

Parking Management System

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Abstract: - In the present era of technology where modernization is increasing day by day with advancement of technology current parking system is not so reliable. With the advancement in technology, we have developed a modern way of parking management system. In current time most of the people are facing problem of parking where ever they go in public places such as Shopping malls, cinema halls, hospitals, workplace, local market areas we face critical problem of parking of cars, bikes, etc. Secondly to search for available slot in nearby parking, one has to go and search all parking space located in that area, that waste most of the time of people and make them to feel frustrated and many a times still after wasting hours didn't get any parking space. Sometimes during festivals times and on other important days there are too rush in public places so at that time peoples face parking problem as well as their vehicle security problem at random parking or even at local parking areas. Surveys tells that 30 percent of total traffic is developed by people who are in search of vacant parking space and slots. That's a big problem now days and our parking management system app provides solution of all the above mentioned problem. It takes the current location of the user and shows the nearest available parking spaces within 100 metre of circumference to the user and all other parking details related to it. This Parking system app is developed in this way that people can check all details by their phone before reaching parking slots and can also book their slot virtually by phone. This app will make people to save their precious time inspire people to book their slot virtually and makes public places more people friendly. That's make the public places having less traffic and more security to the user as the user can see the parking slot owner information in the app and also all the data of the user is also save in record in case of any issue occurred related to vehicles. User can also check the price of the parking slot so that he/she can plan accordingly whether they want to go for booking or else they have to look for other parking slots.

Key Words— *Management system app, Parking Management, Vehicle security, Less traffic.*

I. INTRODUCTION

The project aims to deliver the remedies for the parking management system. In current time most of the people are facing problem of parking where ever they go in public places such as Shopping malls, cinema halls, hospitals, workplace, local market areas we face critical problem of parking of cars, bikes, etc. Surveys tells that 30 percent of total traffic is developed by people who are in search of vacant parking space and slots. That's a big problem now days and our parking management system app provides solution of all the above mentioned problem. This app gives the information of vacant parking slot in nearby location. It is an android app, that is intended to search the vacant parking space in nearby 100 m of the current location. The app make use of google API to take user current location and detect the availability of parking slot. Depending upon availability of space, then the space status is shown on the screen. Hence the user will be able to know if there will be an available parking space for his vehicle within a few minutes, saving the time as well as fuel of the user, thus saving money. The second part in this

application is. The app allows user to make an account using application so that owner can see basics of information about the user who want to park his/her vehicle. Also the app allows user to see the details of parking online through the app like the pictures of available parking space, rent of the parking that owner have decided to charge for the parking. The app allow owner to add new parking slots also if they have new parking slots available also and modify according to their needs, that's makes the app more user friendly.

- Some of the benefits of this parking management application are mentioned below:
- It helps users to detect the available parking slots in nearest location in the area of 100metres from current location.
- The app allows owner to display Parking charges hours wise and also to display charges according to two wheelers or four wheelers.

- Provides cost effective solution and also time effective as well as it saves natural sources also like fuel.

II. WORKFLOW OF THE PROPOSED SYSTEM

For this application to be an efficient, beneficial and purposeful we implemented-

- User will be able to create his/her account for faster bookings.
- Users will be able search available parking slot to nearest to 100m of their nearest or searched location so that they do not face any issues.
- Before confirming the booking, users can view the pictures of the parking slot and also the price allotted by the owner of the parking location.
- The owner can separately create an account to add or remove more parking location if they have.
- The owner can also change the rent price hours wise for different category of vehicle.

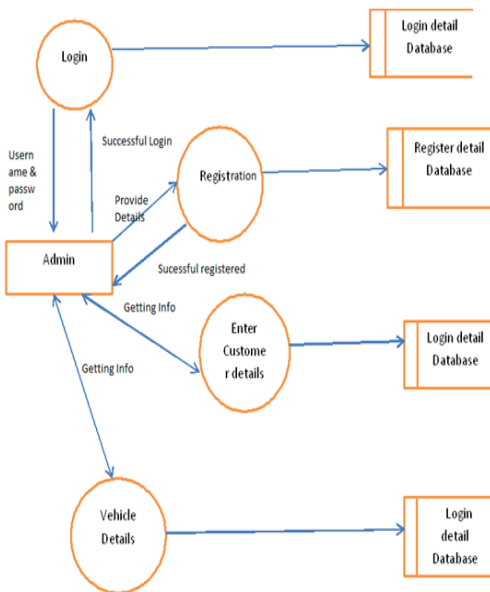


Fig.1. Data Flow Program of the Proposed system

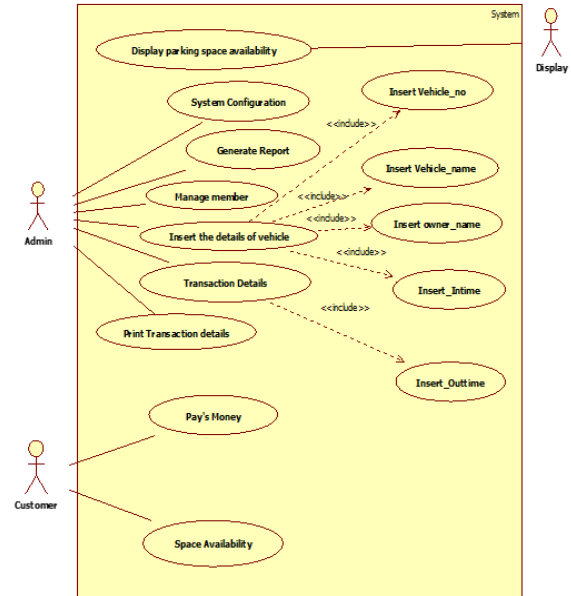


Fig.2. Use case diagram of the proposed system.

Technology Stack: -

- ANDROID
- JAVA
- MYSQL

III. PROCESS DESCRIPTION

A. Use Case Diagram(USD)

The above diagram demonstrates the process how a user can login into application to achieve the benefits of parking management system. The user after login can search the nearest parking slot up to 100 m to current location or the searched location.

The user can clarify their doubts by looking at the pictures of parking location as provided by the owner and also the user will be able to see the rates of various vehicles type hourly and choose the parking slot that's fit according to the needs of the user.

The use case diagram shows how the interconnection or conversation happens between the user and the owner of the parking management system for booking of available slots.

B. DFD Diagram

The above activity diagram shows how a user can make the best use of booking available parking slots after following our

application: -

- Users interact with the login page. If the user is new, then they have to do registration first by filling the basic personal information asked.
- If the user is not new, then he/she has to only login the credentials.
- After the login, home page appears in which user can: -
- View the available parking slots.
- Book the slots that best fit to their needs.
- And can also view the price of different parking before bookings

C. Output Screens

The output screen displays the output obtained by implementing the application.

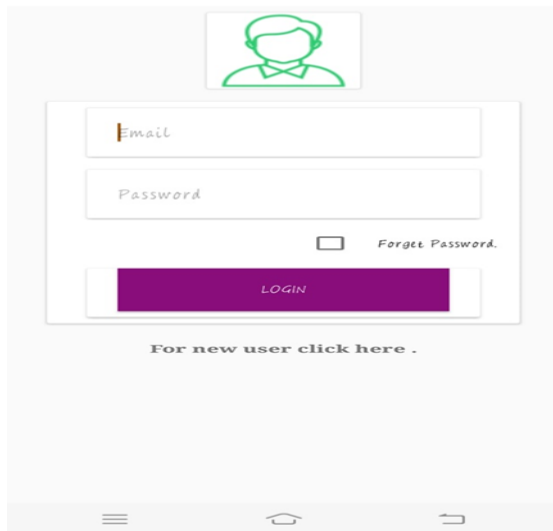


Fig.3. Output screen of login page

Description: This page allows a user to login if it is existing user or create account if they are new users.

Output for Module-2:

Description: This shows the list of the items a user or owner can select from the available options. The user can check the booking, order history, wallets. On the other hand, owner can add booking and check the wallets.

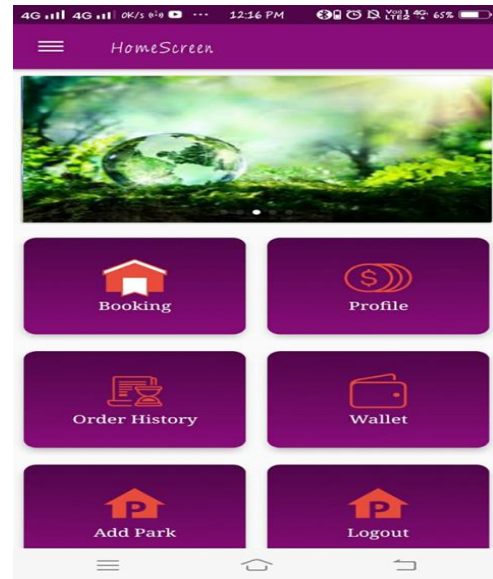


Fig.4. Output screen of Home screen.

Output for Module-3:

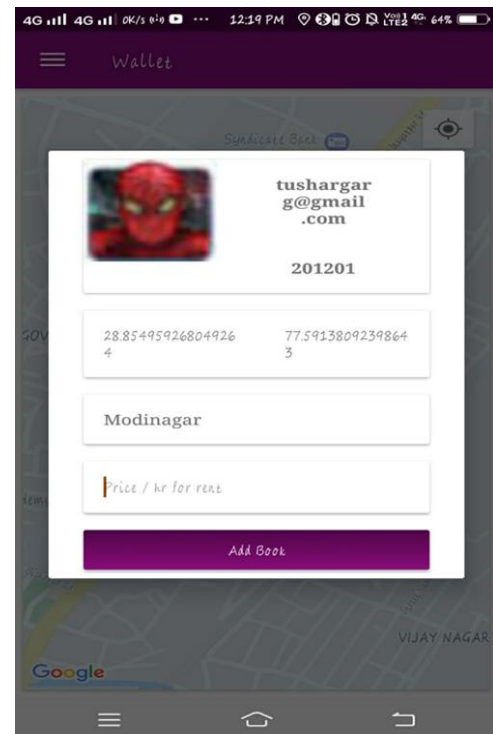


Fig.5. Output screen for owner adding parking space.

Description This shows the details of the parking slots as the owner will be able to know and change the rates and other information related to the parking.

Fig.7. Source Files

Description: All folder and files related to the project are shown above.

Output for Module-4:

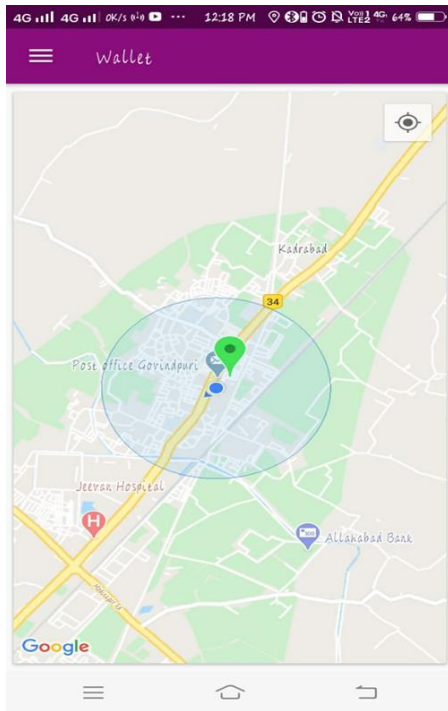
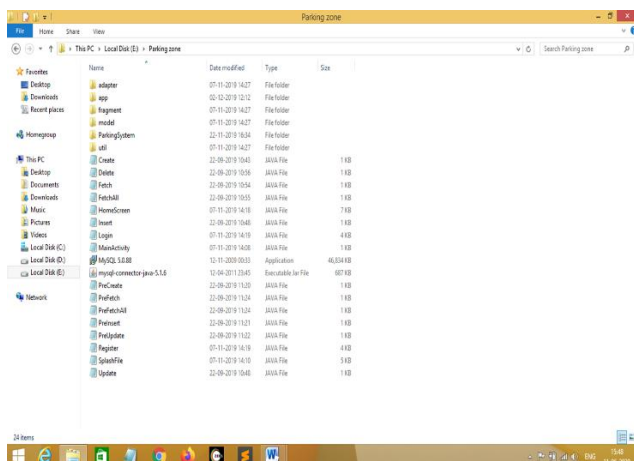


Fig.6. Location

Description This shows how the application makes use of google API to pick up user current location and shows the nearest available parking space near about the current location.

Project Files:



IV. ACKNOWLEDGEMENT

This project makes life of many people much easier and comfortable. Therefore, we want to extend the project if given the opportunity.

Firstly we would be happy to show our respect towards our mentors and guide Mr. Sanjay K.Sonker (Assistant Professor, Department of CSE, MIET, Meerut) who guide us and taught us everything whenever we needed help. We are grateful to Dr. Mukesh Rawat (Professor, Department of CSE, MIET, Meerut) for his continuous help that enables us to perform better in this project and also we are thankful to him for providing various academics activities.

V. CONCLUSION

After the implementation of parking management application, the problem of parking management will be a slightly less and there will be an ease for people. With the help of it people can find available parking slot to nearby them. They can review location pics and price and accordingly book if they find location suitable for them. As compared to current management there will be more security by using this app. To use this application one should have an android mobile phone this is a drawback till the further improvements in it.

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