Vehicle Management System Using Salesforce

INDRODUCTION

Overview :

A vehicle management system is a software application that helps organizations manage their vehicles, drivers, and related activities such as fuel consumption, maintenance, and repairs. The system is designed to improve efficiency, reduce costs, and increase safety by providing real-time visibility into the location and status of vehicles and drivers.

The vehicle management system can be used by a variety of organizations such as transportation companies, government agencies, logistics providers, and field service organizations. The system typically consists of several modules that address different aspects of vehicle management such as fleet tracking, driver management, fuel management, maintenance management, and compliance management.

Purpose

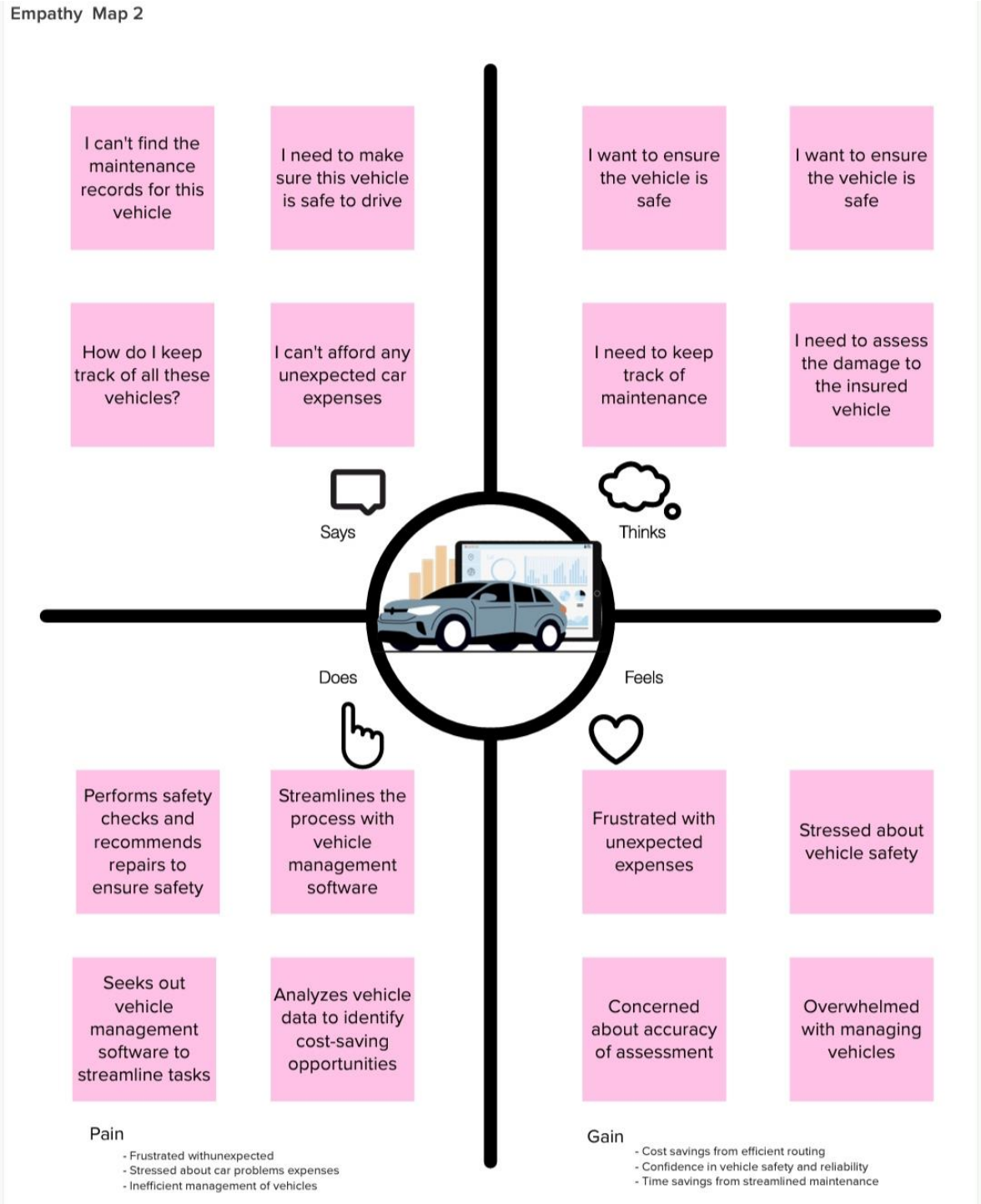
The purpose of a vehicle management system is to help organizations manage their vehicles, drivers, and related activities more effectively and efficiently.

By using a vehicle management system, organizations can achieve several benefits such as:

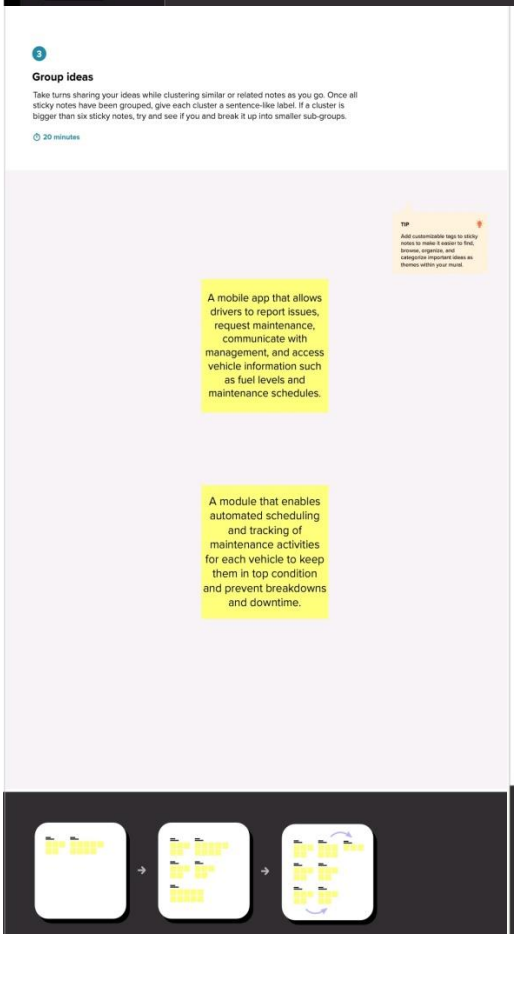
- Improved fleet visibility and control: A vehicle management system provides real-time information on the location and status of vehicles, enabling organizations to track their fleets and optimize their operations.
- Better driver performance and safety: A vehicle management system can monitor driver behavior, such as speeding, harsh braking, or idling, and provide feedback to drivers to improve their performance and safety.
- Reduced fuel consumption and costs: A vehicle management system can monitor fuel consumption and identify opportunities for reducing fuel usage and costs, such as by optimizing routes or reducing idling time.
- Enhanced maintenance and repair management: A vehicle management system can schedule and track maintenance and repairs, reducing downtime and extending the lifespan of vehicles.

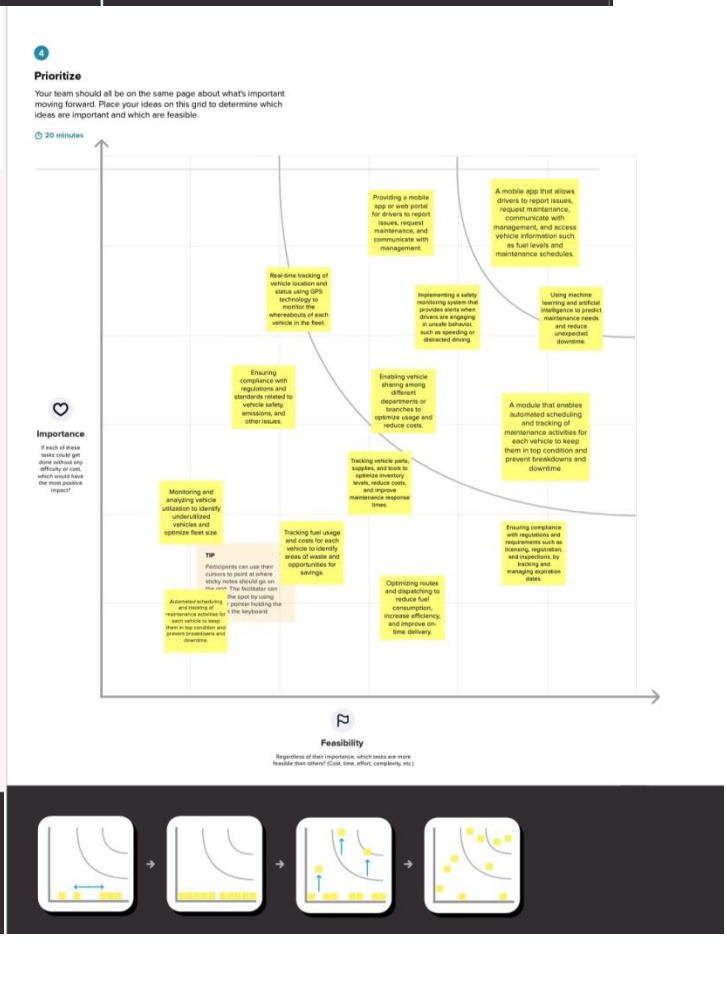
Problem Definition & Design Thinking

Empathy Map



Ideation & Brainstorming Map





RESULT

Data Model :

Object Name	Fields in the Object
Vehicles	

Field Lable	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) iv)HYUNDAI v)SUZUKI 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
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)

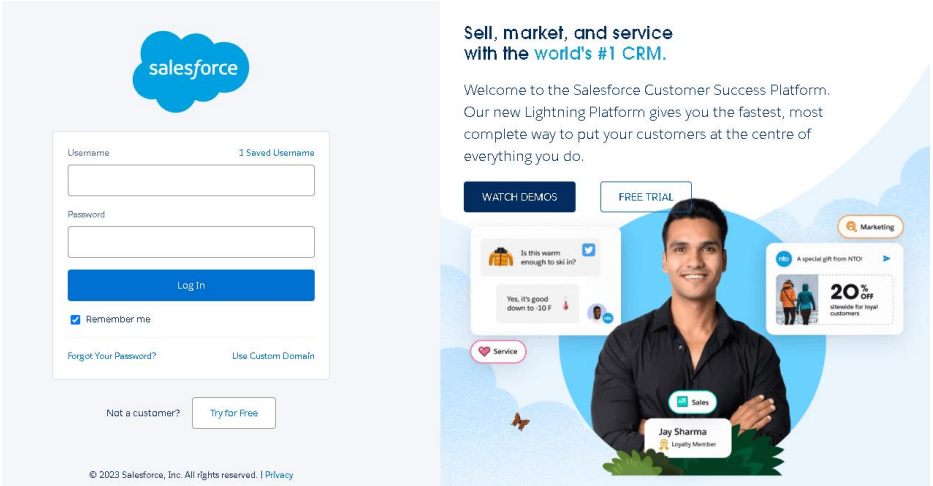
	Driver	

Field Lable	Data Type
Driver Name	Text
Licence No	Text
Mobile No	Number
Fair Per Hour	Text
Vehicle	Lookup(Vehicle)

Activity & ScreenShot

Milestone 1:Creation Salesforce Org:

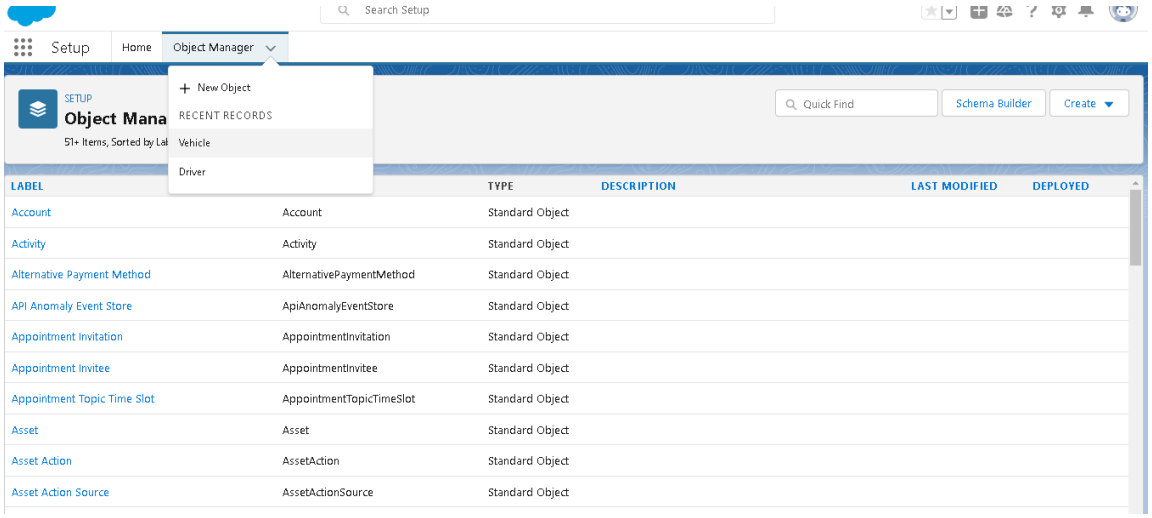
Activity 1:
Creating Developer Account
Creating a developer org in salesforce.



Milestone-2:Object

Activity 1: To Create an object:

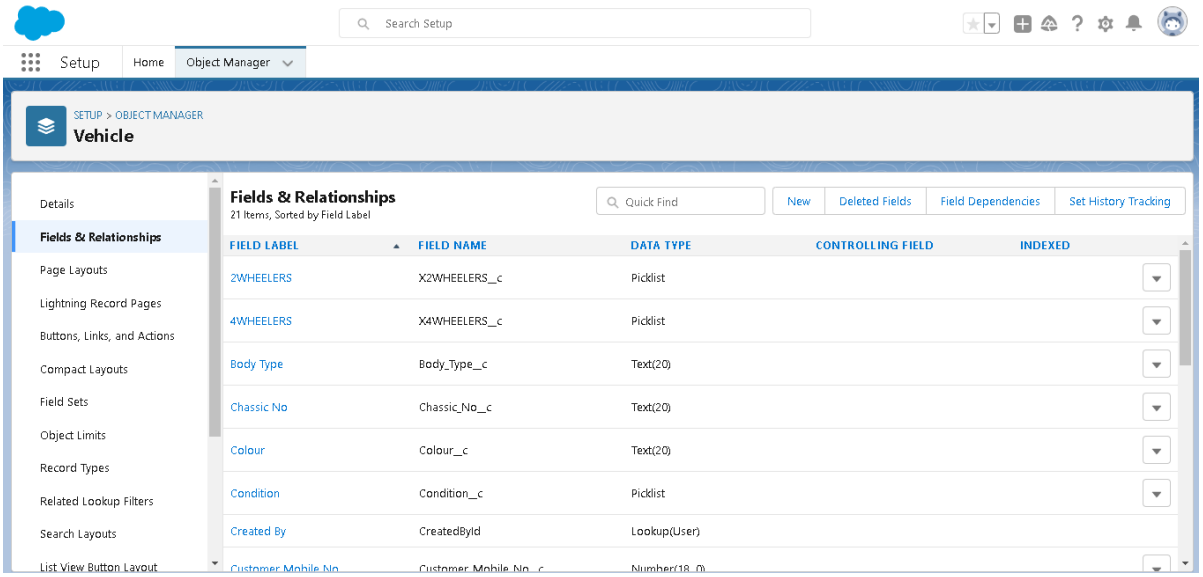
Creation of Objects for Vehicle Management, For this Vehicle Management to creating two objects i.e *Vehicles , Driver.*



Milestone -3:Fields and Relationship

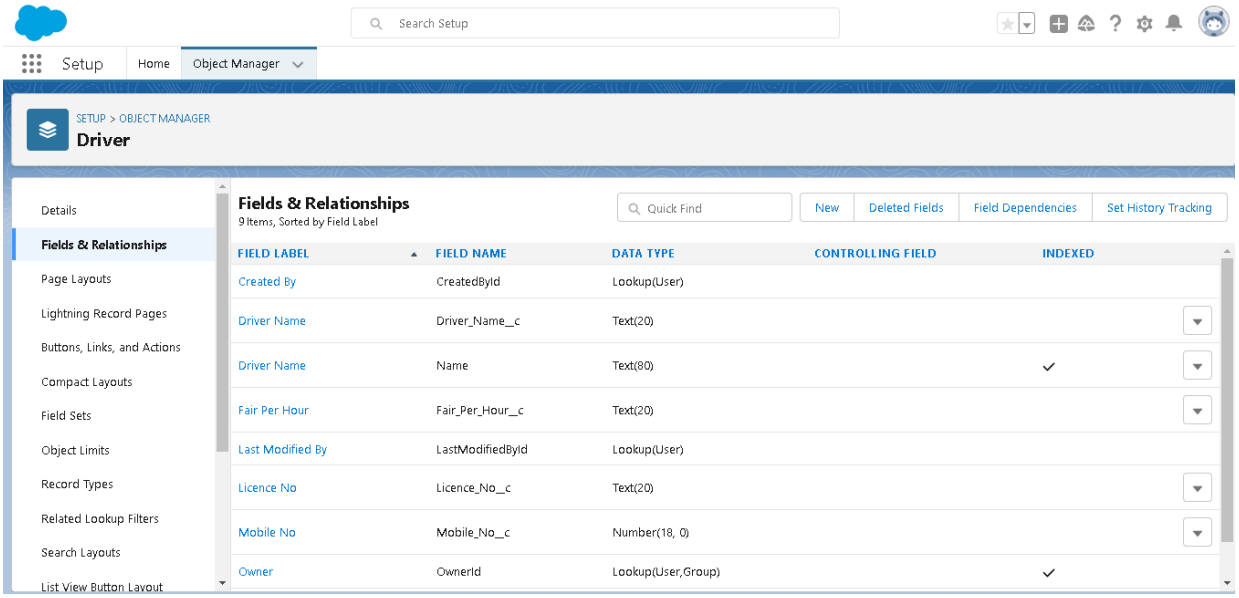
Activity-1: Creation of fields:

Creating a Fields in Vehicles objects



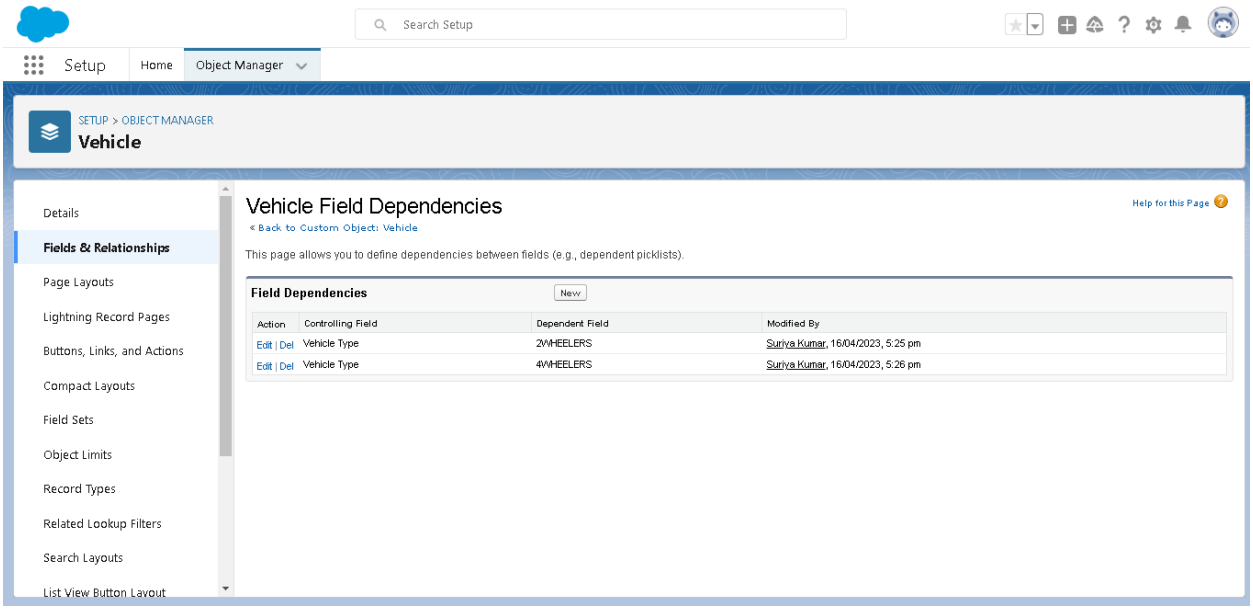
Activity-2:

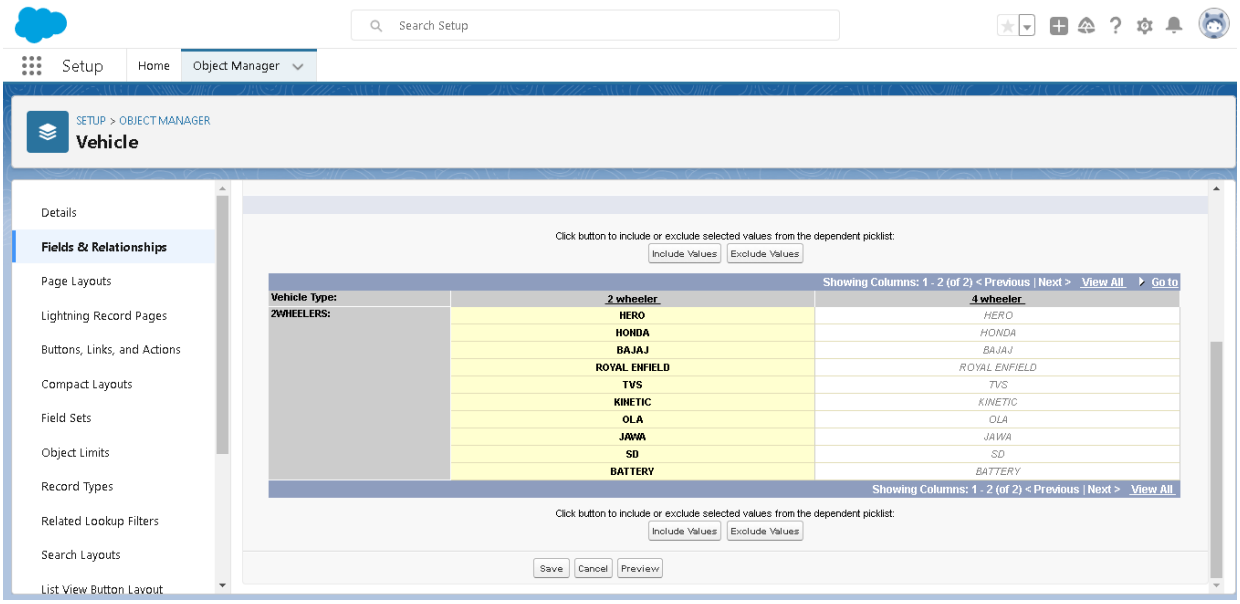
Creating a Fields in Driver objects



Activity-3: Fields dependency In Driver Object:

Creating 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.

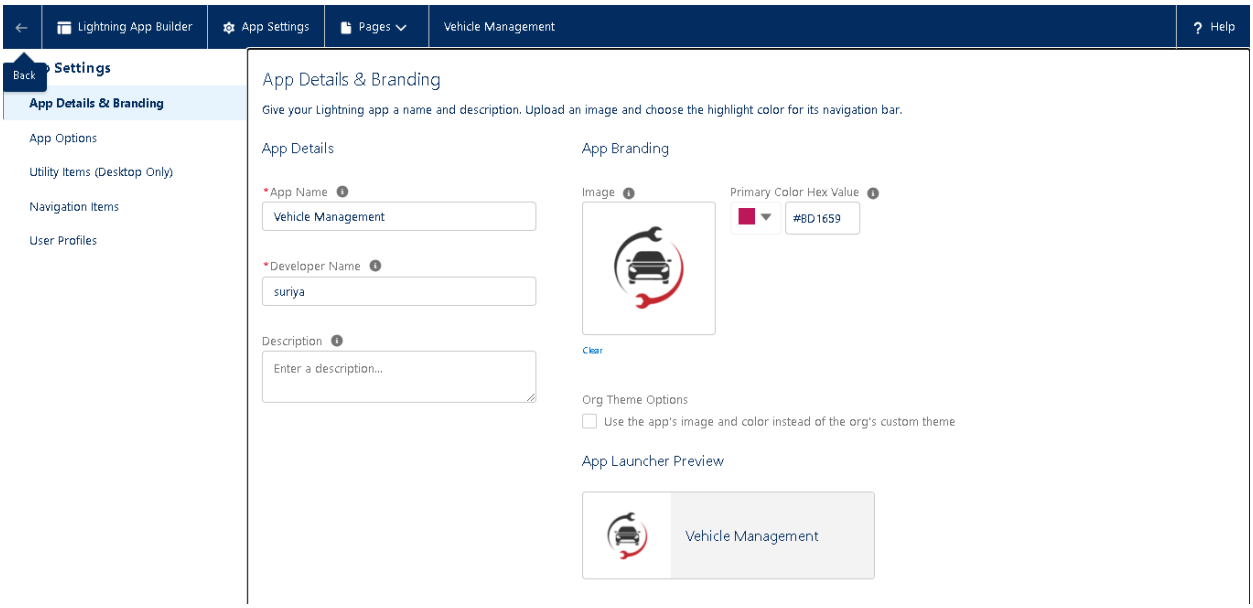




Milestone-4:Lightning App

Activity-1:

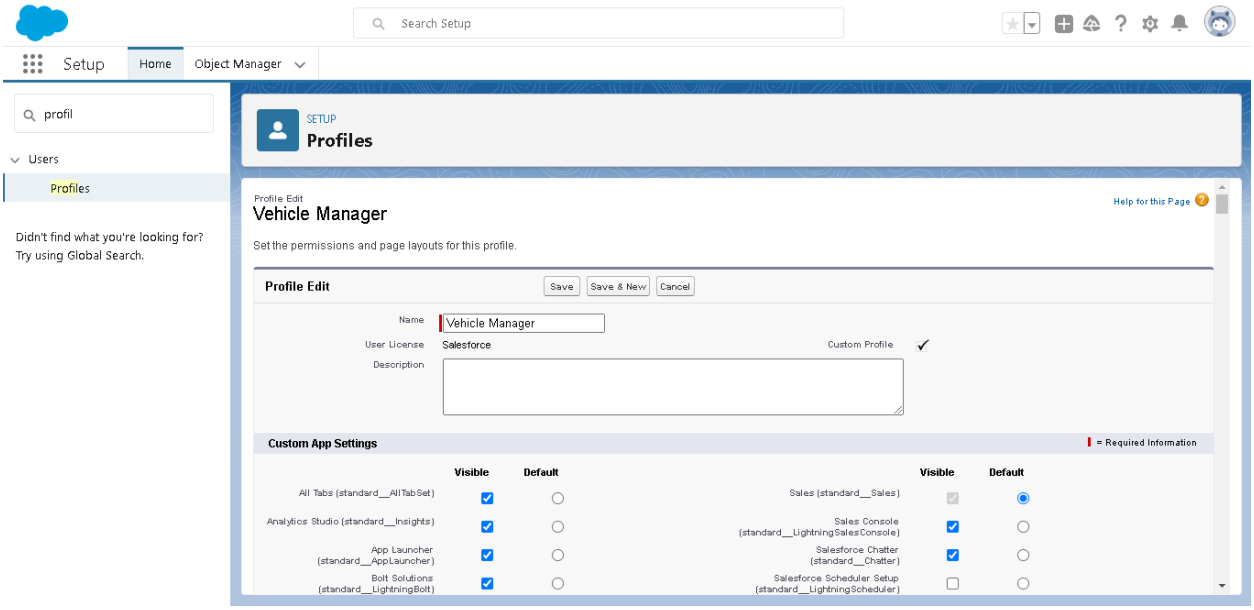
Creating the Vehicle Management Construction app



Milestone-5: Profile

Activity 1:

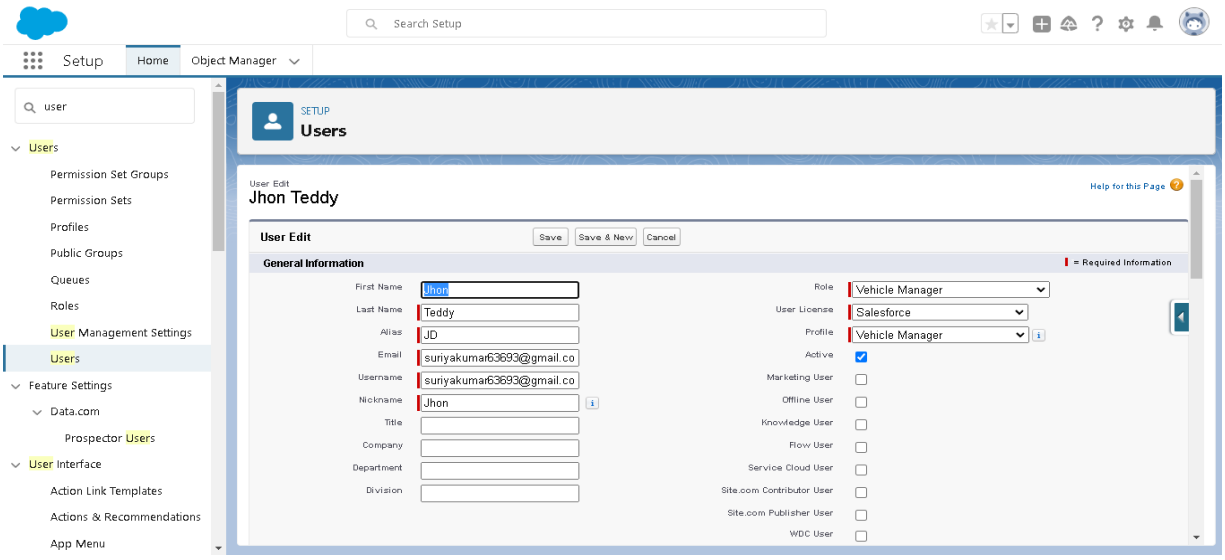
Creating a Profiles:Now create a Vehicle Manager profile and set its object permissions.



Milestone-6: Users

Activity 1:

Creating a Users:

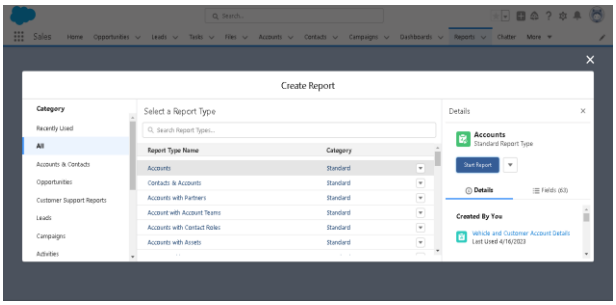


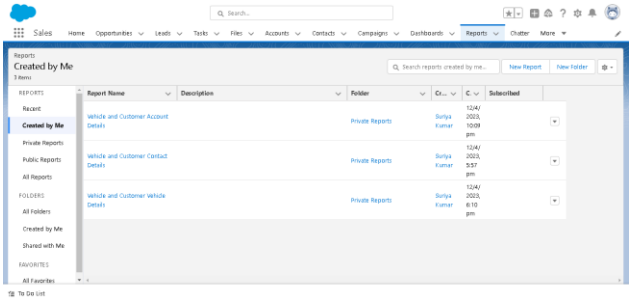
Milestone-7:Reports

Activity 1:

Reports And Dashboards.

Creating a Reports in Vehicle and Customer Details

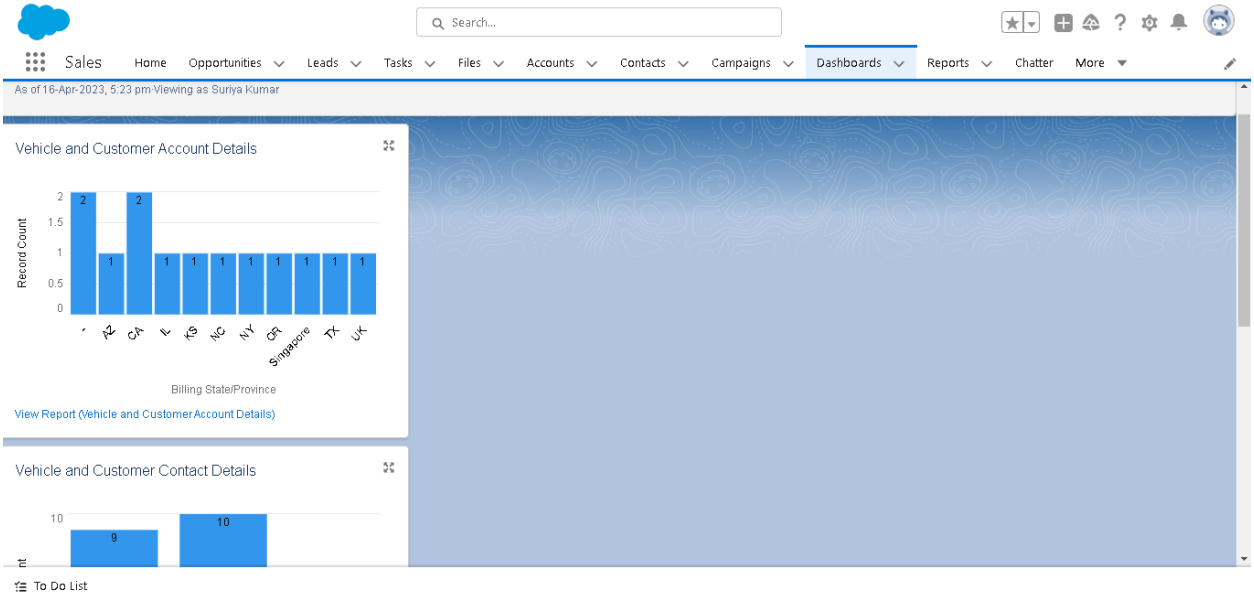




Activity 2:

Dashboard:

Creating dashboard in Vehicle and Customer Details



Trailhead Profile Public URL

Team Leader - https://trailblazer.me/id/surya143s

Team Member 1 - https://trailblazer.me/id/kannan2003

Team Member 2 - https://trailblazer.me/id/parveen143j

Team Member 3 - https://trailblazer.me/id/eswar2003

Advantages & Dis advantages

Advantages:

- Improved Efficiency: A VMS can help optimize vehicle usage by providing real-time visibility into the location, status, and availability of each vehicle. This can help organizations make better use of their resources and reduce costs.
- Increased Safety: VMS can help improve safety by monitoring driver behavior and providing alerts for any violations of safety rules. This can help reduce accidents and protect both drivers and other road users.
- Enhanced Productivity: With the ability to monitor vehicle performance and maintenance requirements, a VMS can help reduce downtime and improve the productivity of the fleet.
- Better Customer Service: With a VMS, organizations can track and manage their vehicles in real-time, allowing them to provide better customer service by providing accurate information on vehicle arrival times and delivery status.
- Cost Savings: A VMS can help organizations save money by reducing fuel consumption, minimizing vehicle wear and tear, and optimizing maintenance schedules.

Disadvantages:

- Implementation Costs: The initial cost of implementing a VMS can be high, including hardware, software, and training costs.
- Technical Issues: Like any technology, VMS can have technical issues such as software bugs, connectivity problems, and data accuracy issues.
- Employee Resistance: Some employees may be resistant to using a VMS, either due to a lack of familiarity with technology or concerns about privacy.
- Maintenance Requirements: VMS requires ongoing maintenance to keep the system up-to-date and functioning correctly.
- Data Security Risks: VMS systems contain sensitive data such as vehicle locations and driver information, which can be vulnerable to hacking or cyber attacks if not properly secured.

APPLICATIONS

- **Logistics and transportation companies**: Vehicle management system can help logistics and transportation companies track and manage their vehicles, optimize routes, and improve delivery times.
- **Public transportation**: Vehicle management system can be used by public transportation companies to track buses, trains, and other vehicles, and provide real-time information to passengers about arrival times and delays.
- **Emergency services**: Vehicle management system can help emergency services such as police, fire, and ambulance services to quickly locate and dispatch vehicles to emergencies, and monitor the status of vehicles in real-time.
- **Construction and maintenance companies**: Vehicle management system can be used by construction and maintenance companies to track the location and status of their vehicles and equipment, and optimize maintenance schedules to minimize downtime.

- **Field service companies**: Vehicle management system can be used by field service companies such as utilities, telecommunications, and HVAC companies to manage their fleets of service vehicles, optimize routes, and monitor the status of vehicles and equipment in real-time.

- **Car rental companies**: VMS can help car rental companies manage their fleets of vehicles, track their location and status, and optimize rental schedules to increase utilization.

CONCLUTION

A vehicle management system is a software-based solution that allows organizations to track, manage, and optimize their fleets of vehicles. The use of a vehicle management system can provide numerous benefits such as improved efficiency, increased safety, enhanced productivity, better customer service, and cost savings. However, there are also potential disadvantages such as high implementation costs, technical issues, employee resistance, maintenance requirements, and data security risks.

The applications of a vehicle management system are widespread and can be useful in various areas such as logistics and transportation, public transportation, emergency services, construction and maintenance, car rental, and field service companies. Overall, the benefits of a vehicle management system typically outweigh the disadvantages, making it a worthwhile investment for organizations that manage a fleet of vehicles. However, it is important to carefully consider the costs, potential risks, and specific needs of the organization before implementing a vehicle management system.

A vehicle management system can be applied in various areas, including logistics and transportation, public transportation, emergency services, construction and maintenance, car rental, and field service companies. For organizations with a fleet of vehicles, implementing a vehicle management system can be a worthwhile investment. However, it is essential to carefully consider the organization's specific needs and challenges to ensure that the selected vehicle management system meets their requirements.

FUTURE SCOPE

- **Integration with other technologies**: vehicle management system could be integrated with other technologies such as artificial intelligence, machine learning, and the Internet of Things (IoT) to provide more advanced features such as predictive maintenance and real-time route optimization.

- **Improved data analytics**: The data collected by vehicle management system could be analyzed more comprehensively to provide insights into vehicle usage patterns, maintenance requirements, and fuel consumption. This could help organizations make more informed decisions about fleet management.

- **Enhanced driver monitoring**: vehicle management system could be further developed to monitor driver behavior more comprehensively, including monitoring for distracted driving and identifying driver fatigue. This could help further improve safety and reduce accidents.

- **Expanded communication capabilities**: vehicle management system could be developed to provide more advanced communication capabilities between drivers, dispatchers, and customers. This could include the ability to send alerts and notifications in real-time, as well as support for two-way communication.

- **Greater scalability**: vehicle management system could be developed to support larger fleets of vehicles and be more scalable to accommodate the needs of growing organizations.