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# Need Ride Friend Carpooling and Chat Using Android System

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***Abstract*-One in every five people in the world has a Smartphone. Use of Smartphone is increasing day by day. The aim of this system is to user using carpooling with messaging android app in the smart phone. This project is about creating a social media application to explore the uses of augmented reality which can be used to improve the user experience in social media. Through the application the users will be able to rate live locations like restaurants, supermarkets, Shopping malls, Arcades and also free places and save live memories in a virtual world created by the augmented reality application. This is going to be very interesting because this social media has these enormous features. The user will feel more lively. They can do useful things through this social media. This will be an android platform. Assume a user wants to go to a place. User can search that place through our social media. Then user will get the list of ratings which were given by his friends. Also when user reaches a place, user can switch on the camera and by our augmented reality application the user can see the friends lively in that specific area. The project will use cloud storage to have a database of the users. It will use Google maps Application program interface (API) in order to get the users locations to the exact point. This application also can understand when the user is entering as well as exiting the place. So while exiting the place the user will get a feedback form to be filled. So that, it will help the user to rate the driver ride.**

***Keywords*-Smartphone, Android, GPS Global Positioning System, driver, mobile contact list,etc**.

## I.INTRODUCTION

Need Ride Friend System is mainly focused on public who use to travel daily to their work. This system is about to develop as an android application. The rider and driver will be using the android application. User having this application in his android phone can create account using his/her mobile number and request ride from the people in his/her contact list. After a ride request people in contact get notified and to their wish they can confirm pickup. GPS location of the pickup point shared between the rides. Through our application the number vehicle in the road may get reduce so traffic will decree and the journey become easy. For example, if they a car owner ready to share a ride and another three likes to travel in a then the number of the car on the road decreases by 3. So it will make a big impact on traffic.

## II.LITERATURE REVIEW

In literature review the team went to do a comparison with the existing products which were using technologies to make efficient system. When compared with existing products the researchers could found the unique features of "Need Ride Friend" System After went through all those above-mentioned research papers, there were no well developed car polling system between the friend circle. Considering all the drawback we found in the above research our research group planned to implement an android app, with chat message, rating to user and notification features. A navigation system has built to find out the pickup point easily and quickly. Pervious application not having in build chat facilities and rating option for users.

There are some securities in other application because they are using a common group peoples. This chapter explains the related project features and what kind of techniques they used how it worked throughout the system as well as found out what were the missing features should have been added further.

### 1. Notification System to Students using an Android Application

This paper has idea about the notification way communication between instructors and students within the university. Make communication easier and quick between the instructor and his students, by sending notification to their mobiles and also notification send from university web site to student and instructor mobile phone using GCM message, so they don't have to use the web site always.

Here, notification is among two people but we have planned to send notification multiple people at the same time. GCM is a service which allows developers to send push messages to Android devices from the server. GCM handles the queuing of the messages as well as delivering those messages to the target applications on the devices. GCM is a free service by Google, and it has no quotas. It is the default push messaging solution for the Android platform.

**2. Carpooling Application in Android**

The users that have this application installed on their cell phones can use this application as either initiators of car pooling event or as invitees for a car pooling event. When the user launches this application, the user is given three options to choose from. The user can create a new car pool event, view the events that he has created earlier or view invitations for car pool event from other users. When the user chooses to create a new event, he is given a form which has fields such as subject of the car pool, time of the car pool, vacancies in the car, destination address of the car pool.

Now when the initiator views the event generated, he can see all those who all have responded to the event. Once the vacancies are full, the other invitees who try to accept the invite later are displayed a message which says that the car is full. The System architecture shown in fig.1 show how the system actually works interacts. The main modules are the passenger and driver. The application will be installed on both the devices and they will interact with each other.

## III. METHODOLOGY

First the prototype model is created to get the overall idea of the final product. The purpose behind the creation of prototype is to get collect better requirement before the design and coding begin. The prototype will have all the UI components and how they are going to interact with each other's. It is better to have proto type because it will give the knowledge about the tracks.

**1. Planning-** During the planning phase, a base of the project will be created. In this period the project is well planned and detailed. Mainly the duration of the project, work distribution between the team members, the deadline for the process will be defined; this will help to the smooth growth of the project.

**2. Requirement Gathering and Analysis-** This project is planned to help the people who are seeking to rides and the people who are willing to provide rides mainly by car. Therefore, the requirement is gathering from the related public through interviews and survey. After this, collected information is get analyzed and divided the problems into one by one in hierarchy order. It will also help to get new idea which users need.

**3. Designing-** In this phase the design of the project is created it will rely the prototype of the project. Here, may be changes according to the information and knowledge gained from the requirement gathering phase. This design will be help full in the implementation phase.

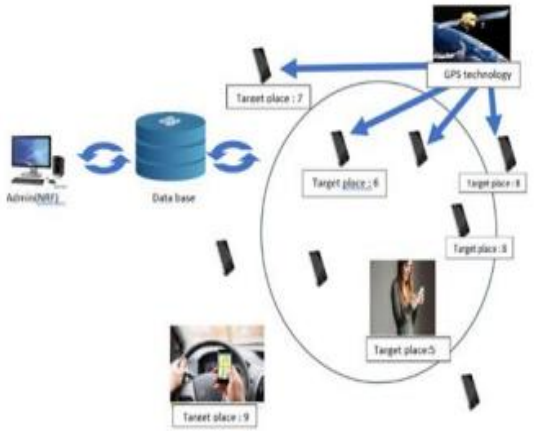


Fig.1 Car pooling application steps.

**4. Implementation-** Develop the NRF by Android Studio and using online database as Firebase. Here the project goes to the next level, each and every component is developed separately and unit tested, here finding and fixing the errors is much easier. After the unit testing the components are integrated together and tested. After the success full Integration, we can have a bug and error free system.

**5. Testing-** Unit Testing, Integration testing, System testing and Performance testing were carried out ensure reliability of entire Need Ride Friend System. Soon after the development of individual components was finished unit testing was carried out by using both black box and white box testing. Then Hardware components were integrated one after another and integrated testing was carried out. At the same time, mobile application and website components are also integrated together and tested. all software components. Timing tests, security and concurrency tests were carried out for order processing and stock management to ensure reliable perform.

## IV.RESULTS AND DISCUSSION

This section provides Evidences regarding Need Ride Friend (NRF) and Test documents which were produced as a result of testing NRF under Evidence Subsection. Discussion subsection covers Descriptions on Reliability level of NRF, Approaches used by the project team to achieve particular accuracy level, Problems faced by the project team, identified solution

and plans that got deviated from original plans once of the system.

**1. Interfaces and details**

**4.1 Login interface**-Below shows the screenshot of login interface of NRF Android application. This login interface is common to who wants rides and who pick as drivers both of them. Once corresponding user login to the application by giving the login details, these details will be sent to validation. If the login is valid then user will be navigated to the corresponding main interface. While this process, Username, Password are locally stored as shared preferences. This information stored as shared preference is later used in other interfaces to retrieve and display only the information regarding to the particular logged user. Sing up option button click also available in this interface. Sometime user can forget email or password. That time he clicks the option forgot password and recover his account usually.


Fig.2 Login page of car pooling application.

**4.2 Forgot Password for Need Ride Friend**- If a user forgot the password, he could click the forgot password label at login interface which will prompt new interface to reset password. This interface allow user to enter email address where reset password link will be sent while click "Reset" button.


Fig.3 Forgot Password for Need Ride Friend.

**4.3 Sign up New user for Need Ride Friend**- The new user should enter his phone number in signup interface.


Fig.4 Signup page of car pooling application.

This interface for post by our friend contact list who need ride the can post the ride .If we like to give the ride we can select one of this.


Fig.5 Fig.2 User riding information of car pooling application.

If we want to share with our ride we can use these interfaces this interface is chat and call to our friends directly.


Fig.6 Riding user requirement of car pooling application.


Fig.7 GPS location of user.

This interface use to pick the destination place where will go. Current location also we can identify.

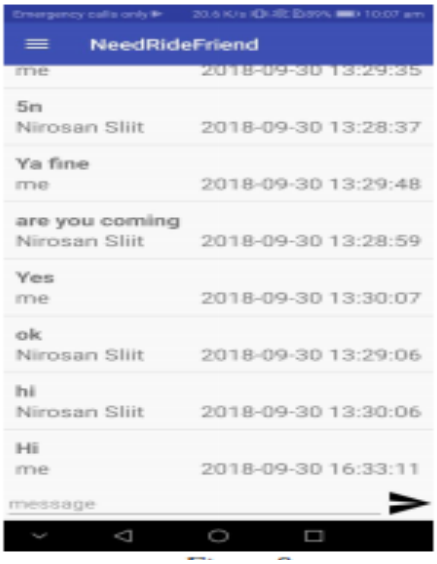


Fig.8 Chat between user through proposed application.

This is chat interface we can chat through this interface.


Fig.9 Selected user contact details.

## V. CONCLUSION

This section summarizes all the discussions made in the above sections under major headings such as Importance of this project, Limitations, Recommendations and Future work. Initially Importance of this project to current situation has been discussed. Next, Limitation factors which need consideration during the deployment of this System has been pointed out followed by some recommendations. Finally, further improvements that can carried out by interested Parties are been listed in future works section. Deployment of Need Ride Friend application carries some limitation constraints which should be taken into consideration. The limitations are as follows,

- Need data plan enabled SIM. GSM/GPRS uses mobile sim to data to the server. Therefore, data plan should be enabled in this case and recharging is needed to maintain uninterrupted connection with the central server.
- Less accuracy with GPS location readings. Location of Destination have been read using GPS module which need perfect satellite connections to accurately read a location. Hence location read may be with less accuracy in case of less satellite connections.
- An android phone and basic knowledge is significant for users and vehicle drivers.

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