

# Project Report Template

Project title: vehicle management system

## 1 INTRODUCTION

### 1.1 Overview:

**Vehicle management system is a** software that provides management functions for the transportation industry or organizations that own vehicles<sup>1</sup>. **It can support business processes such as procurement, sales, service, and inventory of new and used vehicles<sup>2</sup>. It can also improve fleet efficiency, manage driver performance, track vehicle data, and control fuel consumption<sup>3</sup>. It can be a windows application that allows users to add, edit, and delete passengers, staff, and bus routes<sup>4</sup>. It can be a monitoring and control system for vehicle, driver, and goods<sup>5</sup>.**

## 1.2 Purpose:

**The reasons for having a vehicle management system are similar:**

- Improving operational efficiency
- Improving accountability
- Maximizing the value of the fleet or vehicle program

## 2 Problem Definition & Design Thinking:

### 2.1 Empathy Map:



## Empathy map

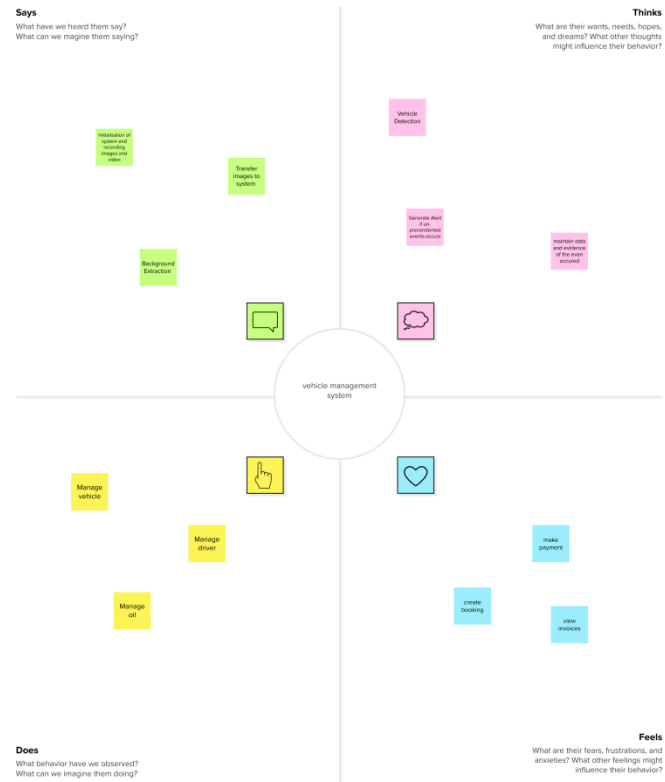
Use this framework to develop a deep, shared understanding and empathy for other people. An empathy map helps describe the aspects of a user's experience, needs and pain points, to quickly understand your users' experience and mindset.

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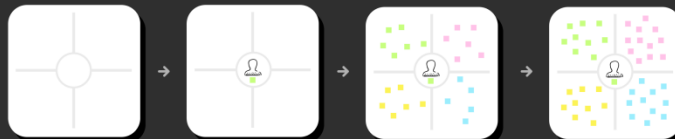


### Build empathy

The information you add here should be representative of the observations and research you've done about your users.



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## 2.2 Ideation & Brainstorming Map:



## 3 RESULT:

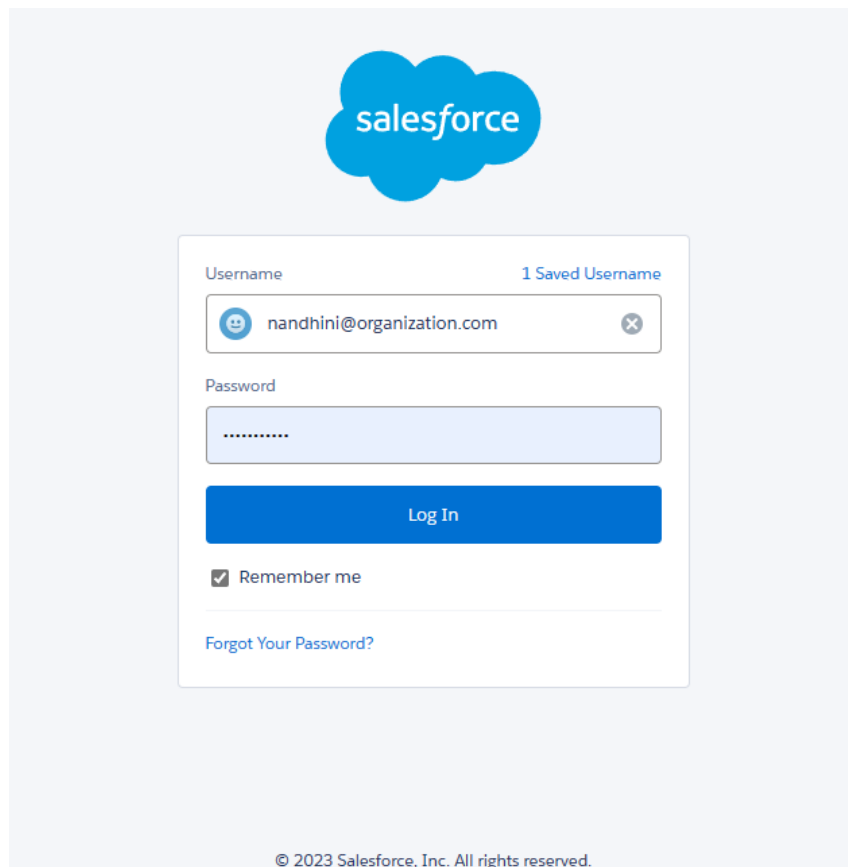
### 3.1 Data Model:

<u>OBJECT NAME</u>	<u>FIELD IN THE OBJECT</u>	
	<u>FIELD LABEL</u>	<u>DATA TYPE</u>
<u>VEHICLE</u>	<u>MILEAGE</u>	TEXT
	<u>SEATS</u>	<u>NUMBER</u>
	<u>START DATE</u>	<u>DATE/TIME</u>
	<u>END DATE</u>	<u>DATE/TIME</u>
<u>DRIVER</u>	<u>LICENSE NO</u>	<u>TEXT</u>
	<u>DRIVER NO</u>	<u>TEXT</u>
	<u>FAIR PER HOUR</u>	<u>TEXT</u>
	<u>MOBILE NUMBER</u>	<u>NUMBER</u>

## 3.2 Activity & Screenshot:

### Milestone 1:

- **Creation Salesforce Org.**
- **Creating Developer Account.**
- **Login To Your Salesforce Account.**

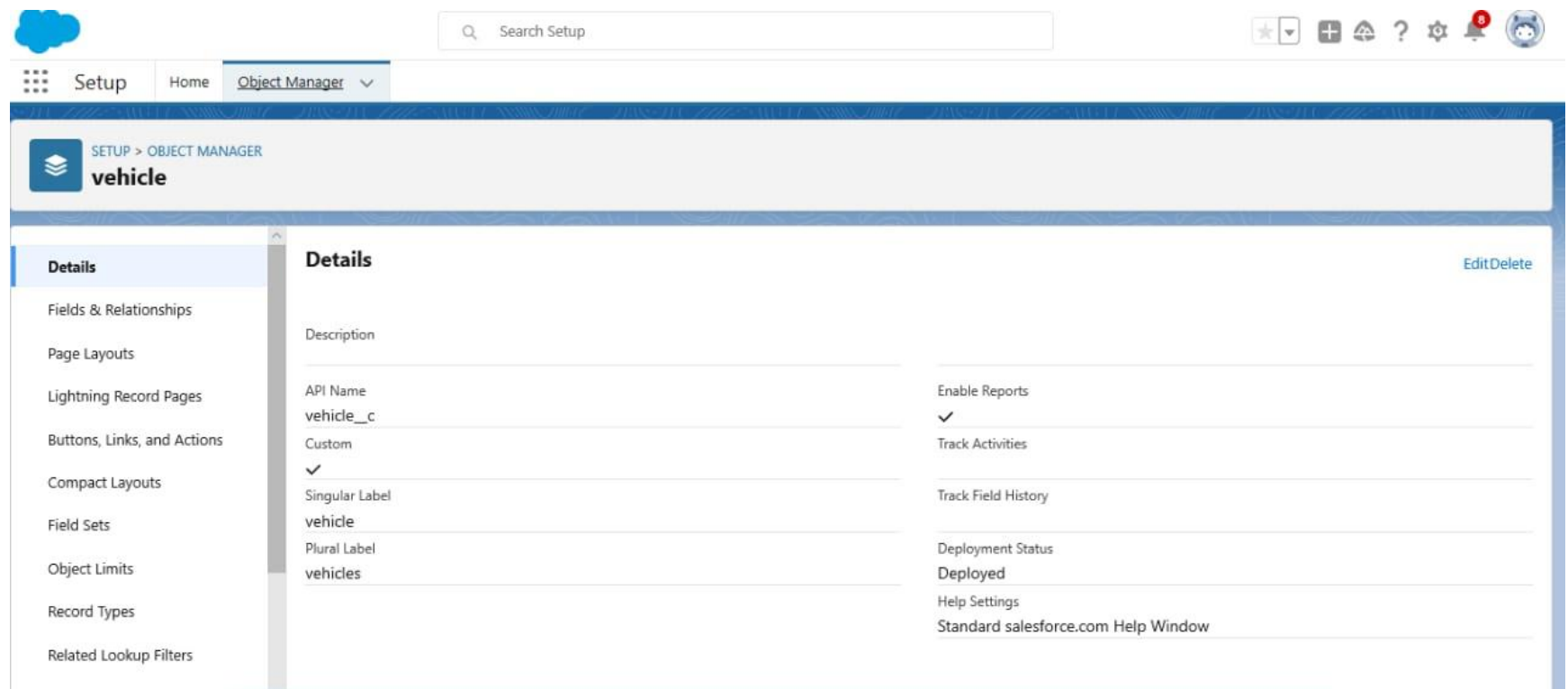


The screenshot displays the Salesforce login interface. At the top center is the Salesforce logo, a blue cloud with the word "salesforce" in white. Below the logo is a white login form. The form has a "Username" label and a "1 Saved Username" link. The username field contains the email "nandhini@organization.com" with a clear button (X) on the right. Below the username field is a "Password" label and a password field with masked characters (dots). A blue "Log In" button is positioned below the password field. Under the button is a "Remember me" checkbox, which is checked. At the bottom of the form is a link that says "Forgot Your Password?". The entire form is set against a light gray background. At the very bottom of the page, there is a copyright notice: "© 2023 Salesforce, Inc. All rights reserved."

## Milestone-2

### Object:

**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 screenshot displays the Salesforce Setup interface, specifically the Object Manager for the 'vehicle' object. The top navigation bar includes the Salesforce logo, a search bar labeled 'Search Setup', and various utility icons. Below the navigation bar, the 'Setup' menu is open, showing 'Home' and 'Object Manager' as options. The 'Object Manager' page for 'vehicle' is displayed, with a left-hand navigation pane containing the following options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, and Related Lookup Filters. The 'Details' section is currently selected, showing the following information:

Details		Edit Delete
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		

The screenshot shows the Salesforce Setup interface. At the top, there's a search bar labeled 'Search Setup'. Below it, the navigation menu includes 'Setup', 'Home', and 'Object Manager'. The 'Object Manager' tab is selected, and the breadcrumb trail shows 'SETUP > OBJECT MANAGER'. The main content area is titled 'driver' and displays the 'Details' tab. On the left, a 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, and Related Lookup Filters. The 'Details' section on the right includes fields for Description, API Name (driver\_\_c), Custom (checked), Singular Label (driver), and Plural Label (drivers). To the right of these fields are checkboxes for 'Enable Reports' (checked), 'Track Activities', and 'Track Field History'. At the bottom, the 'Deployment Status' is shown as 'Deployed', with links for 'Help Settings' and 'Standard salesforce.com Help Window'. 'Edit' and 'Delete' links are visible in the top right corner of the details section.

**SUCCESSFULLY CREATED TO 2 OBJECTS VEHICLE,DRIVER.**

## **Milestone -3:**

### **Fields and Relationship**

**An object relationship in Salesforce is a two-way association between two objects. Relationships are created by creating custom relationship fields on an**



object. This is done so that when users view records, they can also see and access related data.

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

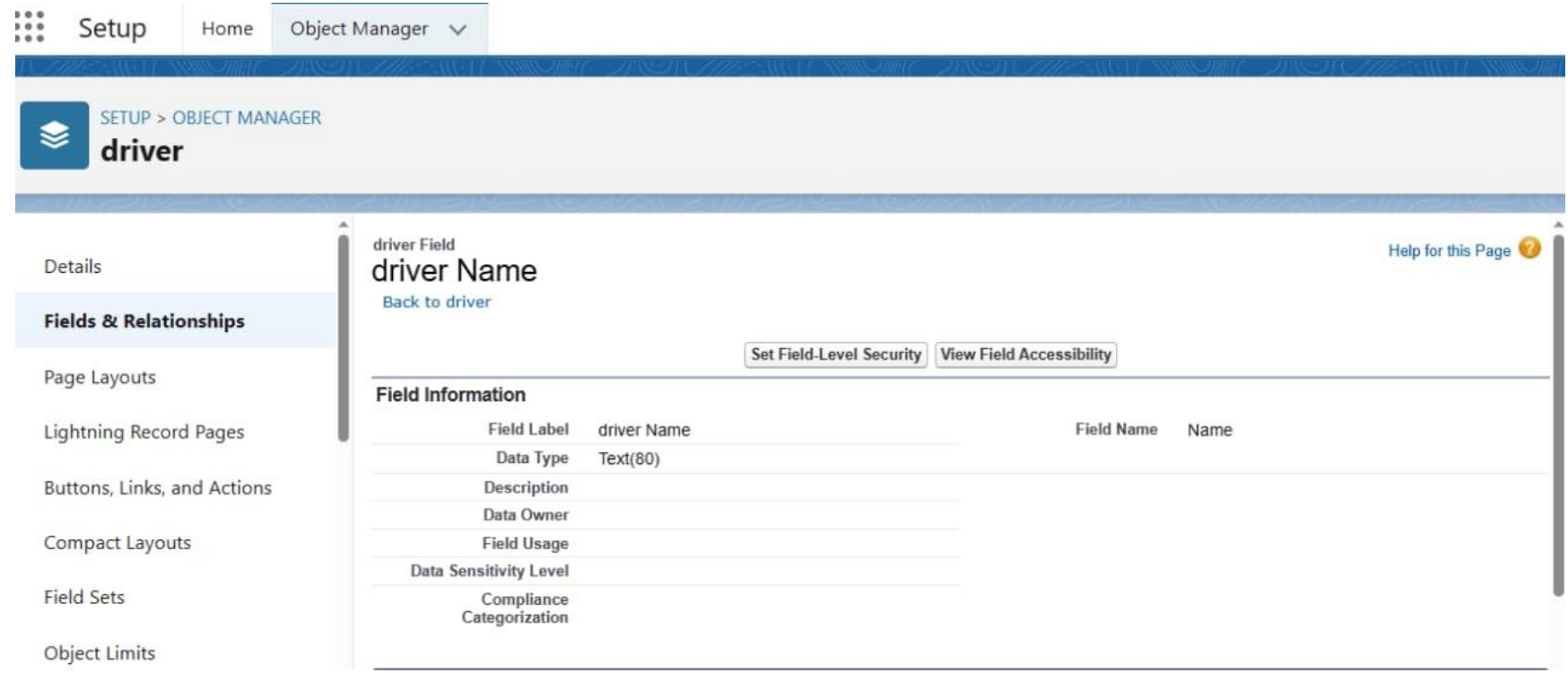
vehicle Custom Field  
**start date**  
[Back to vehicle](#)

[Validation Rules \[0\]](#)

**Custom Field Definition Detail** [Edit](#) [Set Field-Level Security](#) [View Field Accessibility](#) [Where is this used?](#)

**Field Information**

Field Label	start date	Object Name	vehicle
Field Name	start_date	Data Type	Date/Time
API Name	start_date__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Perivanayaki M, 04/05/2023, 12:57 pm	Modified By	Perivanayaki M, 04/05/2023, 12:57 pm



The screenshot shows the Salesforce Setup interface. At the top, there are tabs for 'Setup', 'Home', and 'Object Manager'. Below the 'Object Manager' tab, the breadcrumb 'SETUP > OBJECT MANAGER' is visible, followed by the object name 'driver'. On the left sidebar, a list of navigation options includes 'Details', 'Fields & Relationships' (which is highlighted), 'Page Layouts', 'Lightning Record Pages', 'Buttons, Links, and Actions', 'Compact Layouts', 'Field Sets', and 'Object Limits'. The main content area is titled 'driver Field' and 'driver Name'. It includes a 'Back to driver' link and two buttons: 'Set Field-Level Security' and 'View Field Accessibility'. Below these is a 'Field Information' section with a table. The table has two columns: 'Field Label' and 'Field Name'. The first row shows 'driver Name' as the field label and 'Name' as the field name. The second row shows 'Text(80)' as the data type. The third row shows 'Description'. The fourth row shows 'Data Owner'. The fifth row shows 'Field Usage'. The sixth row shows 'Data Sensitivity Level'. The seventh row shows 'Compliance Categorization'.

Field Label	Field Name
driver Name	Name
Data Type	Text(80)
Description	
Data Owner	
Field Usage	
Data Sensitivity Level	
Compliance Categorization	

**SUCCESSFULLY CREATED TO 2 FIELDS AND RELATIONSHIP VEHICLE, DRIVER.**

**Milestone-4:**

## **Lightning App**

**Apps in Salesforce are a group of tabs that help the application function by working together as a unit. It has a name, a logo, and a particular set of tabs. The simplest app usually has just two tabs.**

The screenshot shows the 'App Settings' interface in Salesforce. On the left is a sidebar with a list of settings categories: 'App Settings' (selected), 'App Details & Branding', 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area is titled 'App Details & Branding' and includes a subtitle: 'Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.' The interface is divided into two columns. The left column, 'App Details', contains three fields: '\* App Name' with the value 'Data Manager', '\* Developer Name' with the value 'DataManager', and a 'Description' field with the text 'Use Data Manager to view limits, monitor usage, and manage recipes.' The right column, 'App Branding', contains an 'Image' upload area with an 'Upload' button, a 'Primary Color Hex Value' field with the value '#0070D2', and 'Org Theme Options' with a checkbox labeled 'Use the app's image and color instead of the org's custom theme'. At the bottom right, there is a section for 'App Launcher Preview'.

- Successfully created lightning app.

## Milestone-5:

### Profile

A profile is a group/collection of settings and permissions that define what a user can do in salesforce. A profile controls “Object permissions, Field permissions,

User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP range.

The screenshot shows the Salesforce Setup interface. The left sidebar contains a search bar with 'profile' entered, a 'Users' dropdown menu, and a 'Profiles' link highlighted in yellow. Below this is a message: 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'SETUP Profiles' and displays a list of profiles. At the top of the list is a 'New Profile' button and a filter dropdown set to 'All Profiles'. Below the filter are links for 'Edit', 'Delete', and 'Create New View'. A tabbed interface shows 'All' as the selected tab. The table lists profiles with columns for 'Action', 'Profile Name', 'User License', and 'Custom'. The profiles listed are: 'Customer Community Plus Login User', 'Customer Community Plus User', 'Customer Community User', 'Customer Portal Manager Custom', 'Customer Portal Manager Standard', and 'External Apps Login User'.

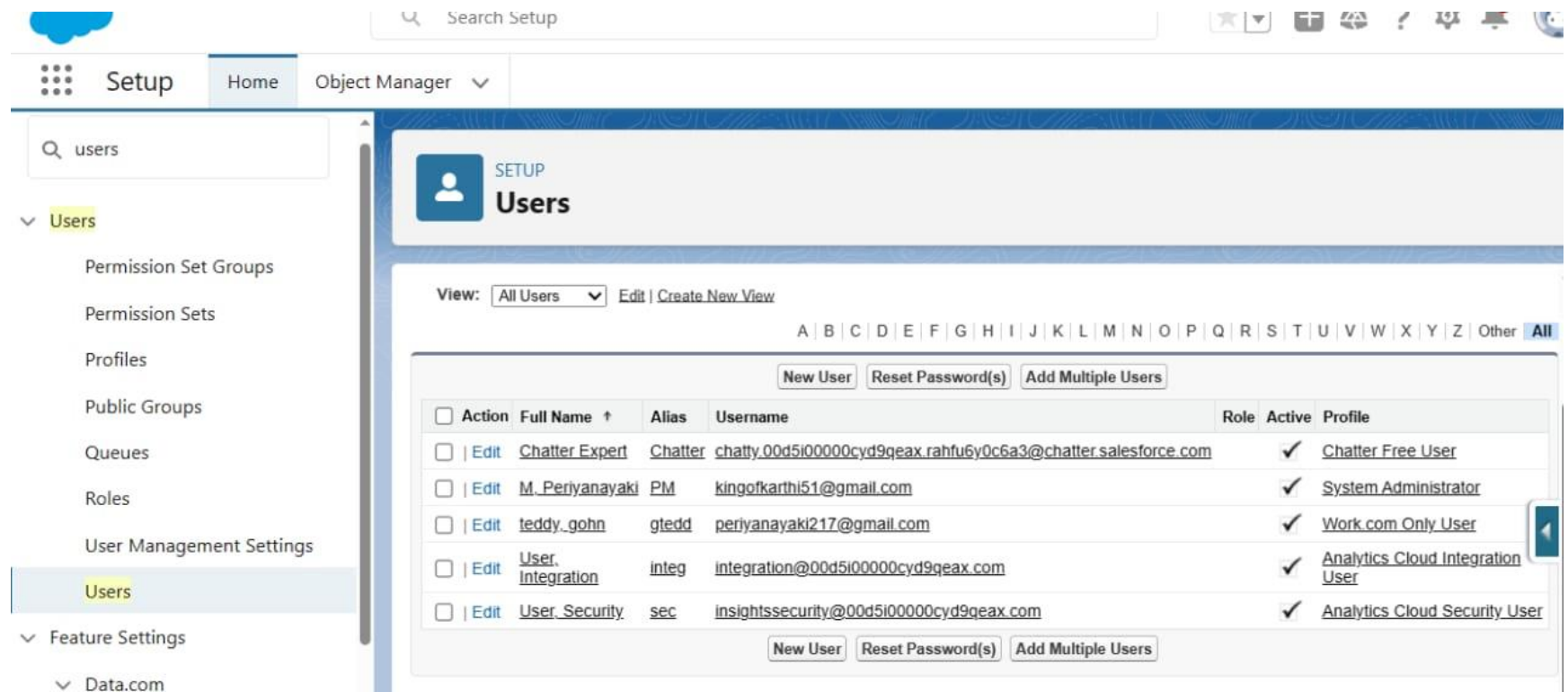
Action	Profile Name	User License	Custom
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">Customer Community Plus Login User</a>	Customer Community Plus Login	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">Customer Community Plus User</a>	Customer Community Plus	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">Customer Community User</a>	Customer Community	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">Customer Portal Manager Custom</a>	Customer Portal Manager Custom	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">Customer Portal Manager Standard</a>	Customer Portal Manager Standard	<input type="checkbox"/>
<a href="#">Edit</a>   <a href="#">Clone</a>	<a href="#">External Apps Login User</a>	External Apps Login	<input type="checkbox"/>

**Successfully created profiles.**

## Milestone-6:

### Users

A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account.



The screenshot shows the Salesforce Setup interface for managing users. The left sidebar contains a search bar with 'users' and a list of navigation items: Users (selected), Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, and User Management Settings. The main content area is titled 'SETUP Users' and includes a 'View: All Users' dropdown, an 'Edit | Create New View' link, and an alphabetical index. Below these are buttons for 'New User', 'Reset Password(s)', and 'Add Multiple Users'. A table lists the current users with columns for Action, Full Name, Alias, Username, Role, Active status, and Profile.

<input type="checkbox"/>	Action	Full Name ↑	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	<a href="#">Edit</a>	Chatter Expert	Chatter	chatty.00d5i00000cyd9qeax.rahfuy0c6a3@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/>	<a href="#">Edit</a>	M. Periyanyaki	PM	kingofkarthi51@gmail.com		✓	System Administrator
<input type="checkbox"/>	<a href="#">Edit</a>	teddy gohn	gtedd	periyanyaki217@gmail.com		✓	Work.com Only User
<input type="checkbox"/>	<a href="#">Edit</a>	User Integration	integ	integration@00d5i00000cyd9qeax.com		✓	Analytics Cloud Integration User
<input type="checkbox"/>	<a href="#">Edit</a>	User Security	sec	insightssecurity@00d5i00000cyd9qeax.com		✓	Analytics Cloud Security User

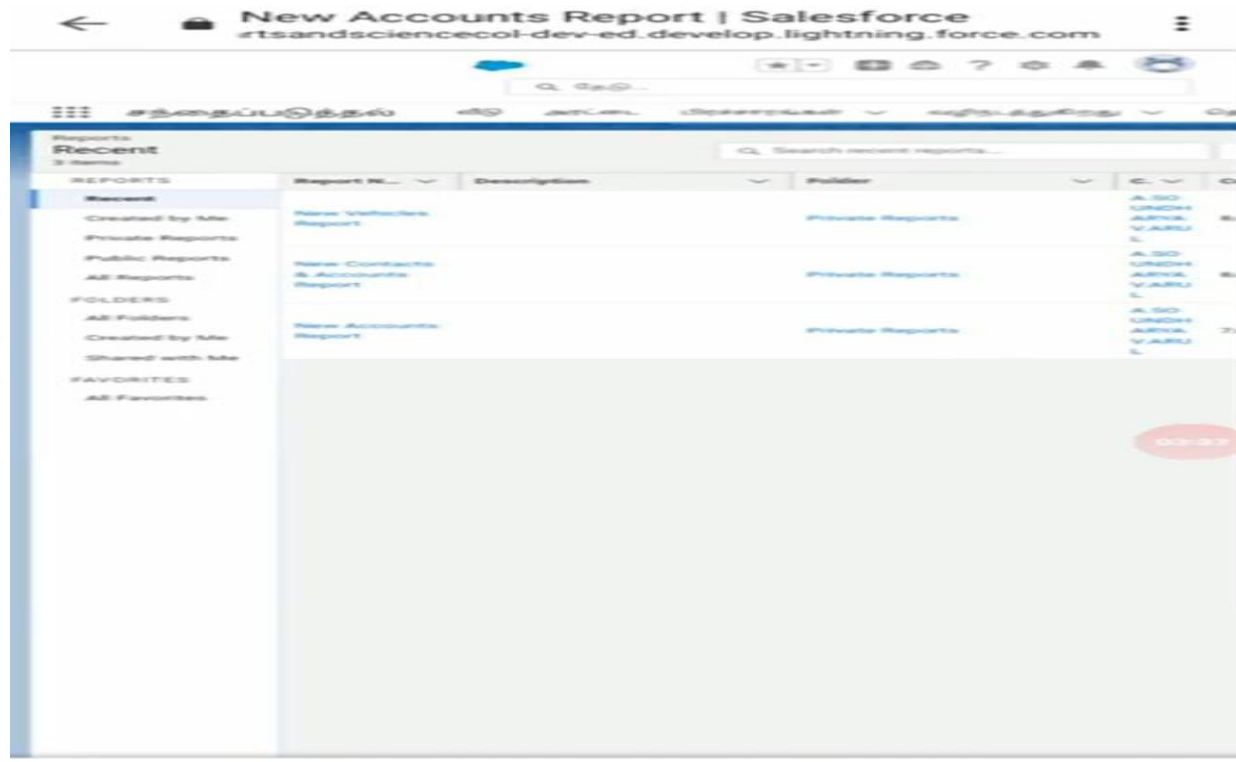
At the bottom of the table, there are buttons for 'New User', 'Reset Password(s)', and 'Add Multiple Users'.

Successfully created users.

## Milestone-7:

### Report

A report is a list of records that meet the criteria you define. It's displayed in Salesforce in rows and columns, and can be filtered, grouped, or displayed in a graphical chart. Every report is stored in a folder. Folders can be public, hidden, or shared, and can be set to read-only or read/write.



Successfully created reports.

#### 4 Trailhead Profile Public URL

Team Lead - <https://trailblazer.me/id/rannadurai2>

Team Member 1 – <https://trailblazer.me/id/rrathika1>

Team Member 2 – <https://trailblazer.me/id/priye40>

Team Member 3-<https://trailblazer.me/id/rganesan34>

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#### 5 ADVANTAGES:

**a vehicle management system**

- benefits ...
- **1. The entire fleet on a single screen, in real time ...**
- **2. Vehicle status, readily available ...**
- **3. Driver and vehicle safety and reliability ...**
- **4. Improved fuel efficiency, minimized fuel fraud ...**
- **5. Improved lifespan for vehicles and equipment ...**
- **6. Better reporting on driver behavior, work hours and vehicle performance ...**

- **7. Reduced maintenance and labor costs ...**
- **8. Tax deduction and insurance**

## **DISADVANTAGES:**

- **Pro: Simplifying Hired Hauling** When it comes time to hire a hauler, you've got your work cut out for you. ...
- **Pro: You Can Digitize All Paperwork** Contractors have to handle a lot of paperwork in their day to day lives. ...
- **Con: Change Management Is Difficult** Organizations build muscles around processes over many years. ...
- **Con: Not All Transportation Management Systems are Created Equal**

## **6 APPLICATIONS:**

- **You can manage all your vehicles centrally in a vehicle data pool and thus make them available to yourself and your dealers.**  
**You can store both business and technical master data for a**



vehicle in this data pool. The business details include data such as status of the vehicle (created, ordered and so on) or the availability of the vehicle (available, reserved, sold etc.). The technical details include data such as the individual features of the vehicle (horsepower, motor type, color etc.) as they have been defined in SAP variant configuration. For more, general information on standard variant configuration functions, see: [Variant Configuration](#) .

## ▪ 7 CONCLUSION:

- When a business first purchases a new vehicle, it will be able to completely track the vehicle and any modifications on it. It will also be able to track the cost of the vehicle.
- However, over time, the vehicle will not be completely new anymore. There will be more and more modifications on it. Then, the business needs to track these modifications.
- As a business needs to manage more and more data, they can find that it is more difficult to find a timeline that they can view the data. That is why it is necessary to have a system that can provide the data and analyze it.

- At the same time, the data scattered across the world will not always be able to be accessed. Therefore, the system has to be able to collect it from various sources.

## 8 FUTURE SCOPE:

**This Special Issue would not have been a success without the constant efforts of the authors—including those whose papers could not be selected. We can only hope that this Special Issue is able to provide them with a platform to learn and improve their existing works based on the valuable comments of the reviewers and editors. We would also like to thank the reviewers for dedicating their time and energy to the submitted manuscripts and motivating the authors to improve their work. Last, but not least, we would like to extend our heartiest congratulations to the entire editorial team of *Applied Sciences* for their sincere efforts and constant dedication in making this Special Issue a success.**