









GOVERNMENT OF TAMILNADU

Naan Muthalvan - Project-Based Experiential Learning VEHICLE MANAGEMENT SYSTEM USING SALESFORCE

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PG AND RESEARCH DEPARTMENT OF MATHEMATICS



M.V.MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN

Affiliated To Mother Teresa Women's University, Kodaikanal)
Reaccredited with "A" Grade by NAAC

DINDIGUL-624001. APRIL - 2023

M.V.MUTHIAH GOVERNMENT ARTS COLLEG FOR WOMEN (AFFILIATED TO MOTHER TERESA WOMEN'S UNIVERSITY, KODAIKANAL) REACCREDITED WITH "A" GRADE BY NAAC DINDIGUL - 624 001

BONAFIDE CERTIFICATE

This is to certify that this is a bonafide record of the project entitled, "VEHICLE MANAGEMENT SYSTEM USING SALESFORCE" done by Ms.S KEERTHANA (20321TR013), Ms.A INUL INAYA (20321TR010), Ms.B JEEVITHA (20321TR011) and Ms.M KALAI SELVI (20321TR012). This is submitted in partial fulfillment for the award of the degree of Bachelor of Science in

Mathematics in M.V.MUTHIAH GOVERNMENT ARTS COLLEGE FOR WOMEN, DINDIGUL during the period of December 2022 to April 2023.

Project Mentor(s)

1. Euro

Head of the Department

Submitted for viva-voce Examination held on _____

VEHICLE MANAGEMENT SYSTEM USING SALESFORCE

INTRODUCTION:

Welcome to Salesforce! Salesforce is game-changing technology, with a host of productivity-boosting features, that will help you sell smarter and faster. Salesforce is your customer success platform, designed to help you sell, service, market, analyze, and connect with your customers analyze, and connect with your customers collaborate and engage with employees and partners, and store your data securely in the cloud.

1.1 Overview:

Vehicle management system have become increasingly, important over the world, due to both to demands for increasingly flexibility and capability. A vehicle management system is a powerful tool, which can be implemented to improve fleet efficiency. Its allows a business to quickly and clearly keep track of vehicle status and other important information. we define this system as "onboard systems that manage a vehicle's internal capabilities to accomplish the mission goals".

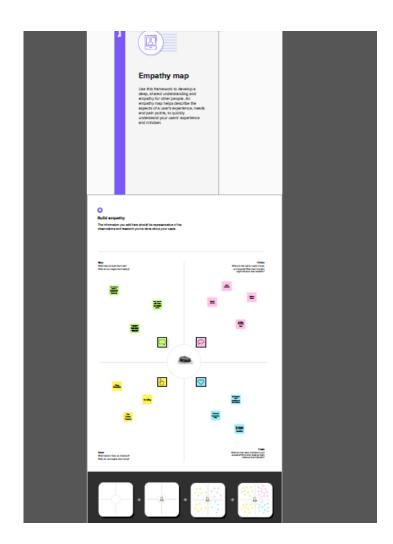
The vehicle management software fully customizable to suit the needs of your business. Its allows you to access the information from anywhere in the world at any given time, as long as you have internet access.

1.2 Purpose:

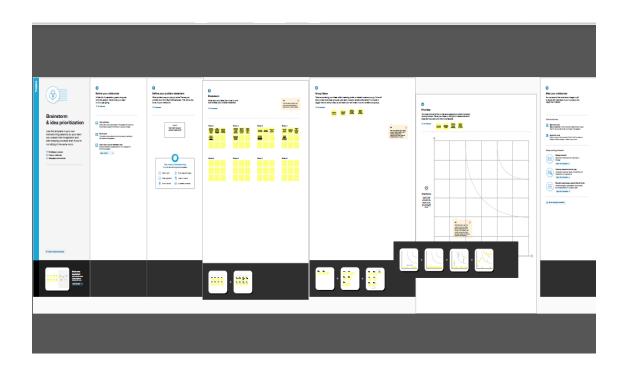
- Improve <u>fleet safety</u> and working conditions.
- Improve the behaviour and performance of drivers and beat <u>unsafe driving.</u>
- Schedule shifts and work hours.
- Leverage driver retention.
- Schedule routine maintenance.
- Manage <u>fuel efficiency</u>.

2.purpose definition &design thinking:

2.1 Empathy Map:



2.2 Ideation & Brainstorming Map:



3 Result:

3.1 Data model:

Object Name	Fields in the object

Vehicle		
	Field label	Data Type
	Customer name	text
	Customer mobile no	number
	Vehicle type 1. 2wheeler 2. 4wheeler	picklist
	2wheelers 1. HERO 2. HONDA 3. BAJAJ 4. ROYAL ENFIELD 5. TVS 6. KINETIC 7. OLA 8. JAWA 9. SD 10. BATTERY	Picklist
	4wheelers 1. RENAULT 2. SKODA 3. HONDA 4. HYUNDAI 5. SUZUKI 6. MAHINDRA	Picklist

7. VOLKSWAGEN	
7. VOLKSWAGEN 8. BENZ	
8. BENZ 9. AUDI	
10. VOLVO	
Vehicle name	text
Vehicle no	text
Chassic no	text
colour	text
Body type	text
Vehicle includes 1. Fire extenuation 2. First aid kit 3. Multi charger kit 4. Stepney 5. Stereo 6. Tool kit 7. Tracking device 8. Tyre jack	Multi picklist
Condition 1. Good 2. Medium 3. Least	Picklist
Mileage	Text
Seats	Number
Start date	Date/time

	End date Opportunity	Date/time Lookup(opportunity)
Driver	Field label	Data Type
	Driver name	text
	Licence no	text
	Mobile no	number
	Fair per hour	text
	vehicle	Lookup(vehicle)

3.2 Activity& Screenshot:

Activity 1:

Creating Developer Account

Creating a developer org in salesforce.

- 1. Go to 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

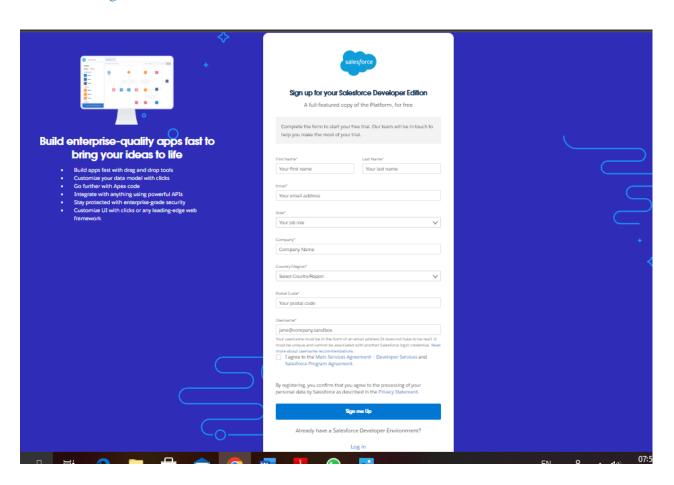
d. County: India

e. Postal Code: pin code

f. Username: should be a combination of your name and company

This need not be an actual email id, you can give anything in the format:

username@organization.com

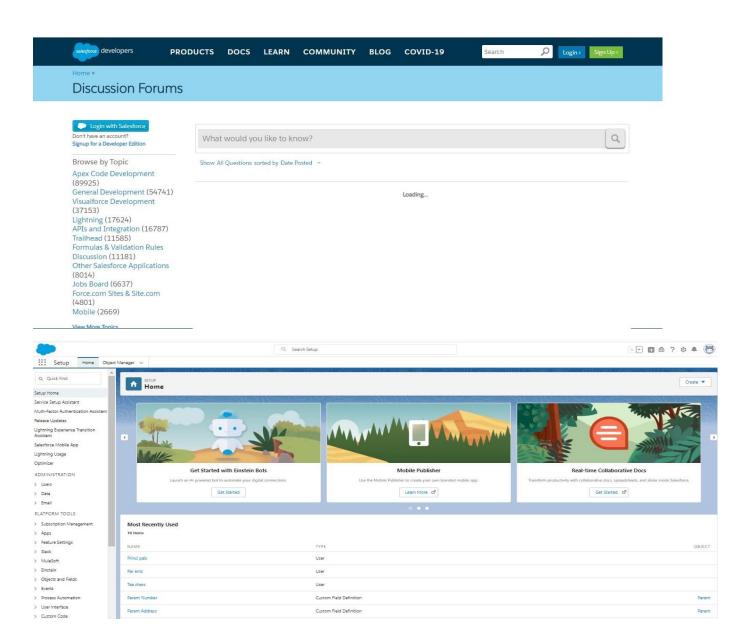


Login To Your Salesforce Account

- 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.

Salesforce Login

htttps://login.salesforce.com



Milestone-2:Object

Salesforce objects are database tables that permit you to store data that is specific to an Organization; Salesforce objects are of two types:

Standard Objects: Standard objects are the

kind of objects that are provided by salesforce.com such as users, contracts, reports, dashboards, etc.

Standard Objects: Account, Contact, Opportunity.

Custom objects: Vehicles, Drivers

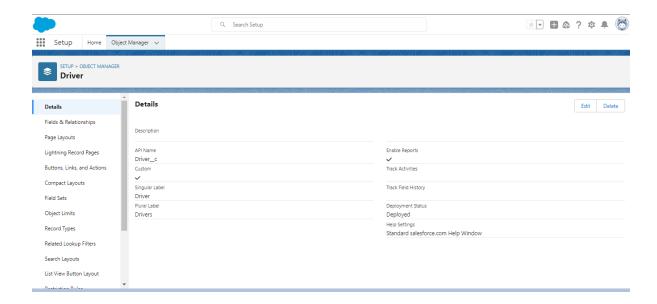
Activity 1:

To Create an object:

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

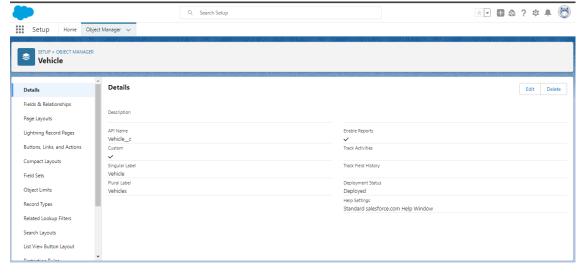
The below steps will assist you in creating those objects.

- 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 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



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.

Activity-1:

Creation of fields:

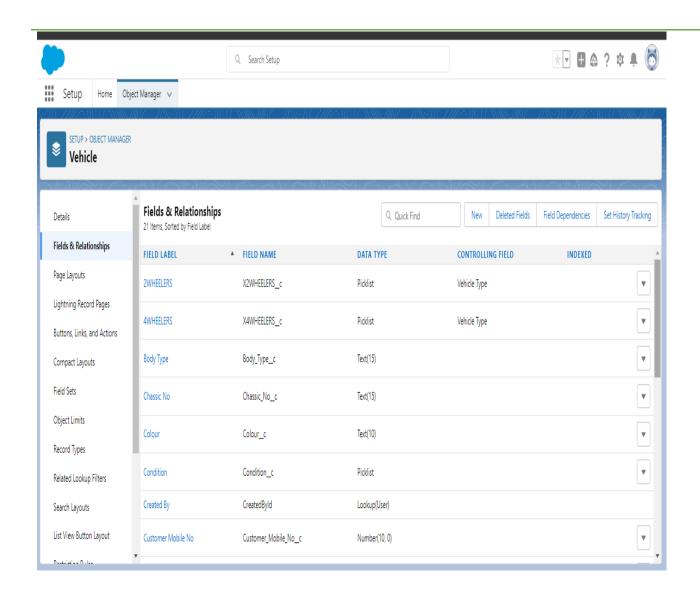
Fields in Vehicles objects follow below data types:

Field label	Data Type
Customer name	text
Customer mobile no	number
Vehicle type 3. 2wheeler 4. 4wheeler 2wheelers 11. HERO 12. HONDA 13. BAJAJ 14. ROYAL ENFIELD 15. TVS 16. KINETIC 17. OLA 18. JAWA 19. SD 20. BATTERY	picklist Picklist
4wheelers 11. RENAULT 12. SKODA 13. HONDA 14. HYUNDAI 15. SUZUKI 16. MAHINDRA 17. VOLKSWAGEN	Picklist

18. BENZ	
19. AUDI	
20. VOLVO	
Vehicle name	text
Vehicle no	text
Chassic no	text
Colour	text
Body type	text
Vehicle includes 9. Fire extenuation 10. First aid kit 11. Multi charger kit 12. Stepney 13. Stereo 14. Tool kit 15. Tracking device 16. Tyre jack	Multi picklist
Condition 4. Good 5. Medium 6. Least	Picklist
Mileage	Text
Seats	Number
Start date	Date/time

End date	Date/time
Opportunity	Lookup(opportunity)

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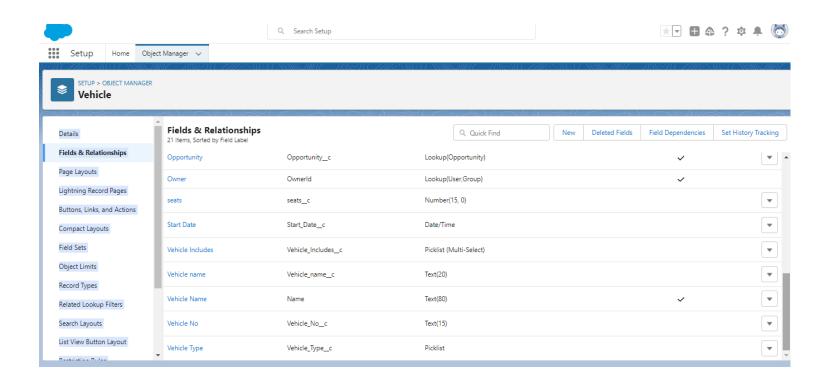


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Activity:2

To create the driver object continue the same steps which is followed for the above object.

Field	Data type
Driver name	Text
Licence no	Text
Mobile no	Number
Fair per hour	Text
Vehicle	Lookup(vehicle)



Activity-3:

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.

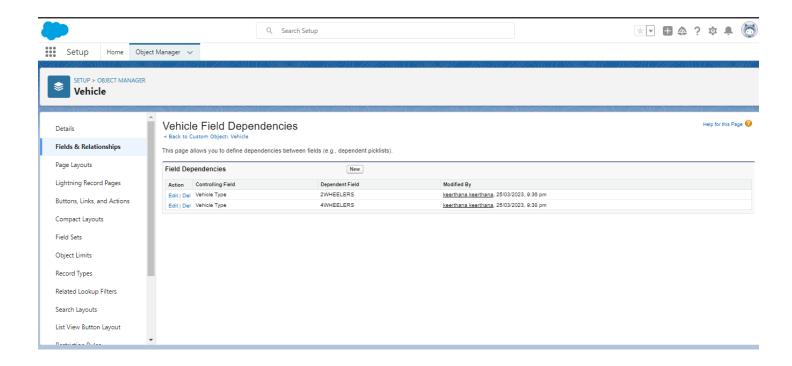
- Click on the gear icon and then select Setup.
- Click on the object manager tab just beside the home tab.
- After the above steps, Select Vehicles Object
- Now Select Fields and relationships from setup menu of the vehicle object.
- Click Field Dependencies.
- Click New.
- Select Vehicle Type as the 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)JAWA
- 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.



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.

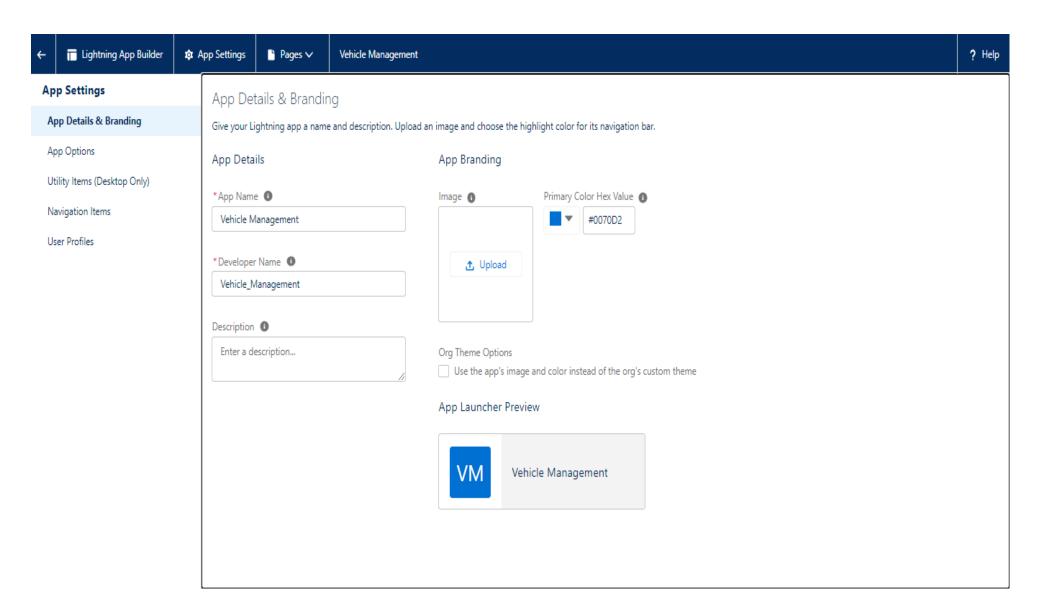
Activity-1:

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.



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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 ranges.

Activity 1:

Creating a Profiles:

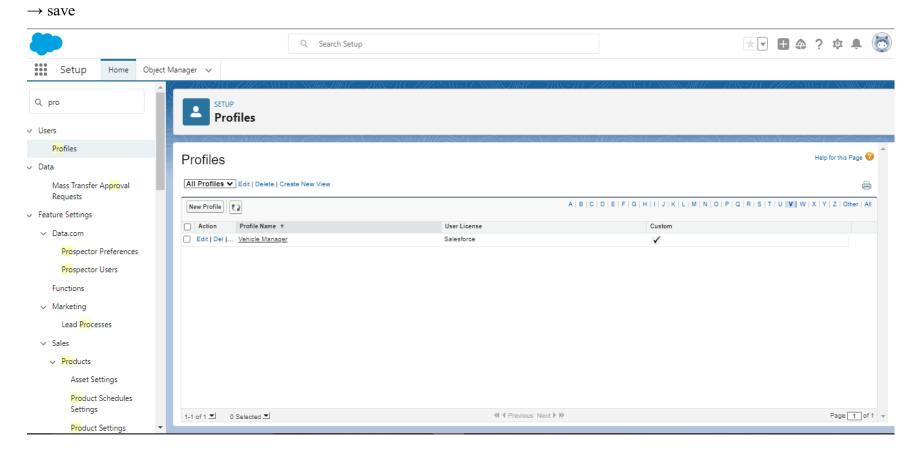
Now create a Vehicle Manager profile and set its object permissions.

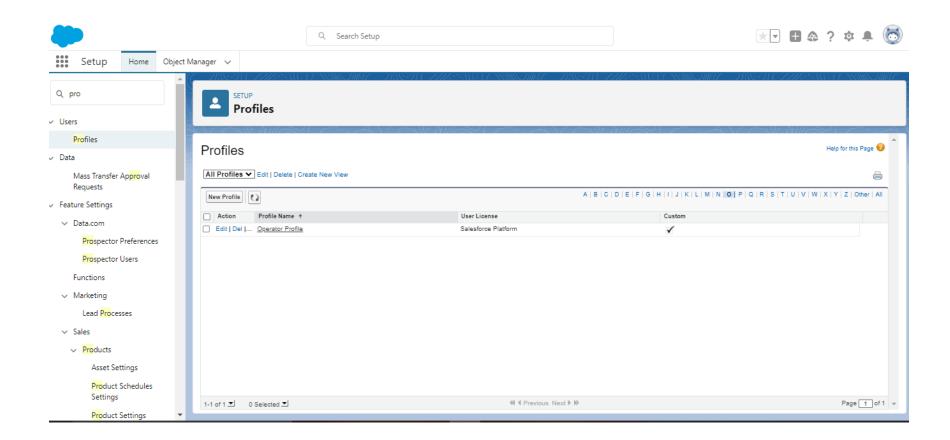
- From Setup enter Profiles in the Quick Find box, and select Profiles.
- From the list of profiles, find Standard User.
- Click Clone.
- For Profile Name, enter Vehicle Manager.
- Click Save.
- While still on the Vehicle Manager profile page, then click Edit.

• 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 \rightarrow type profiles in quick find box \rightarrow click on profiles \rightarrow clone the desired profile(standard user is preferable) \rightarrow enter profile name



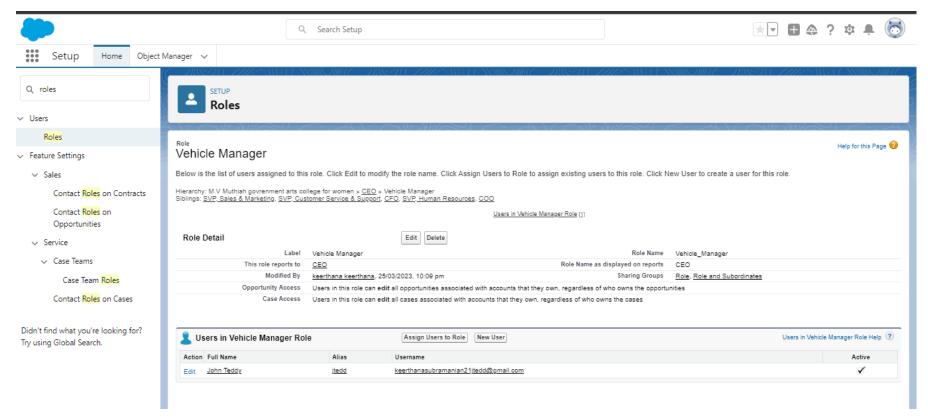


Setup Roles:

- 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 which will report to the Vehicle manager.



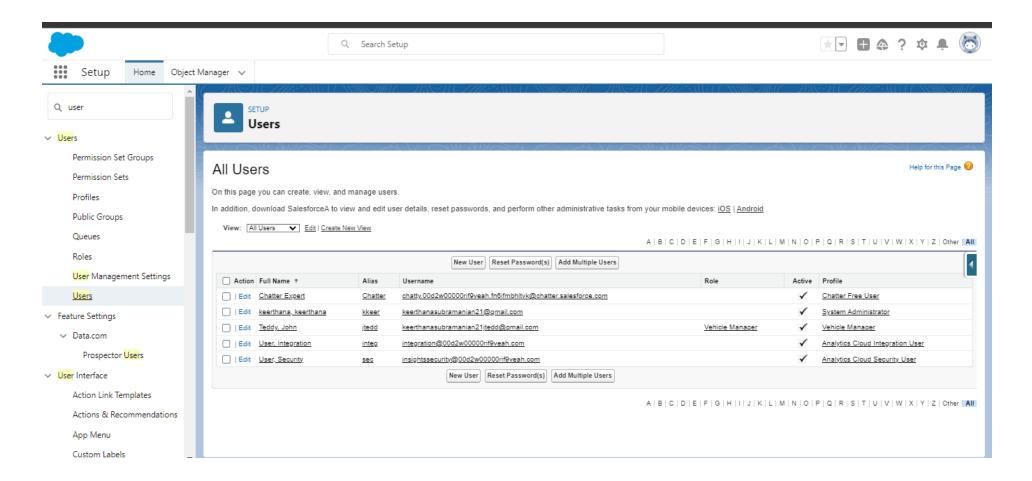
Milestone-6: Users

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.

Activity 1:

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.



Milestone-7:Reports

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.

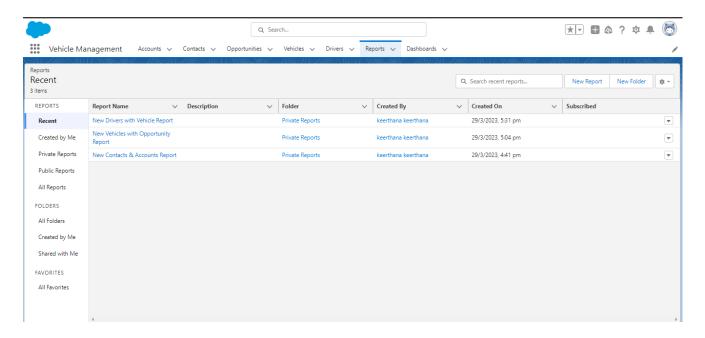
Activity 1:

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.



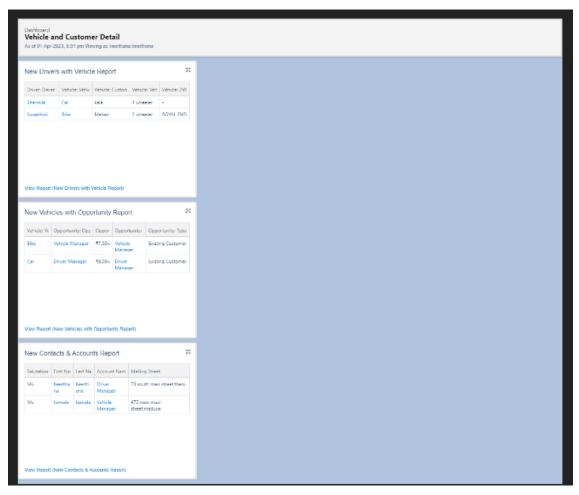
Activity 2:

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.

To create a report:

Go to the app \rightarrow click on the reports tab



4. Trailhead profile public URL:

Team lead- S. Keerthana- https://trailblazer.me/id/kkeerthana44

Team member 1-A. Inul Inaya

Team member 2-B. Jeevitha

Team member 3-M. Kalaiselvi

5. Advantages & disadvantage:

Advantages:

1 productivity efficiency and performance levels of vehicles.

2 advanced vehicle management system the vehicles is onboard computer, gather data for user.

3 vehicle management has an integrated system to track & manage all-important assets & ensure the best profitability.

4 customize the report according to business requirements.

Disadvantages:

- 1. Active tracking based fleet management requires monthly subscription charges and data usage charges.
- 2. It requires skilled resources to maintain such system. This increases maintenance costs.
- 3. GPS device used in fleet management is power hungry which drains battery faster.

6 .Applications:

- Vehicle fuel tracking systems.
- Vehicle maintenance software solutions
- Vehicle tracking systems
- Vehicle inventory management systems.

7. Conclusions:

The developed system has been successfully deployed on a web-site. After connected to the system through the Internet, some feedbacks are found. This system's workflow of the front-end is user friendly and efficient enough to work. Online vehicle reservation system improves the existing system since we are in computerized world. With this new system is mandatory, it enables the user of the system (client, employee, System administrator) to reserve vehicles online and this reduces the wasting of time of the clients looking for where to go, increase the safety the property.

The system developed with future development possibilities in consideration. The object oriented approach of this system permits addition of new entities and methods, which will be helpful to interact with existing ones and to extend the functionalities. The developers of this system wishes to continue their involvement and contribution to this system for further development operation. Some new features will be added soon in this system. The developers of this system wish to add a Forum facility in this web-site, where all the registered users will be able to perform desired tasks.

8 .Future scope:

The system could be modified suitable to work on a large network. This involves, amount other, resolving used conflicts, protecting database integrity and ensuring consistency of data if it is distributed across multiple location. The project could be implemented in an average sized organization. An average company will not be very keep on spending loads of money on ledgers. Whereas these project will greatly reduce the costs which is using common and cheap office items like database and desktop application. An average company will not be very keep on spending loads of money on ledgers. Whereas these project will greatly reduce the costs which is using common and cheap office items like database and desktop application. Can possible to improve this project on mobile app version. In mobile app client will be able to book vehicles through smart phones.