

V-Share

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Abstract: Ridesharing can be described as a way of transport where passengers share their trip or vehicle. This way of transportation is profitable as sharing a ride splits the cost associated with it amongst them. The V-share system allows the students and faculties of the college to share the ride. This approach not only provides facilities like expenditure saving but also traffic congestion and air pollution. Passengers who want to travel to or from college needs to join the ride created or can themselves make one.

Keywords: Android Application, Ridesharing, Share.

1. Introduction

V-Share is basically a car sharing mechanism for the students and staff of college. This application will help the students to easily get students to share the cab with them. Student will first register to the application and will then login to the application. There will be two different modules one for student and one for staff. V-Share application will be of great convenience for the students and staff of college. The buses towards college are of limited frequency because of which many students prefer travelling by taxi. But then comes the need to ask people to share taxi. So the proposed idea of V-Share application will overcome this inconveniency. We intent to make an Android application, which is an application of ride-sharing in which drivers (alone-riders) who are traveling to work alone can ask for fellow passengers through our application. For those who use public-transport system to go to work daily can use this application to find passengers who are travelling to the same destination and willing to share ride. This will not only get rid of the extra journey time of passengers but will also help environment by reducing pollution and traffic on roads. This social networking application is also called fare-sharing and time sharing as you are you are sharing both with fellow travelers.

In the proposed system we will create an android application as a service or platform for ridesharing which can be installed on Android based Smartphone's. This software is developed for android system. The two main reasons for choosing Android OS instead of another one are:

Android is an open source operating system, and thus allows reusing some pieces of program to create a new application. It is also quite well documented and sources can be found on Internet to learn how developing applications for this platform. Android is fast growing operating system, and it became the

world's leading smartphone platform in January 2015 and it will help for bringing more and more users for ridesharing. This application will allow users to share their rides details prior to its journey making other join it. The application is cost effective as it shares the money by dividing fuel costs among fellow passengers [1].

2. Literature survey

Arpita Dixit, Shweta Bora, Sonali Chemate, Nikita Kolpekwar "Real-Time Carpooling System for Android Platform" February 2016 says that Transportation is a major issue these days. One of the most used means of communication in roadways. One of the major forms of road transport consists of the private passenger car. These cars are generally used with only a single rider. An overabundance of cars creates various problems which include increased traffic, increase pollution, parking congestion and many more. Car sharing aims at solving this problem by targeting the empty seats in the private cars. Employees of the same area or the students going to the same school can carpool. This can be done as the know each other and can communicate. But when going on an intercity trip you are not aware if some other person also intends to make the same journey. Thus the applications helps you in seeing people and journey schedules and make an informed decision about do you wish to travel alone or save money and travel with a safe company [2].

Masayo Ota, Huy Vo, Claudio Silva, and Juliana Freire, "STaRS: Simulating Taxi Ride Sharing at Scale" says that as urban populations grow, cities face many challenges related to transportation, resource consumption, and the environment. Ride sharing has been proposed as an effective approach to reduce traffic congestion, gasoline consumption, and pollution. However, despite great promise, researchers and policy makers lack adequate tools to assess the tradeoffs and benefits of various ride-sharing strategies. [3]

Aarathi R "A Smart Real Time Ridesharing and Travel Assistance" February 2015 says that in order to reduce traffic congestion, a real time ridesharing is proposed. This method is implemented by developing an android application which is user friendly and has high mobility [4].

3. Proposed system

We as a 7th semester students of Diploma in Engineering are making this project by taking help from these already working

and tested applications as well as making our own set of improvements. The proposed system is designed by using authentication technique which includes registration phase and Verification phase. Concept of multithreading is used so that more than one user at a time can login without causing any error and server getting down. The check-in system enables users to check in meeting points and notify all users about that. Carpooling reduces pollution since we have less cars on the road. It's also economic since the travel expenses are shared among the riders. Travelling alone may be stressful, so having other persons with you on a trip reduces the stress and is also the occasion to socialize and make the trip funnier. Finding people to share a ride with is the challenge of carpooling as it is difficult to find a person going to the same place as you at a given time. Many websites and applications has been developed to help people meet to share rides. This application enables users to create and share their trip and find passengers. The purpose of this project is to develop an application that tries to overcome the disadvantages of the other available applications. The application is to be generic. V-share, which is the name chosen for this application, is also a real-time application: any person taking part of a trip can inform the meeting point through chatting application to let the other persons know that he/she has arrived to the meeting point.

Following are the features of the system:

- When the user visits the application for the first time he/she needs to register before using it.
- When the user has created its profile that is after registration process user is ready to use the app.
- The user will now login with the registered credentials.
- After login your profile will be visible which includes user's Branch and Userid.

There will be several options for users:

- *Create Ride:* In this, user will select start point and destination point. After this he/she needs to select number of users, options available for this are four and six. After user clicks submit ride is created. After creating ride and applying for ride u will be joined to that ride.
- *Join Ride:* After creating ride u will be able to see your current location, the user needs to click on apply to join the created ride.
- Chat option will be available so that users joined to the ride can talk to each other for discussing the meet point or such information without disclosure of any credentials. Checklist will be visible which will make other users to see the user id of joined users.
- *Ride Logs:* All the rides created by user in a day will be visible to the user in this option.
- *Logout:* Once the user logs out he/she will be navigated to the login page.

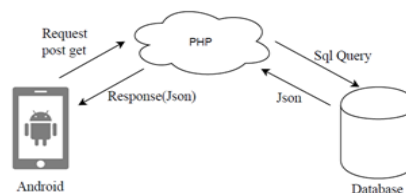


Fig. 1. DFD/ Flow chart

A data flow diagram (or DFD) is a graphical representation of the flow of data through an information system. It shows how information is input to and output from the system, the sources and destinations of that information, and where that information is stored.

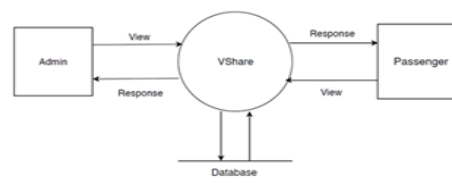


Fig. 2. DFD Level-0

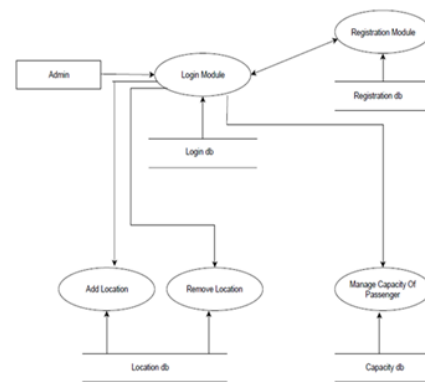


Fig. 3. DFD Level-1

4. Conclusion

V-share application is very effective and convenient means for the students and faculty of college to travel. Also useful to reduce the congestion of vehicles in front of college area. It also provides an eco-friendly way to travel. It gives an opportunity to meet new people from different branches of college. The application saves the taxi fare for each individual passenger while the profit of taxi drivers does not decrease compared with the case where no taxi is shared among the riders.

References

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