RideShare

ABSTRACT PRESENTATION

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Introduction

- RideShare is an Android app facilitating carpooling to reduce traffic, offer cost-effective travel, and promote environmental responsibility.
- *Reduce Traffic, Save Money:* RideShare carpooling cuts down on vehicles, easing congestion and offering affordable travel.
- *Cost-Effective Alternative:* Provides a budget-friendly option compared to traditional taxis or ride-hailing services.
- *Eco-Conscious Choice:* Promotes carpooling to minimize carbon footprint and foster a sustainable environment.

Description of Project/Product

- Developing a mobile application (Android) to facilitate carpooling and reduce traffic congestion.
- This app will connect riders and drivers for cost-effective travel and promote a more sustainable transportation system.

Scope of the Project

- Connects riders & drivers: Matches riders seeking affordable travel with drivers offering empty seats.
- Seamless carpooling: Enables booking carpools, sharing available seats, and suggesting efficient routes.
- The main focuses are to reduce traffic congestion, offer cost-effective travel, and promote carpooling.
- Initial scope excludes advanced features like multi-stop rides, social networking, and public transport integration.
- Focuses on core functionalities: Prioritizes core carpooling experience with potential for future expansion.

Functional Requirements

- *User Account Management:*

  Users can securely create accounts and log in by providing the necessary details.
- *Carpool Creation:*

  Registered users with cars can create carpools for other users to view on the app.
- *Carpool Search and Joining:*

  Users can search for and join carpools available based on their destination and availability.

Functional Requirements

- *Ride Confirmation and Notification:*

  The driver can accept or reject the ride request, and notifies both user and driver about the ride status.
- *Location-Based Services:*

  The app uses the user's current location to display nearby carpools and suggest possible routes to specified destination.
- *User Rating and Feedback:*

  Users and drivers can both provide feedback on one another after the end of the trip for future references.

System Features

- *User Registration and Login*

  Users can create an account in the app by giving necessary information. The app additionally asks details relevant to carpooling such car type and drivers license.

- *Search Carpools*

  Search option is displayed on the homepage of the application that allows users to search for available carpools based on their current location or user's specified location.

System Features

- *Create Carpool*

  Only a registered user having a car can create a carpool by specifying the ride details and available seats.

- *Join Carpool*

  System allows registered users to request a ride from one of the many available options of carpools. If a user has already joined a carpool, the app shall allow them to leave that carpool.

- *Location Based Services*

  The app can use the user's location (with user's permission) to make the searching process easier. It can automatically fill in your starting point and show you the nearest carpools first.

System Features

- *Rating System*

  Enable users to rate and provide feedback on their carpooling experience upon completion of the ride, facilitating accountability and improving service quality.

- *Carbon Emission Control*

  The system shall display the total distance traveled through carpooling and the corresponding reduction in carbon emissions in the user's profile using which it will award badges to users.

- *User Safety*

  The system shall include an emergency contact button that allows users to request immediate assistance in case of emergencies.

Software/ Hardware Requirements

- Flutter,
- Dart Programming Language,
- Firebase
- Google Maps API and other location based APIs (Geolocation API, Places API and so)
- Flutter Packages

- Android OS 7.0+, 4GB RAM, 8 GB storage, GPS, Wi-Fi, mobile data,
- Snapdragon 600 series or equivalent processor, 720x1280 display.

Conclusion

- Revolutionizing transportation with a user-friendly carpooling app connecting riders and drivers for efficient commuting, enabling users to both join and create carpools.
- Users can seamlessly search for carpools based on specific criteria, access comprehensive ride details, effortlessly create and join carpools.
- Real-time notifications, visual route representation, and tracking facilitate seamless communication and coordination between riders and drivers.