshot shows the Salesforce Setup interface for creating a Custom Object. The left sidebar contains a navigation menu with options like 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, Sharing Rules, Triggers, Flow Triggers, and Validation Rules. The main content area is titled 'Vehicle' and includes a 'Custom Object Definition Edit' section with buttons for 'Save', 'Save & New', and 'Cancel'. Below this, there are sections for 'Custom Object Information', 'Enter Record Name Label and Format', 'Optional Features', 'Object Classification', 'Deployment Status', and 'Search Status'. The 'Custom Object Information' section includes fields for 'Label' (Vehicle), 'Plural Label' (Vehicles), and 'Object Name' (Vehicle). The 'Enter Record Name Label and Format' section includes a 'Record Name' field (Vehicle Name) and a 'Data Type' dropdown (Text). The 'Optional Features' section includes checkboxes for 'Allow Reports', 'Allow Accounts', 'Track Field History', 'Allow in Classic Orgs', and 'Enable Lightning'. The 'Object Classification' section includes checkboxes for 'Allow Sharing', 'Allow Bulk API Access', and 'Allow Streaming API Access'. The 'Deployment Status' section includes radio buttons for 'In Development' and 'Deployed'. The 'Search Status' section includes a checkbox for 'Allow Search'.

On the Custom Object Definition page, create the object as follows:

- Label: Vehicle
- Plural Label: Vehicles
- Record Name: Vehicle Name
- Check the Allow Reports checkbox
- Check the Allow Search checkbox
- Click Save.

- Now create a custom tab. Click the Home tab, enter Tabs in Quick Find and select Tabs.
- Under Custom Object Tabs, click New.
- For Object, select Vehicle.
- For Tab Style, select any icon.
- Leave all defaults as is. Click Next, Next, and Save.

## **Activity-4:**

To Create a driver object continue the same steps Which is followed for the above object.

The screenshot displays the Salesforce Setup interface for configuring a custom object named "Driver". The left sidebar contains a navigation menu with options like "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", "Sharing Rules", "Triggers", "Flow Triggers", and "Validation Rules". The main content area is titled "Driver" and features a "Custom Object Definition Editor". This editor includes several sections: "Custom Object Information" with input fields for "Label" (set to "Driver"), "Plural Label" (set to "Driver's"), and "Search Label" (set to "Driver's"); a section explaining that the object name is used for API referencing with an "Object Name" field; "Enter Record Name Label and Format" with a "Record Name" field (set to "Driver Name") and a "Data Type" dropdown (set to "Text"); "Optional Features" with checkboxes for "Allow Records", "Allow Accounts", "Track Field History", "Allow as External Objects", and "Enable Logging"; "Object Classification" with checkboxes for "Allow Sharing", "Allow Bulk API Access", and "Allow Streaming API Access"; "Deployment Status" with radio buttons for "In Development" and "Deployed"; and "Search Status" with a checkbox for "Allow Search". The page also includes a "Help for this Page" link and a "Required Information" indicator.

## **Activity-5:**

**Fields In Driver Object:**

Create a dependency between these two picklists, so that when a Vehicle type is selected, only respective 2Wheeler Brands are available in the 2Wheeler field, Similarly for 4 wheelers.

The below steps will assist you in creating Field Dependencies.

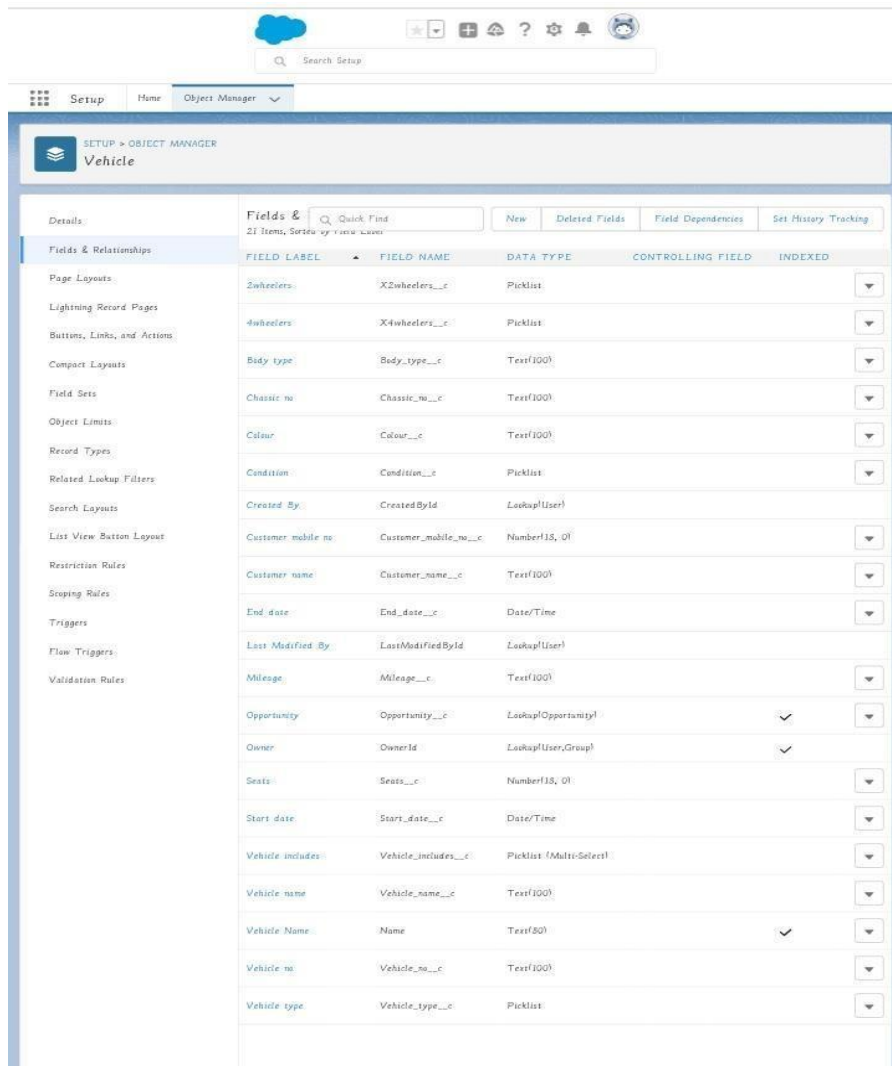
- Click on the gear icon and then select Setup.
- Click on the object manager tab just beside the home tab.
- After the above steps, Select Vehicles Object
- Now Select Fields and relationships from setup menu of the vehicle object.
- Click Field Dependencies.
- Click New.
- Select Vehicle Type as the Controlling Field and select 2wheelers as the Dependent Field.
- Click Continue.
- Select the appropriate 2 wheelers Brands in each column by double-clicking them.
- 2WHEELERS : i) HERO ii) HONDA iii) BAJAJ iv) ROYAL ENFIELD v) TVS vi) KINETIC vii) OLA viii) JAW A ix) SD x) BATTERY
- Click Include Values.
- Click Preview, then test the dependency by selecting different Vehicle Type and viewing the different Vehicles available for Vehicle Type.
- Click Close to close the preview window. ● Click Save.

Follow same steps for 4wheelers also

- Vehicle Type as the Controlling Field and select 4wheelers as the Dependent Field.
- Click Continue.
- Select the appropriate 4wheelers Brands in each column by double-clicking them.
- 4WHEELERS : i) RENAULT ii) SKODA iii) HONDA iv) HYUNDAI v) SUZUKI vi) MAHINDRA vii) VOLKSWAGEN viii) BENZ ix) AUDI x) VOLVO
- Click Include Values.
- Click Preview, then test the dependency by selecting different Vehicle Type and viewing the different Vehicles available for Vehicle Type.
- Click Close to close the preview window.
- Click Save.



Now click on “Fields & Relationships” → New



## **Activity-6:**

### **Create the Vehicle Management Construction app**

- From Setup, enter App Manager in the Quick Find and select App Manager.
- Click New Lightning App. Enter Vehicle Management as the App Name, then click Next
- Under App Options, leave the default selections and click Next.
- Under Utility Items, leave as is and click Next.
- From Available Items, select Accounts, Contacts, Opportunities, Vehicle, Driver, Reports, and Dashboards and move them to Selected Items. Click Next.

- From Available Profiles, select System Administrator and move it to Selected Profiles. Click Save & Finish.
- To verify your changes, click the App Launcher, type Vehicle Management and select the Vehicle Management app.

Note:

1. App Launcher-Displays available apps.
2. App Name-Displays the current selected app.
3. Navigation menu-Displays the tabs available inside the app.

**Lightning Experience App Manager**

**Clone Apps(Beta)**

Quickly create new Lightning apps by cloning existing apps. To use the beta feature, indicate that you've read all legal requirements and agree to participate by toggling Enable App Cloning. See additional details and terms in the [Winter '23 release notes](#).

Enable App Cloning ☐ Disabled

22 Items • Sorted by App Name • Filtered by All appmenutems - TabSet Type

	App Name	Developer N...	Des...	Last Modifie...	App...	Vi...
1	All Tabs	AllTabSet		31/03/2023, 11:...	Classic	✓
2	Analytics Studio	Insights	Build C...	31/03/2023, 11:...	Classic	✓
3	App Launcher	AppLauncher	App La...	31/03/2023, 11:...	Classic	✓
4	Bolt Solutions	LightningBolt	Discove...	31/03/2023, 11:...	Lightning	✓
5	Community	Community	Salesfo...	31/03/2023, 11:...	Classic	✓
6	Content	Content	Salesfo...	31/03/2023, 11:...	Classic	✓
7	Data Manager	DataManager	Use Dat...	31/03/2023, 11:...	Lightning	✓
8	Digital Experien...	SalesforceCMS	Manag...	31/03/2023, 11:...	Lightning	✓
9	Lightning Usag...	LightningInstru...	View A...	31/03/2023, 11:...	Lightning	✓
10	Marketing	Marketing	Best-in...	31/03/2023, 11:...	Classic	✓
11	Platform	Platform	The fun...	31/03/2023, 11:...	Classic	✓
12	Queue Manage...	QueueManage...	Create ...	31/03/2023, 11:...	Lightning	✓
13	Sales	Sales	The wo...	31/03/2023, 11:...	Classic	✓
14	Sales	LightningSales	Manag...	31/03/2023, 11:...	Lightning	✓
15	Sales Console	LightningSales...	(Lightni...	31/03/2023, 11:...	Lightning	✓
16	Salesforce Cha...	Chatter	The Sal...	31/03/2023, 11:...	Classic	✓
17	Salesforce Sch...	LightningSched...	Set up ...	31/03/2023, 11:...	Lightning	✓
18	Service	Service	Manag...	31/03/2023, 11:...	Classic	✓
19	Service Console	LightningService	(Lightni...	31/03/2023, 11:...	Lightning	✓
20	Site.com	Sites	Build pi...	31/03/2023, 11:...	Classic	✓
21	Subscription M...	RevenueCloudC...	Get star...	31/03/2023, 11:...	Lightning	✓
22	Vehicle Manag...	Vehicle_Manag...		09/04/2023, 8:4...	Lightning	✓

## **Activity-7:**

**Creating a Profiles:**Now create a Vehicle Manager profile and set its object permissions.

**Creating a Profiles:**

Now create a Vehicle Manager profile and set its object permissions.

- From Setup enter Profiles in the Quick Find box, and select Profiles.
- From the list of profiles, find Standard User.
- Click Clone.
- For Profile Name, enter Vehicle Manager.
- Click Save.
- While still on the Vehicle Manager profile page, then click Edit.
- Scroll down to Custom Object Permissions and give access for Create,Read,Edit,Delete,View all and modify all for Vehicle object and Drivers object.

To create a new profile:

Go to setup → type profiles in quick find box → click on profiles → clone the desired profile

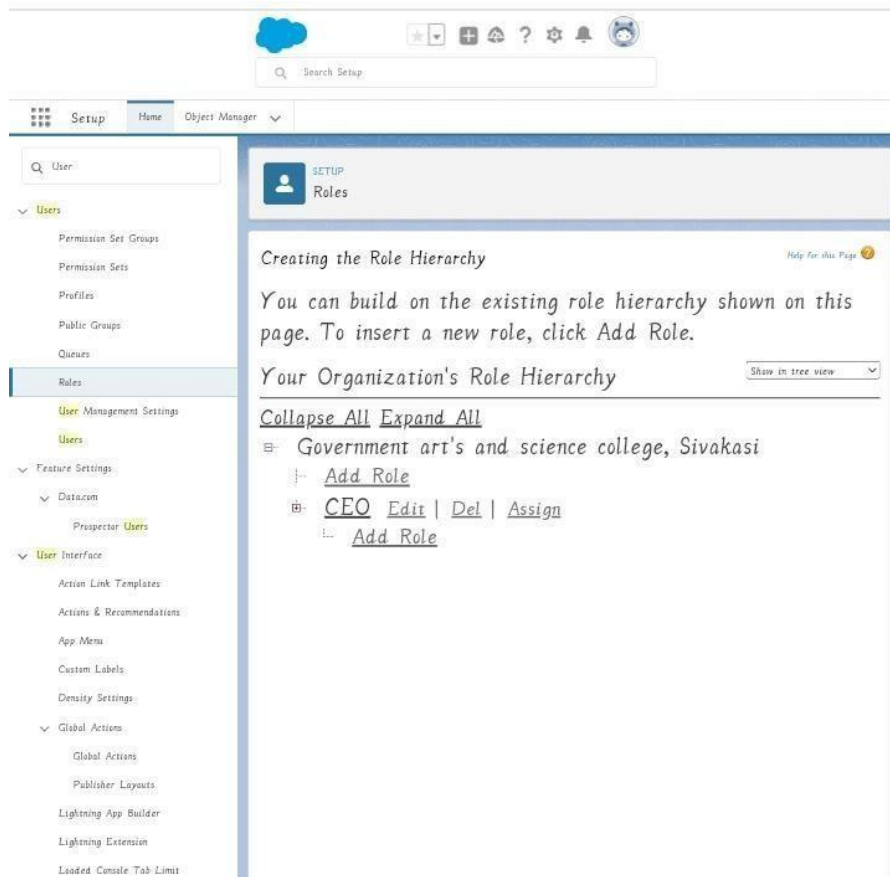
(standard user is preferable) → enter profile name → save

## **Activity-8:**

### **Setup Roles:**

1. Click on the Gear Icon
2. Click "Setup"
3. In the Quick Find box, enter "Roles"
4. Click "Roles"
5. Click on "Set Up Roles"
6. Click "Expand All"
7. Under the CEO, click on "Add Role"
8. Fill up the Label as Vehicle Manager, Role Name Vehicle\_Manager.
9. Enter a Role name that will be displayed on Reports
10. Click on Save .

Similarly create Two Roles under Vehicle Manager as Operator 1 And Operator 2 Roles



## **Activity-9:**

### **Creating a Users:**

1. From Setup, in the Quick Find box, enter Users, and then select Users.
2. Click New User.
3. Enter the user's name John Teddy and (Your) email address and a unique username in the form of an email address. By default, the username is the same as the email address.
4. Select a **Role**(Vehicle Manager)
5. Select a User Licence As salesforce.
6. Select a profile as Vehicle Manager.
7. Check Generate new password and notify the user immediately to have the user's login name and a temporary password emailed to your email.

Fill in the fields (first name, last name, alias, email id, username, nick name, role, userlicense, profiles) → save.

Setup

Home

Object Manager

Search Setup

Users

Permission Set Groups

Permission Sets

Profiles

Public Groups

Queues

Roles

User Management Settings

Users

Feature Settings

Data.com

Prospector Users

User Interface

Action Link Templates

Actions & Recommendations

App Menu

Custom Labels

Display Settings

Global Actions

Global Actions

Publisher Layouts

Lightning App Builder

Lightning Extension

Loaded Console Tab Limit

Path Settings

Quick Text Settings

Record Page Settings

Rename Tabs and Labels

Sites and Domains

Custom URLs

Domains

Sites

Tab

Themes and Branding

Translation Workbench

Export

Import

Translate

Translation Language Settings

User Interface

User Engagement

Adoption Assistance

Guidance Center

Help Menu

In-App Guidance

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

SETUP

Users

User Edit

Save

Save & New

Cancel

General Information

Required Information

First Name

Mahesh Kumar

Last Name

K

Alias

MK

Email

kmaheshbaby444@gmail.com

Username

mahesh4@company.com

Nickname

mahesh4

Title

Company

Government art's and science

Department

Division

Role

Vehicle manager

User License

Salesforce

Profile

System Administrator

Active

☒

Marketing User

☒

Offline User

☒

Knowledge User

☐

Flow User

☐

Service Cloud User

☒

Sticcom Coordinator User

☐

Sticcom Publisher User

☐

WDC User

☐

Outbound User Type

--None--

Outbound Monthly Addition Limit

100

Accountability Mode (Class Only)

☐

High Contrast Palette as Chorus

☐

Look Lightning Pages While Scrolling

☒

Display Mode

☐

Send Apex Warning Emails

☐

Make Setup My Default Landing Page

☒

Quick Access Menu

☒

Development Mode

☐

Show View State in Development Mode

☐

Cache Diagnostics

☐

Salesforce CRM Canvas User

☒

Review Salesforce CRM Canvas Email Alerts

☒

Review Salesforce CRM Canvas Alerts as Daily Digest

☒

Allow Forecasting Call Center

☒

Phone

Extension

Fax

Mobile

+91 7449192449

Email Encoding

Unicode (UTF-8)

Employee Number

Start of day

6:00 am

End of day

11:00 pm

Individual

Mailing Address

Street

City

Zip/Postal Code

State/Province

Country

IN

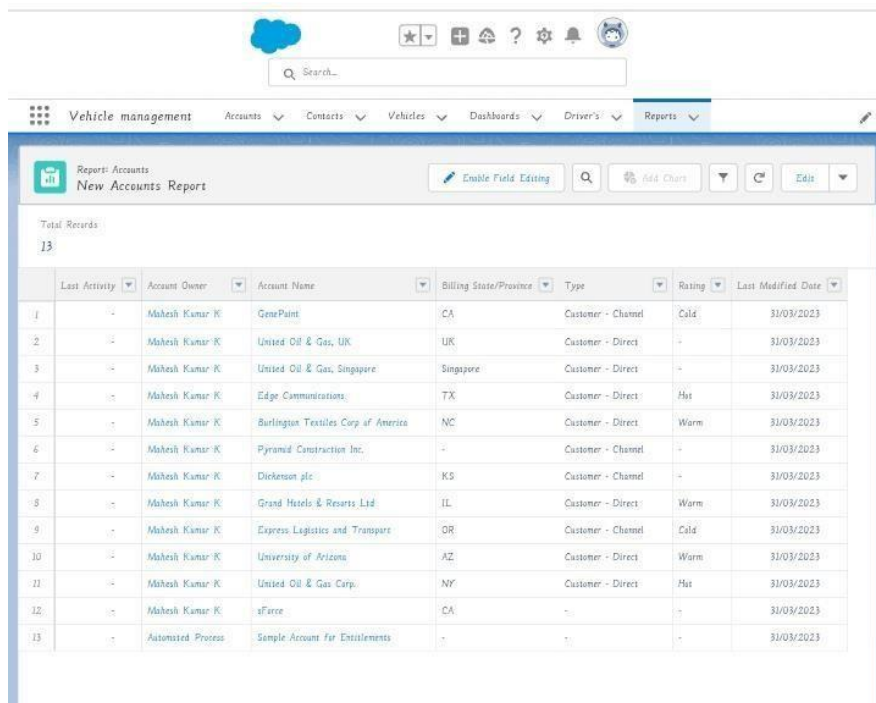
Single Sign On Information

Federation ID

## Activity-10:

### Reports And Dashboards.

- Go to Reports and click New Report.
- Select the Accounts, Contacts and Vehicle report type and click Start Report.
- To begin filtering, click Filters.
- Click the Show Me standard filter and select My Contacts. Click Apply.
- Click on add columns add Vehicle:Vehicle name, Vehicle:Customer id, Vehicle:Customer name, Vehicle:Customer Number, Vehicle:Chassis Number.
- Click Save.
- Save your report as Vehicle and Customer Details and accept the auto-generated unique name.

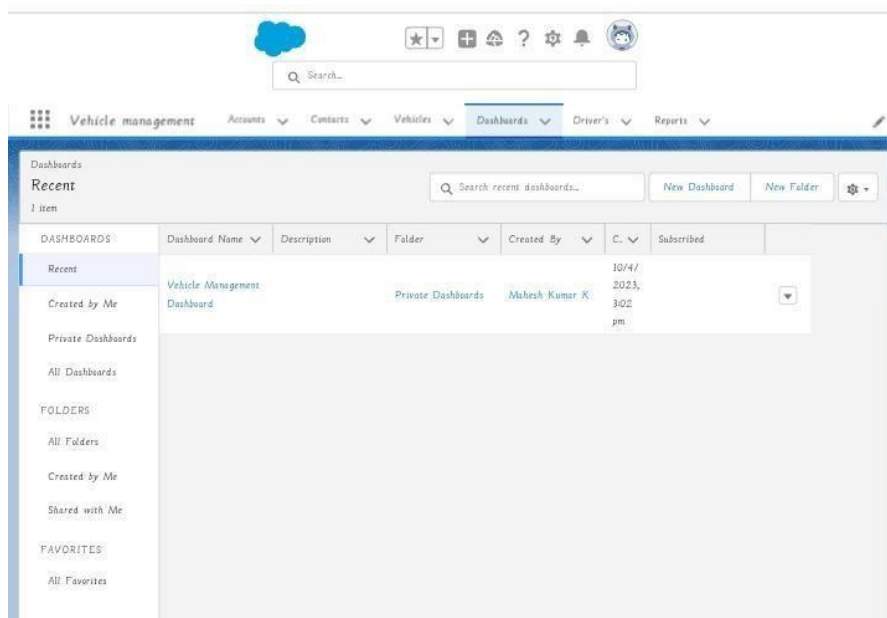


The screenshot shows a web application interface with a top navigation bar and a main content area. The top navigation bar includes a search bar and several icons. The main content area has a sidebar with a menu and a main panel displaying a report titled 'New Accounts Report'. The report shows a table with 13 records, each with columns for Last Activity, Account Owner, Account Name, Billing State/Province, Type, Rating, and Last Modified Date.

	Last Activity	Account Owner	Account Name	Billing State/Province	Type	Rating	Last Modified Date
1		Mahesh Kumar K	GenePoint	CA	Customer - Channel	Cold	31/03/2023
2		Mahesh Kumar K	United Oil & Gas, UK	UK	Customer - Direct	-	31/03/2023
3		Mahesh Kumar K	United Oil & Gas, Singapore	Singapore	Customer - Direct	-	31/03/2023
4		Mahesh Kumar K	Edge Communications	TX	Customer - Direct	Hot	31/03/2023
5		Mahesh Kumar K	Burlington Textiles Corp of America	NC	Customer - Direct	Warm	31/03/2023
6		Mahesh Kumar K	Pyramid Construction Inc.	-	Customer - Channel	-	31/03/2023
7		Mahesh Kumar K	Dickenson plc	KS	Customer - Channel	-	31/03/2023
8		Mahesh Kumar K	Grand Hotels & Resorts Ltd	IL	Customer - Direct	Warm	31/03/2023
9		Mahesh Kumar K	Express Logistics and Transport	OR	Customer - Channel	Cold	31/03/2023
10		Mahesh Kumar K	University of Arizona	AZ	Customer - Direct	Warm	31/03/2023
11		Mahesh Kumar K	United Oil & Gas Corp.	NY	Customer - Direct	Hot	31/03/2023
12		Mahesh Kumar K	eForce	CA	-	-	31/03/2023
13		Automated Process	Sample Account for Entitlements	-	-	-	31/03/2023

## Dashboard:

1. Click the Dashboards tab.
2. Click New Dashboard.
3. Name the dashboard Vehicle and Customer Details and click Create.
4. Click +Component.
5. Select the Supplies report and click Select.
6. Select the Vertical Bar Chart component and click Add.
7. Click Save and then Done.



## Trailhead profile public URL

Team Leader - <https://trailblazer.me/id/sdhanush13>

Team Member 1 - <https://trailblazer.me/id/kanng355>

Team Member 2 - <https://trailblazer.me/id/kkumar21233>

Team Member 3 - <https://trailblazer.me/id/pkavikumar>

## **ADVANTAGES & DISADVANTAGE**

### **ADVANTAGES**

#### **Driver safety**

Statistically speaking, a motor vehicle crash happens approximately every 5 seconds. Peak hours in a busy rural area won't make things easier. Fleet managers need to know how to educate drivers on safe driving practices. And having a driving behavior report, or a driver scorecard helps identify the behaviors that need to be addressed. In many countries, it is the law that all vehicles are also equipped with an on-board camera that will record all types of incidents for future reference.

A vehicle management system offers full fleet visibility on a single screen. Fleet managers get all sorts of information, such as:

Location and status of vehicles and drivers

Trip logs and events, routes followed, delays caused

Productivity, efficiency and performance levels of vehicles and staff

Timely notifications regarding malfunctions and delays

In general, fleet managers and operators enjoy better insights that lead to better customer service.

### **DISADVANTAGES**

We bet a flurry of questions will run through your head on the quest for the perfect fleet vehicle.

How does the cost of buying a new fleet vehicle compare to buying a used one?

If I buy a used fleet vehicle, how much will I spend on maintenance, as compared to buying a new one?

How does either decision affect my cash flow?

A new vehicle means higher prices and higher depreciation percentage, once you buy. But it also means reliability and the latest technology features. Interestingly enough, a used vehicle means lower initial cost and lower depreciation rates; but also, questionable reliability and possible repairing or upgrading costs.



A fleet vehicle is a big investment. And it's important to make your decision carefully. Let's examine what you should think about before you pay a visit to the dealer.

## **APPLICATIONS**

### **Vehicle Status**

We've always treated you with a per-vehicle status snapshot. This was more about the key indications of a vehicle's health. But, how about fleet utilization? With our newest addition in metric tiles, you're now able to quickly glance at how your fleet is being used and reach your conclusions about how optimally this is done. Unanswered questions like "Do I need extra vehicles?" or "Am I paying for more than I need?", will be a thing of the past, in no time!

## **CONCLUSION**

Add and update maintenance tasks like oil change, air filter change and tire replacement.

Add, update and set automatic reminders for maintenance tasks based on mileage and/or time.

Improvements

We made a series of web application performance improvements and minor fixes

## **FUTURE SCOPE**

### **Fleet Safety Scorecard**

Get a glance at your dashboard and gain quick, summarized insights about the safety level of your fleet with key indicative metrics, on our new fleet safety scorecard. Not only will it help you improve your fleet strategy; if you use it right, it will also help prevent downtime and upkeep your company reputation. You'll only need to make a habit of taking a quick look at the numbers on the fleet safety scorecard, every few days. Identify issues with driver behavior and offer your drivers these overdue state-certified fleet safety courses you've always suspected they need. Your fleet will thank you for it!