Car Parking System

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Abstract— This application will be used to search for parking places to park their cars. It will save users valuable time and money. Reservation can be done earlier using the application. Users can also do early payment using the application by debit or credit cards or using any bank account. This is the kind of application which is used to park the cars only.
Keywords: Car Parking System

I. INTRODUCTION

A smart car parking is a system that helps users in finding vacant parking spots. It processes the data and guides the cars to available parking spaces. It works on small or big cities where parking is a problem. It can also work on big shopping mall.

II. PROBLEM SUMMARY

Traffic jam is a serious problem in big cities. Cities like Mumbai and Dhaka, people stuck by traffic jam it kills our valuable time and many people gets frustrated because of this traffic jam. Now-a-days the number of cars user are increasing day by day. According to the increasing number of cars there is not enough places for parking those cars. So people park their cars here and there. This is one of the major cause of traffic jam. Parking in roadside causes traffic jam and it is also illegal. So authorities can detain peoples car if they park in the wrong place. People can have to go to jail also.

III. AIM AND OBJECTIVE OF WORK

In our system we provide smart parking in small or big cities. People can easily park their cars any nearby shopping which are included in our system. By using our system user can make reservation for their car. Their car will be secured on our system. Because of systematic parking traffic jam will be reduced. When jam reduces people will not be frustrated and the number of road accident will be reduced automatically. The aim of this system is to give the solution of parking problem of cars. That will help us to reduce the traffic jam.

IV. PROBLEM SPECIFICATIONS

We implement android app which give following solution (advantages) for solving the problem of current scenario of the car parking sector.

- Information is there for users.
- Reducing time.
- Helps to reduce traffic jam.
- If traffic jam reduces road accident will reduce automatically.
- Minimizes drivers frustration.
- Parking space maximizes for parking the cars.
- Shopping malls will benefits more money because many people will start to come the shopping which are having "car parking system".
- Provide early reservation for users. User can easily select empty slots and reserve it.

Money charges on calculation of hours. So users are spending less money than previous.

V. BRIEF LITERATURE REVIEW & PSAR

Patents search activity research (PSAR) formed base for research idea about Car Parking System project. Further, scope of project was enhanced by design driven canvas exercises. With the purpose of improving the efficiency of parking sector, many research ideas were proposed and many scholarly articles have been published.

Foundation idea and scope of research, for our project, is laid done through PSAR activity. We analyzed various literatures available like patents and other scholarly articles and their analyses with pros and cons, developed our project objective and aims. We also study the some of the government product to understand our project.

- A computerized valet parking system.
  The parking system includes a first data transceiver for inputting and retrieving a first set of vehicle identification data, and a second data transceiver located at a vehicle parking facility remote from the first data transceiver for inputting and retrieving a second set of vehicle identification data.
- A multi-level garage in which vehicles are parked in parking stalls on any of a plurality of parking levels by means of elevator-supported transfer carts. Each parking stall consists of four multi finger spaced apart combs, with the fingers at the stalls at each level being in a common horizontal plane. Each transfer cart includes a top transfer plate with four spaced apart multi finger combs, the fingers of each comb being adapted to support a wheel of a vehicle positioned on the transfer plate. The latter is vertically movable with respect to the cart between a raised first position and a lowered second position.
- The invention relates to a system for checking the payment of vehicle parking charges comprising, on the one hand, a vehicle-portable parking meter device for paying vehicle parking charges and, on the other hand, a portable hand-held parking checker device for checking parking charges.
- This application relates generally to application software, commonly referred to as an app. More specifically, this application relates to installing and operating of apps in a moving vehicle, such as an automobile. A system and method for monitoring apps in a vehicle or in a smart phone to reduce driver distraction is disclosed. A controller operating inside or in combination with the head unit of the vehicle or operating inside or in combination with the smart phone may monitor operation of the vehicle, and generate alerts indicative of operation of the vehicle In response to the alert, the operation of the app in the vehicle or in the smart phone may be modified.
- Many needs of parking management, especially in on-street parking environments in urban areas, are not being

met with current technology. Parking management systems that include accurate space occupancy detection do not include unique vehicle identification for vehicle-based parking access and rate determination, motorist guidance, violation detection, and enforcement automation support

VI. IMPLEMENTATION METHODOLOGY

At the time of discussing the project scope, we prepared the project activities. All of these activities are done by us.

A. AEIOU Summary:

Login to system. Put details of user into system. Find out vacant spaces. Confirms parking.

B. Empathy Summary:

User uses the app. Parking becomes easy. User become happy. The system saves time. For admin, easy to maintain the system.

C. Ideation Summary:

User use the app through internet. Admin controls the whole system. Security guard maintains the law in parking spot. Car parked in reserved place.

D. Product Development Canvas:

Easy to use. Reservation. On-line payment system by hourly basis.

VII. IMPLEMENTATION

– User will give their information. After verifying the authentication of email user can log into the system.

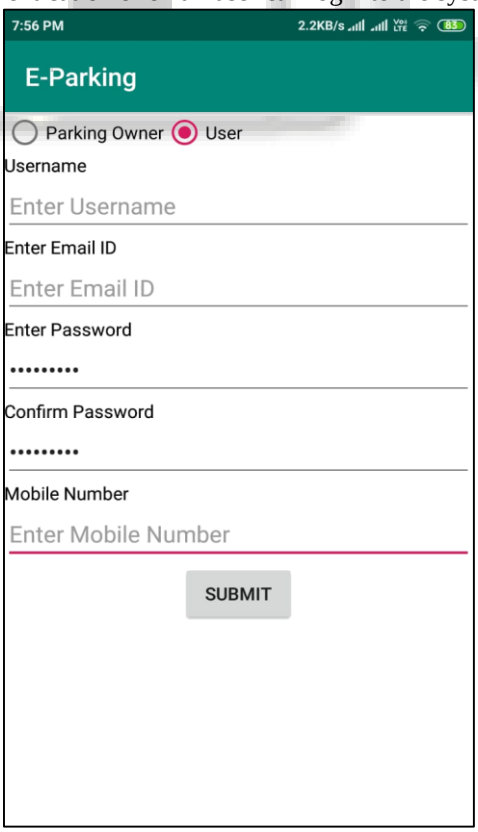


Fig. 1: Registration page

– User have to give their right email and password that previously they put on the registration form to login to the system.

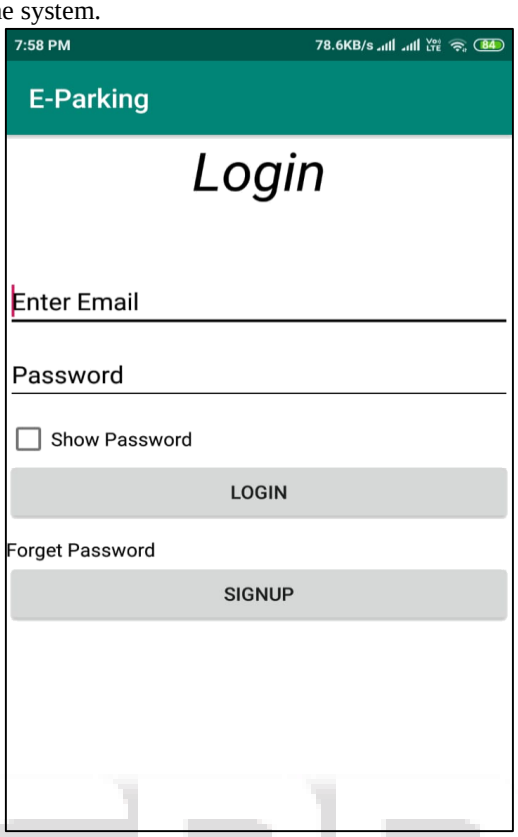


Fig. 2: Login page

– Google map shows user where the nearest spot is and how many slots are available on the selected parking place.

Fig. 3: Google map search

– User can reserve here for their cars. They can easily select the empty slots make reserve for them.

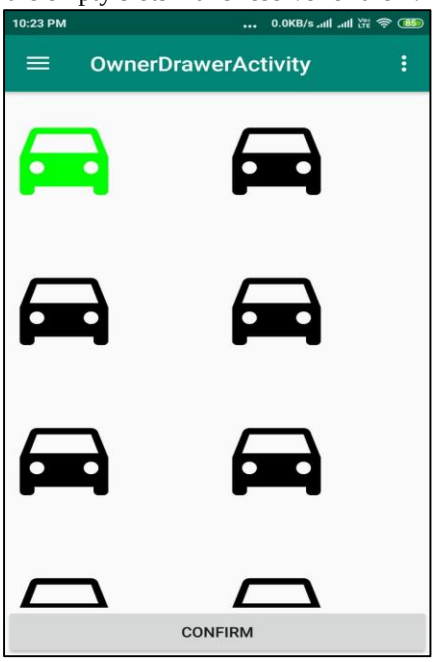


Fig. 4: Reservation

– User can select their desired reservation time and hour.

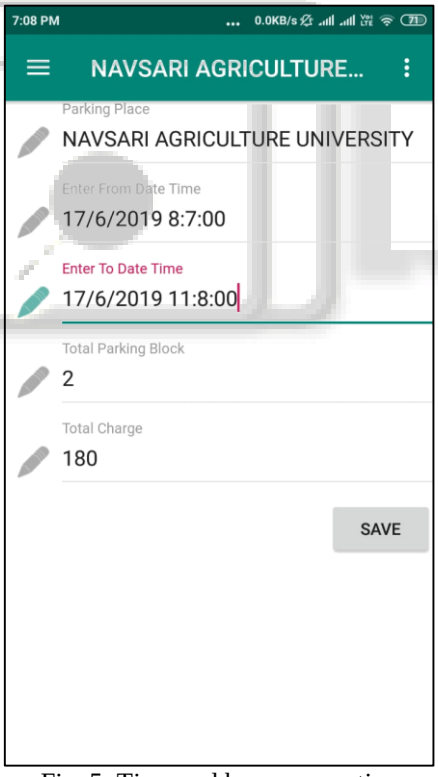


Fig. 5: Time and hour reservation

– User can check their reservation history by clicking drawer. We keep the history of user.

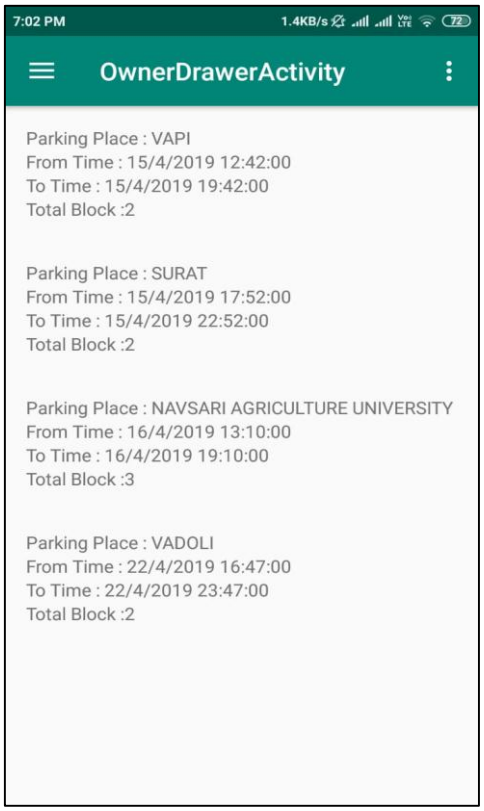
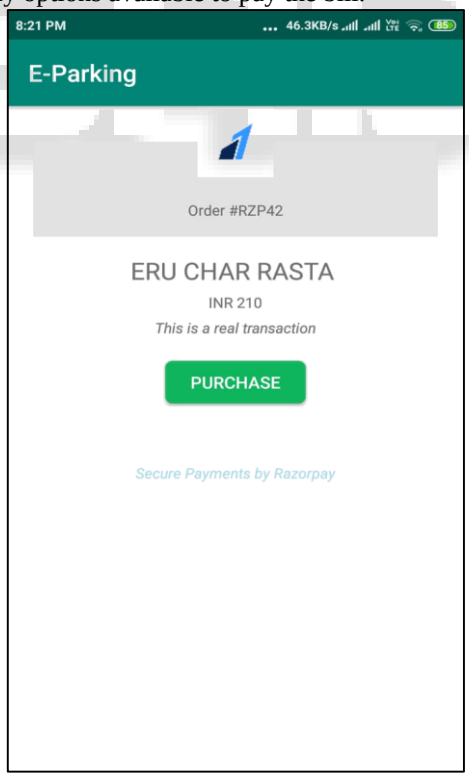


Fig. 6: History of reservation

– Here user can pay their charges by on-line. There are many options available to pay the bill.



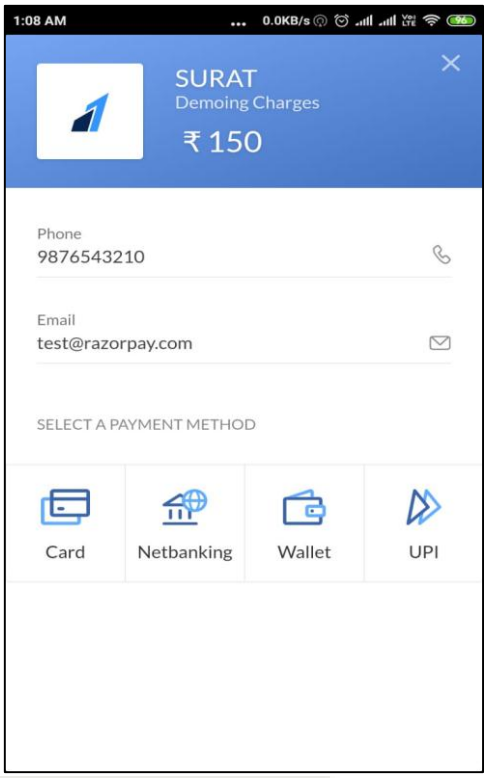


Fig. 7: Payment System

VIII. Project Summary and Future Work

A. *Features:*

- Strong database
- Secure login
- Security of car
- Guideline for user for parking
- Available parking slots
- Reservation system
- Charges money on basis of hour
- View and manage profile of user.

B. *Advantages:*

- User friendliness
- Reduce time
- Reduce car parking cost
- Provide security
- Access from Anywhere
- Easy to Access for user
- Easy Functionality

IX. Future Scopes

Considering the current scenario of parking system the future implications of our project is great. In future we are going to implement many more module in our parking system for reducing parking problem. We are going make our App user friendly so that user can easily use it. Car parking system is going to help to reduce the traffic jam in city areas.

X. Conclusion

The benefit of this system is huge with respect of the current scenarios. It is easy for the user to find out vacant parking slots. We believe implementation of this project will be effective to the users and this system will help them.

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