iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 6 **Issue:** V **Month of publication:** May 2018

DOI: http://doi.org/10.22214/ijraset.2018.5457

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 6 Issue V, May 2018- Available at www.ijraset.com

Bike Pooling Android Application

Pooja Sutar[1], Rucha Patki[2] Aarti Kenchi[3], Tejas Dhole[4], Prof. Pranali Mahadik[5]
[1, 2, 3, 4] *Department of Computer Engineering, Anantrao Pawar College Of Engineering and Research*

***Abstract*: As there is lot of increase the number of vehicles, there is increase in pollution, traffic, and rise in petrol costs. To overcome these problems this paper introduces bike sharing application in which people can share expenses of fuel by sharing the bike to reach their destinations. The objective of bike pooling is to reduce the number of bikes in use by grouping people. Also the growing pollution and traffic problems will be reduced due to sharing of bikes.**
Keywords: Google maps , Bike Pooling, pollution, android, location.

I. INTRODUCTION

The increased human population and high use of private vehicles increases the load on the environment and raises issues of high levels of air pollution in cities, parking problems, noise pollution, and traffic congestion problems. People are also suffering from high traveling costs and also fuel prices are rising.

In order to overcome these problems, this paper is useful for finding different solutions on it. Bike pooling is an android application in which people will share bikes to travel distances which goes along the same route of the bike user. Bike Pooling is a pick-up and drop-off service provided to the users according to their needs. Hence this will help to reduce air pollution,traffic congestion as the number of vehicles will be reduced. Bike pooling also helps people to share their travel expenses that is fuel costs. It is also useful to save fuel for future use as fuels are getting decreased day by day due to large amount of consumption. Bike Pooling is an Android application which is implemented with the help of KNN algorithm. This application makes use of integrated Google maps to trace out the locations. In this application guardian number is also provided in case of emergency purpose.

II. MOTIVATION

Nowadays Lots of people refer cab for traveling around city. It was pretty much beneficial to people. But sometimes in particular area cabs are not available so that will prove unbeneficial to user, because system was time consuming and so to overcome these issues we implement this system which will beneficial ,less time consuming and useful for people for short distance journey.

III. EXISTING SYSTEM

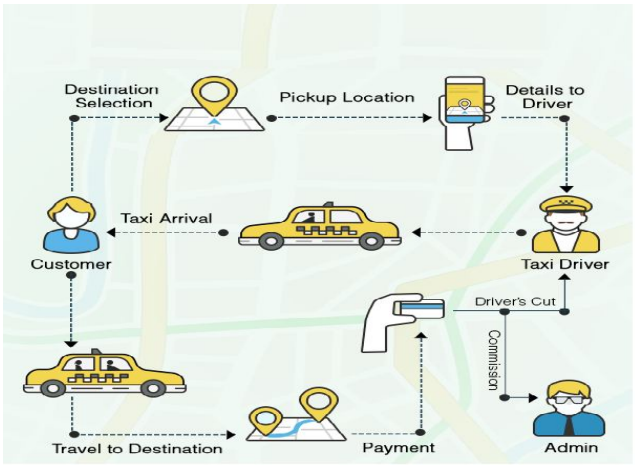


FIG. 1

In previous system, the system was a web application. The existing system was developed only for cars. This system was taking very much time for tracing locations and traveling purpose. Also it was increasing traffic problems. The system was not convenient for the user and the driver. The system was time consuming and was giving less accuracy. To overcome all these issues we are developing an android application which will be less time consuming and convenient for users.

©IJRASET: All Rights are Reserved

IV. PROPOSED SYSTEM

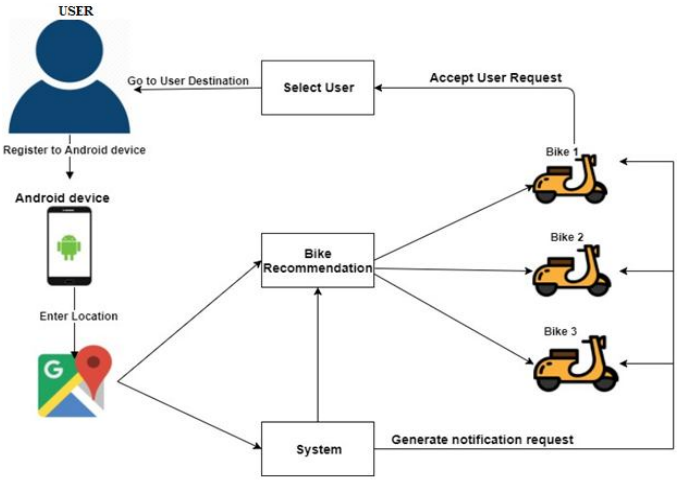


FIG. 2

The system in Fig.1 is system architecture of Bike Pooling using Android Application. Bike pooling means sharing of bikes among people for traveling purpose. First the user downloads the Bike Pooling Application and then he/she will install it in his android phone. Then user will register through an android device, enter his/her details to the application, and enter the location where he/she wants to reach. Then booking of bikes is done.

User send the request to the biker and biker accept the nearest user's request. After registration and booking, current location of user and biker will be displayed and also the path for traveling showing shortest route will be displayed using GPS navigation and integrated Google maps and for shortest route the KNN algorithm is used. The user will pick up from current location and drop to the desired destination safely with minimum cost.

V. SYSTEM IMLPEMENTATION

The system for Bike Pooling is developed using Android Application. First the user will register through an android device, enter his/her details to the application, and enter the location where he/she wants to reach. The user will pick up from current location and drop to the desired destination safely with minimum cost. In this application User can register using his\her information like name, password, date of birth, Gender, etc. Registration process can be done using OTP.

After registration user can login to the system. After Login he/she can fill the details of Bike and then he/she can schedule the ride. The User's and Biker's current deviation can be shown using Google Map. The payment can be done using cash or card. In this application card option is provide and wallet also provided.

Tools and Technology used for implementing Bike Pooling Application:

A. Xampp

XAMPP is a open source platform and also free for users. It is Web server solution which is developed by Apache. It consists of database for storing data, HTTP server, PHP for displaying webpages and PERL for programming.

1) Components of XAMPP are

a) *Apache:* Apache is the web server application which process and deliver the web contents from website to computer or server.

b) *MySQL:* MySQL is used for database purpose for storing large data related to the application. It contains all details about the user and biker for example name,address, contact number, vehicle details, etc.

c) *PHP:* PHP is a Hypertext Pre-processor which is used for server-side scripting language. It is open source, easy to learn and it works perfectly so it the choice of most developers.

d) *Perl:* Perl is a high-level, dynamic programming language used extensively in network programming, system admin, etc.

B. Java

Java language is used for implementation purpose. Android Studio is used as platform for coding and development.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 6 Issue V, May 2018- Available at www.ijraset.com

VI. ALGORITHM

A. KNN Algorithm

K-nearest neighbour classifier is one of the introductory supervised classifier, which every data science learner should be aware of. Fix Hodges proposed K-nearest neighbour classifier algorithm in the year of 1951 for performing pattern classification task. For simplicity, this classifier is called as KNN Classifier. To be surprised k-nearest neighbour classifier mostly represented as KNN, even in many research papers too. KNN address the pattern recognition problems and also the best choices for addressing some of the classification related tasks. The simple version of the K-nearest neighbour classifier algorithms is to predict the target label by finding the nearest neighbour class. The closest class will be identified using the distance measures like Euclidean distance.
KNN algorithm is used for finding the shortest way of transportation.

B. Pseudocode

1) Calculate d (x, xi) i =1, 2, ..., n; where d denotes the Euclidean distance between the points.Arrange the calculated n Euclidean distances in non-decreasing order.
2) Let k be a +ve integer, take the first k distances from this sorted list.
3) Find those k-points corresponding to these k-distances.
4) Let ki denotes the number of points belonging to the ith class among k points i.e. k 0 ki ¿kj i j then put x in class i.

VII. RESULTS

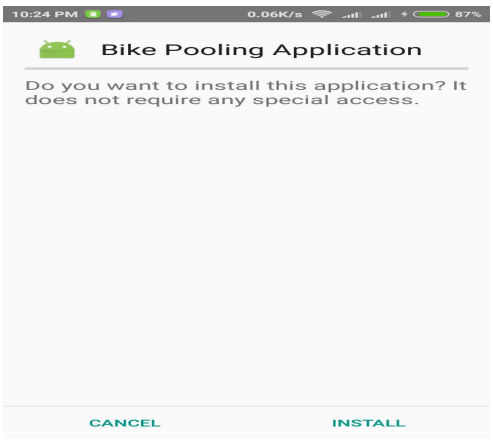


FIG.3

In Fig.3 the Bike Pooling application will be installed .

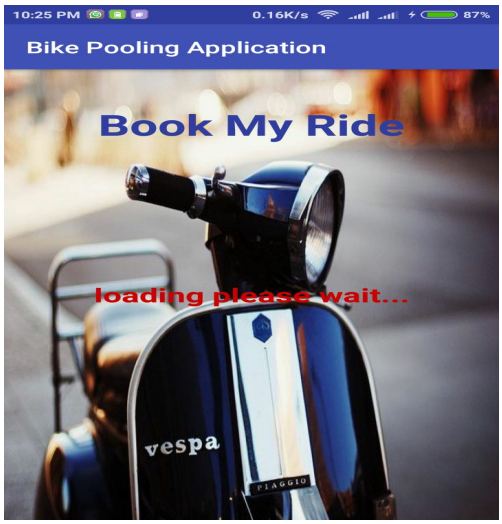


FIG. 4

©IJRASET: All Rights are Reserved

In fig.4 This is the front page of the application.

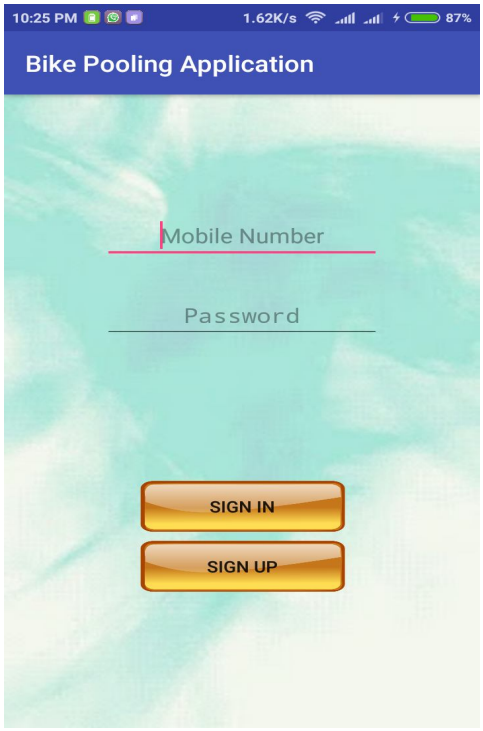


FIG.4



FIG.5

In Fig. 4 and Fig. 5 the Login and Registration page of the application is displayed where the user can register and login into the app using his/her information.

©IJRASET: All Rights are Reserved

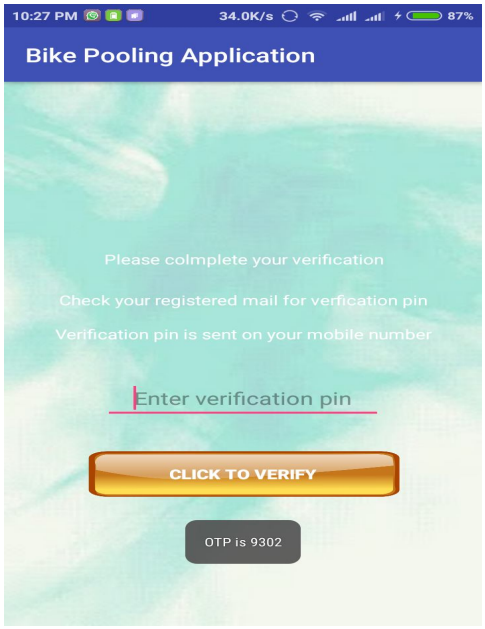


FIG. 6

In Fig.6 after the registration process the verification page will occur where user needs to enter the OTP sent on his/her mobile number.

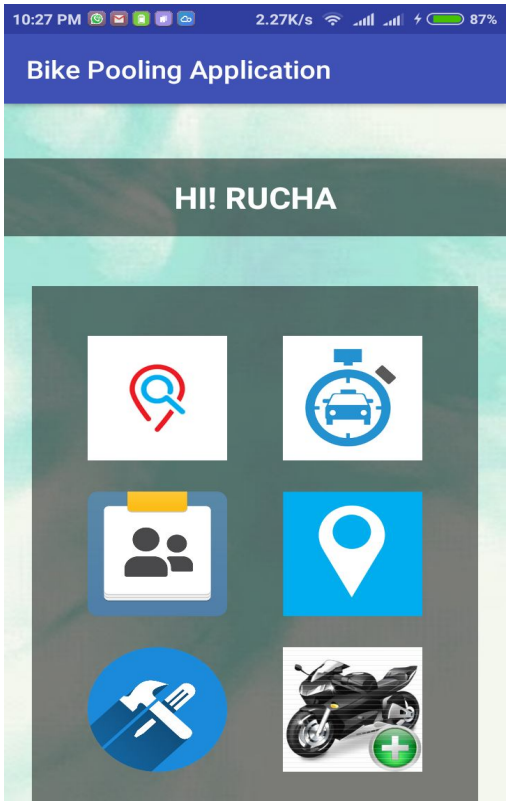


FIG. 7

In Fig. 7 the home page is displayed where vaious function of app are available like adding bike details, tracing locatins, booking rides, making payment.

©IJRASET: All Rights are Reserved

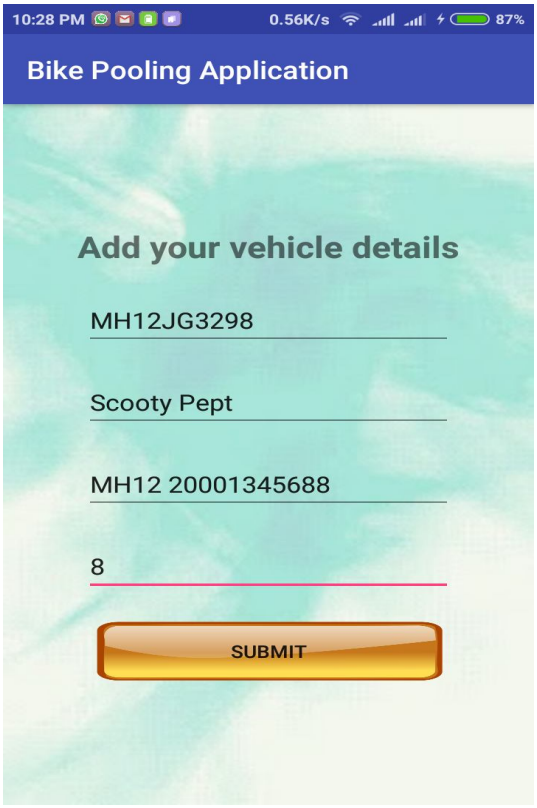


FIG. 8

In Fig.8 the biker will add his/her bike details.

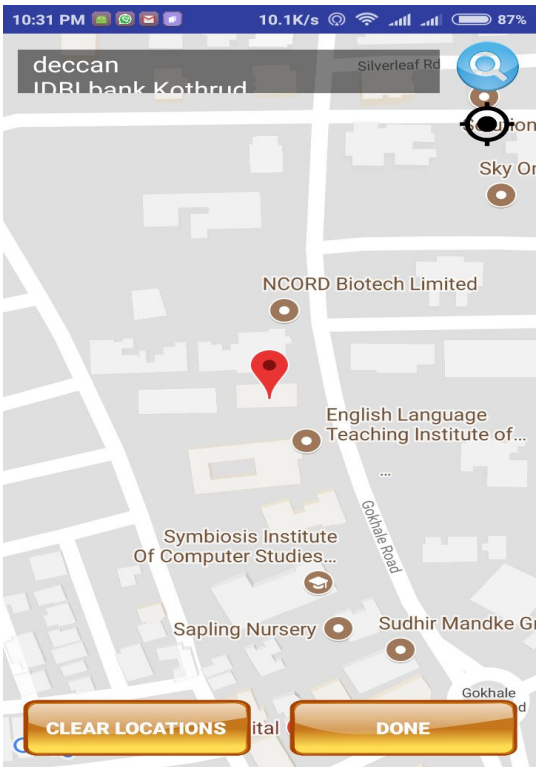


FIG. 9

©IJRASET: All Rights are Reserved

Here the biker will add the starting and destination locations.

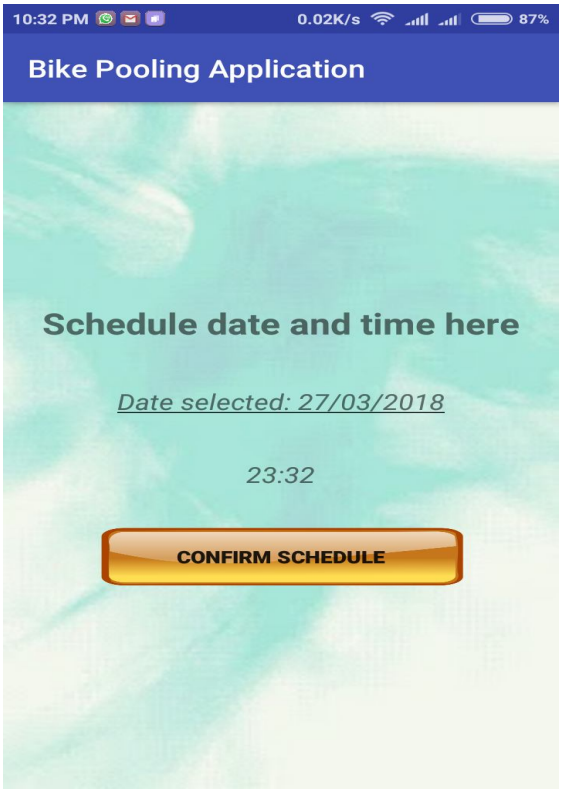


FIG. 10

Here the user will fix date, time and location and confirm the schedule.

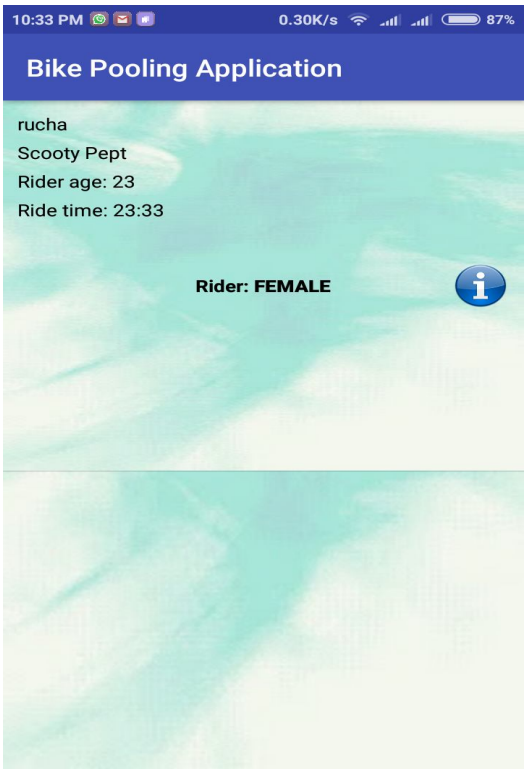


FIG.11

©IJRASET: All Rights are Reserved

In Fig 11 the available bike riders will be displayed.



Fig. 12

Here the user will send request to biker which is going on the same route of user's destination location.

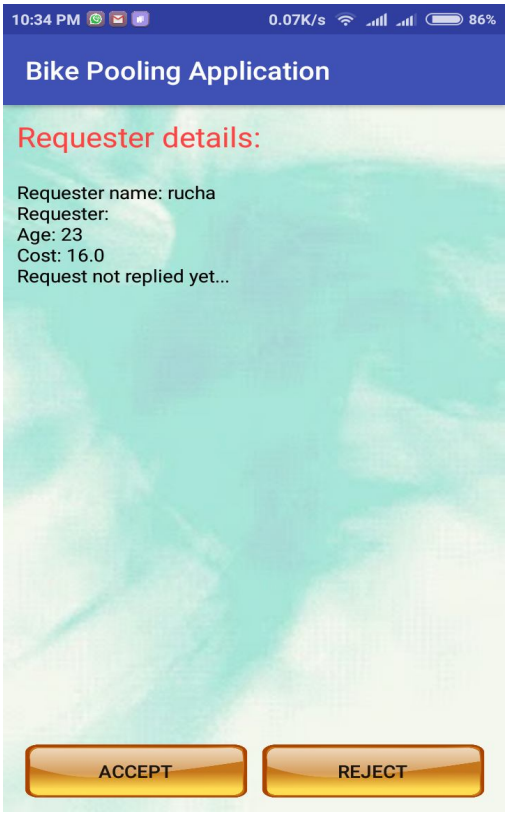


FIG. 13

©IJRASET: All Rights are Reserved

In Fig,13 the biker will accept or reject the request of the user.

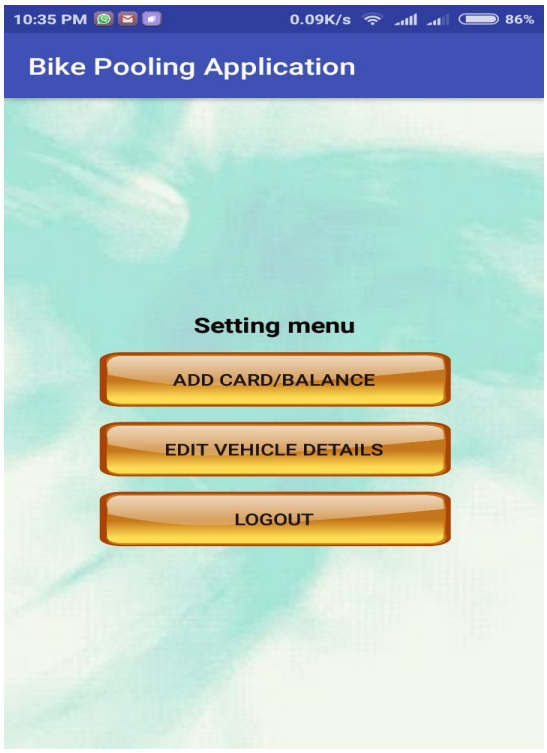


FIG. 14

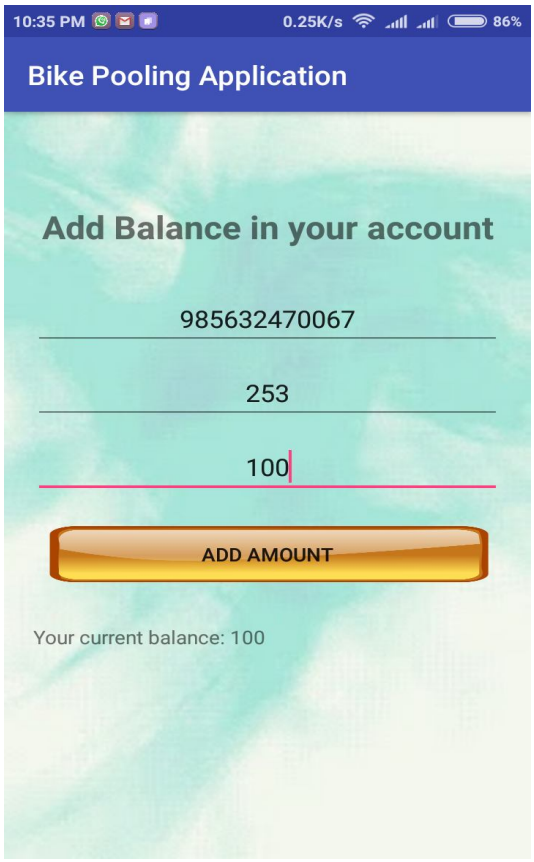


FIG.15

©IJRASET: All Rights are Reserved

In Fig.14 and Fig.15 there is option of logout editing vehicle details and adding card details to make payment.

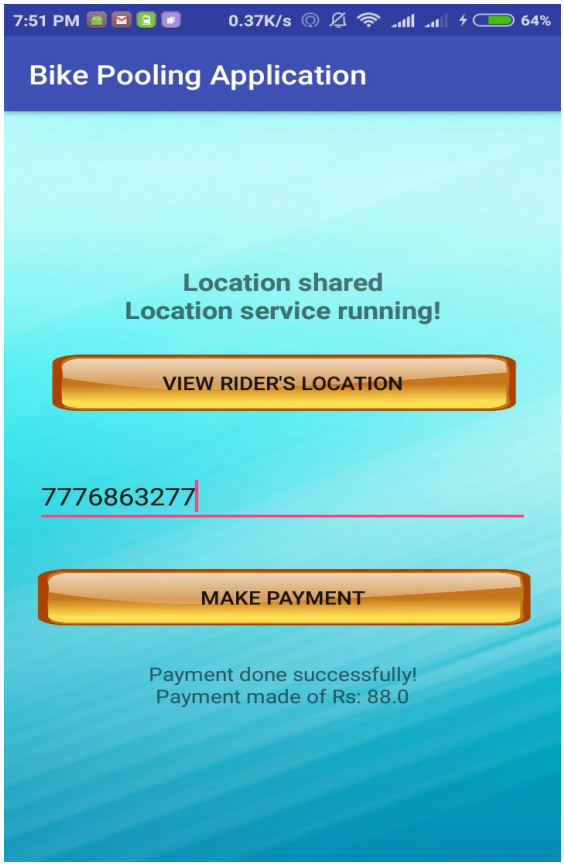


FIG. 16

In Fig. 16 user will make payment and the the ride will be confirmed.

VIII. CONCLUSION

Bike pooling is an android application which helps in reducing traffic congestion and pollution problem. This application is user friendly and also helpful for maintaining the green environment. The application is used for traveling purpose. Guardian can get real time location of user if accident takes place. This application also provides facility of giving notification when request is canceled.

IX. ACKNOWLEDGEMENT

It gives us great pleasure in presenting the project paper on “Bike Pooling Using Android Application”. We take this opportunity to thank all persons who rendered their full services for us. It’s with lot of happiness we are expressing gratitude to our guide Prof. Pranali Mahadik and H.O.D Prof. Manoj Mulik, Computer Engineering Department, for timely and kind help, guidance and providing us with most essential material requied. We also thank Prof. Rama Gaikwad, Project Coordinator, Computer Engineering for the cooperation extended for the project.

REFERENCES

[1] Aditya N. Bharadwaj, “Public Bicycle-Sharing System”, July 2016, National Conference, PP-1-4.
[2] SumitSardar, “SPAC DRIVE”, International Journal of Advance Engineering and Research Development “Emerging Technologies in the Computer World”, January -2017, PP-127-130.
[3] Amey S. Dodal, “Bike Sharing and Rental System: An Android Application”, 2016, IJSRD,PP-1123-1127
[4] Divyesh Patel, “A Smart Real Time Ridesharing Android Application”, International Journal on Recent and Innovation Trends in Computing and Communication, 2016, PP-188-192.
[5] Dixit, “Real-Time Carpooling System for Android Platform”, International Journal of Engineering and Innovative Technology (IJEIT), 2012, PP-436-437.
[6] Menon, “Take Me with You: A smart car pooling app using Genetic Algorithm”, International Engineering Research Journal (IERJ) Volume 2 Issue 3, PP 962-964.

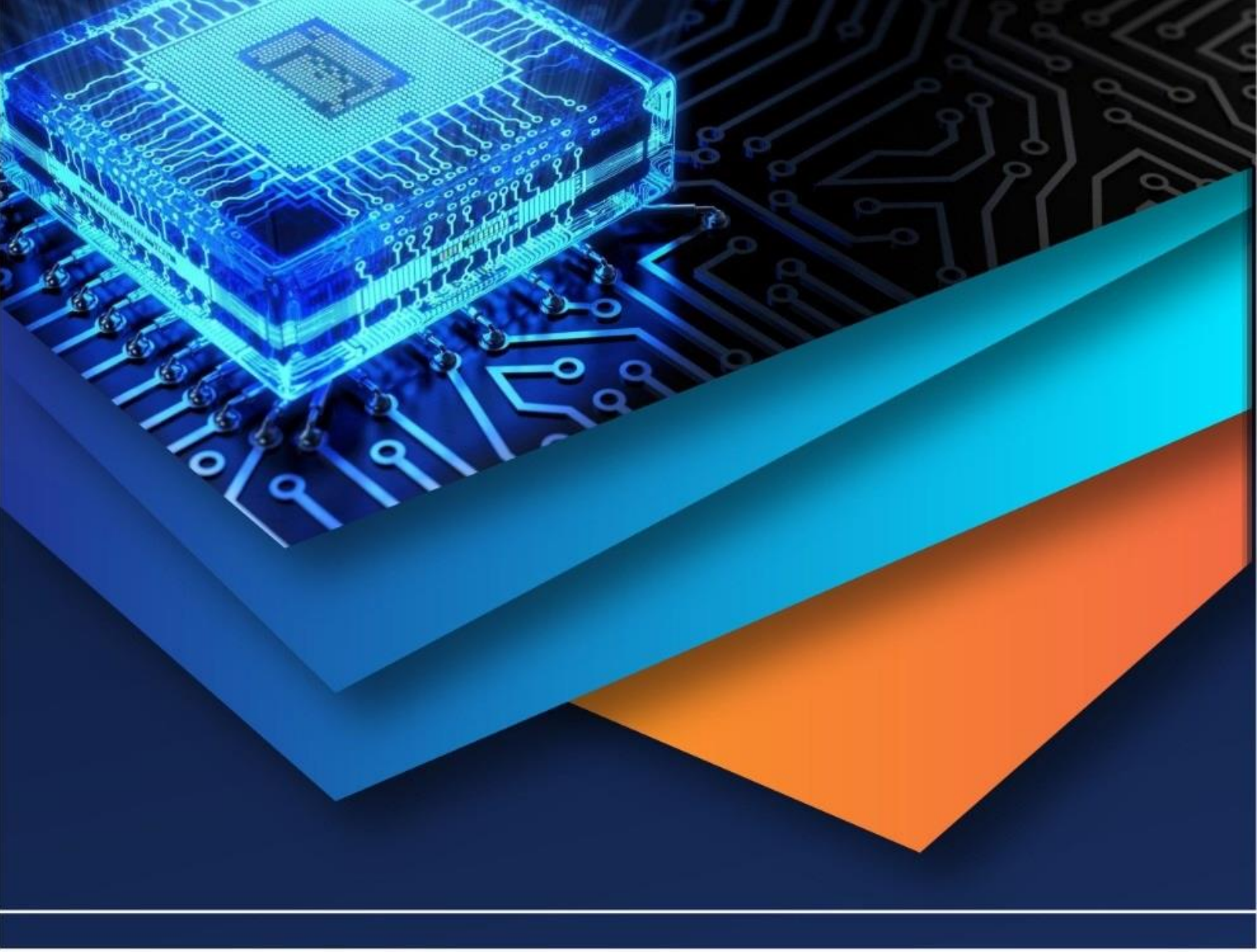
©IJRASET: All Rights are Reserved

[7] Nayana M. Nale, "Real-Time Carpooling Application for Android Platform", International Journal Of Engineering And Computer Science ISSN: 2319-7242, Volume – 5 Issue -03 March, 2016 PP 15900-15903.
[8] KapilKamble, "Car Pooling Android Application", International Journal of Engineering Research in Computer Science and Engineering (IJERCSE) Vol 3, Issue 3, March 2016,PP-29-32.
[9] YuvrajNalawade, "Implementation of Dynamic Carpooling System on Android Platform", International Journal of Innovative Research in Advanced Engineering (IJIRAE) ISSN: 2349-2163Issue 2, Volume 2 (February 2015), PP-247-249.
[10] Fu-Shiung Hsieh, "Car Pooling based on Trajectories of Drivers and Requirements of Passengers", 2017 IEEE 31st International Conference on Advanced Information Networking and Applications, PP-972-978.
[11] Mohammad ShahriarRahman, "Secure Bike Sharing System for Multi-modal Journey", 2016 IEEE International Conferences on Big Data and Cloud Computing, PP-437-444.
[12] Avila Antao, "Carpooling Application in Android", International Journal of Current Engineering and Technology, April 2015, PP- 955-958.
[13] Y. A. Gonczarowski, N. Nisan, R. Ostrovsky, and W. Rosenbaum, "A stable marriage requires communication," in Proceedings of ACM-SIAM SODA, 2015.
[14] J. P. Hanna, M. Albert, D. Chen, and P. Stone, "Minimum cost matching for autonomous carsharing," IFAC-PapersOnLine, 2016
[15] Y. Tong, J. She, B. Ding, L. Chen, T. Wo, and K. Xu, "Online minimum matching in real-time spatial data: experiments and analysis," Proceedings of the VLDB Endowment, 2016.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 6.887
Volume 6 Issue V, May 2018- Available at www.ijraset.com

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)