



Automated Vehicle Parking System Based on Web Application

Erum Sajid

EasyChair preprints are intended for rapid dissemination of research results and are integrated with the rest of EasyChair.

July 6, 2020

Automated Vehicle Parking System Based on Web Application

Erum Sajid

Department of Computer Science and engineering

Galgotias University, Greater Noida

Email-erumsajid15@gmail.com

Abstract-An automated (car) parking system (APS) is a mechanical system designed to minimize the area and/or volume required for parking cars. Like a multi-story parking garage, an APS provides parking for cars on multiple levels stacked vertically to maximize the number of parking spaces while minimizing land usage. The APS, however, utilizes a mechanical system to transport cars to and from parking spaces (rather than the driver) in order to eliminate much of the space wasted in a multi-story parking garage.[1] While a multi-story parking garage is similar to multiple parking lots stacked vertically, an APS is more similar to an automated storage and retrieval system for cars.[1] The paternoster (shown animated at the right) is an example of one of the earliest and most common types of APS.

Introduction

The current population of **India** is **1,376,566,797** as of Tuesday, March 31, 2020, based on Worldometer

elaboration of the latest United Nations data. India 2020 population is estimated at **1,380,004,385** people at mid year according to UN data. India population is equivalent to **17.7%** of the [total world population](#). India ranks number **2** in the list of [countries \(and dependencies\) by population](#). The population density in India is 464 per Km² (1,202 people per mi²). The total **land** area is 2,973,190 Km² (1,147,955 sq. miles). This shows that we have less area for parking. This application will help to solve this problem.

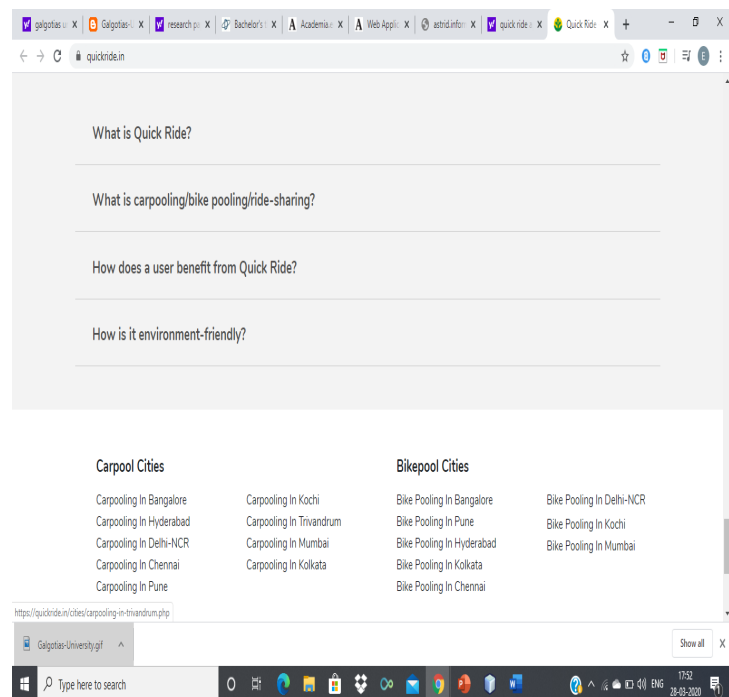
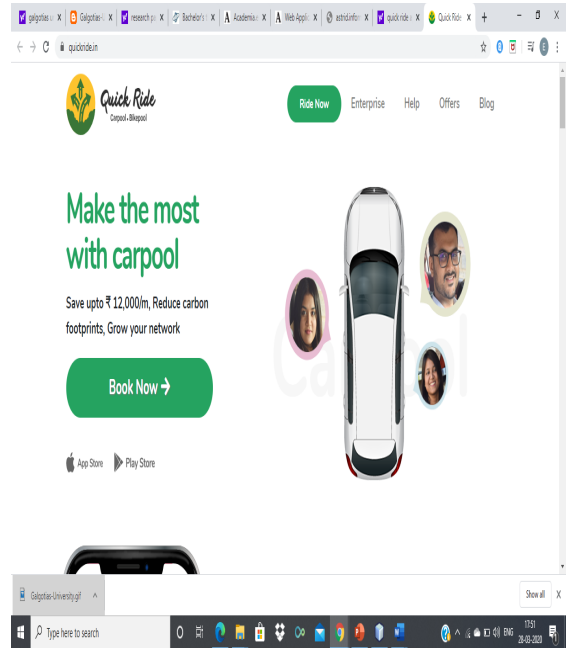
Benefits of this application:

This app can be used by the person who need to find parking area and the person who have parking space.

- ❑ By virtue of their relatively smaller volume and mechanized parking systems, APS are often used in locations where a multi-story parking garage would be too large, too costly or impractical.[7][19]



- ❑ Examples of such applications include, under or inside existing or new structures, between existing structures and in irregularly shaped areas.
- ❑ APS can also be applied in situations similar to multi-storey parking garages such as freestanding above ground, under buildings above grade and under buildings below grades
- ❑ Costs
- ❑ It create an opportunity for money earning.It will reduce traffic problem.



LITERATURE SURVEY

- I have researched on all application for this idea.
- Application like Zomato. But the main application that help to create this idea is quickride, Sride which is used in our office.

About QUICK RIDE :

1.What is quickride app?

Quick Ride is India's largest carpooling and bike pooling platform. The Quick Ride application facilitates ride-sharing by giving users a choice to either offer or find rides.

2.What is carpooling/bikepooling?

In simple terms, carpooling/bike

pooling/ride-sharing refers to sharing empty seats in a vehicle. People commuting from one point to another can share empty seats with other passengers who are travelling on the same route.

3.How does a user get benefits from quickride?

Quick Ride is an application which allows users to share rides, share commuting costs, reduce traffic and pollution, all at the same time.

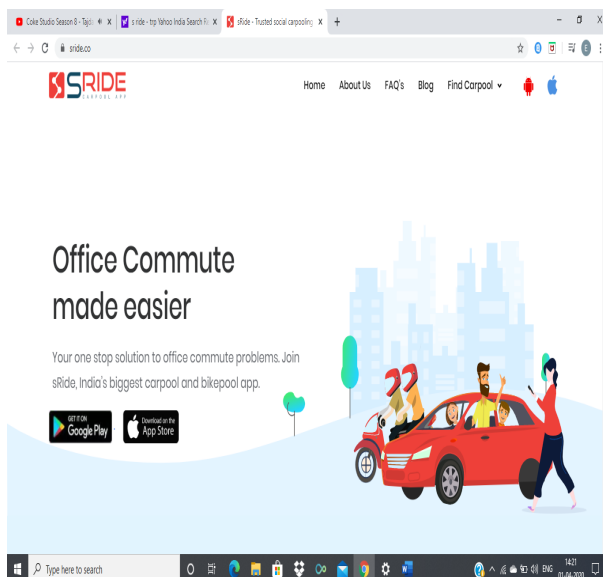
A **ride giver** reduces his/her commuting costs by sharing fuel expenses with other passengers.

A **ride taker** gets to share empty seats in ride giver's vehicle and has a comfortable commute.

4.How is it environment-friendly?

Quick Ride helps in reducing the number of vehicles on the road. Quick Ride facilitates the users to fill up the empty seats in already commuting vehicles that go empty.

About SRide:



Benefits:

- Save upto 80% on Commute Costs
Riders save upto Rs 3000 per month on commute costs compared to people who opt for cabs/auto
- Expand your Professional Network
Carpool with professionals from different domains and expand your professional network while commuting
- Reduce Pollution & Save Environment
Carpool and reduce traffic and pollution.

PROPOSED METHODOLOGIES:

Fully automated parking systems operate much like robotic valet parking.[18] The driver drives the car into an APS entry (transfer) area. The driver and all passengers exit the car. The driver uses an automated terminal nearby for payment and receipt of a ticket. When driver and passengers have left the entry area, the mechanical system lifts the car and transports it to a pre-determined parking space in the system. More sophisticated fully automated APS will obtain the dimensions of cars on entry in order to place them in the smallest available parking space.



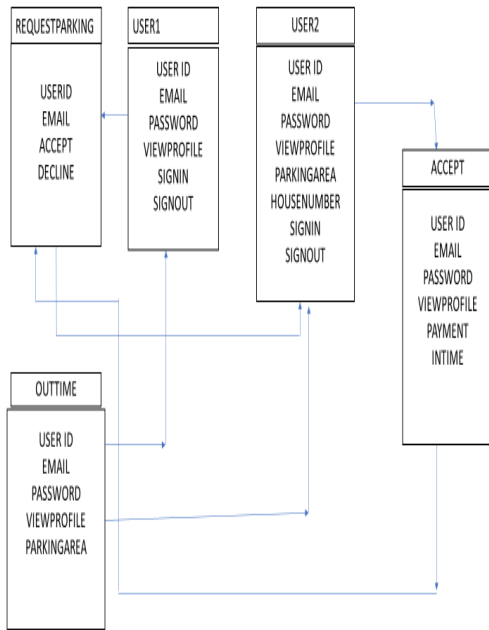
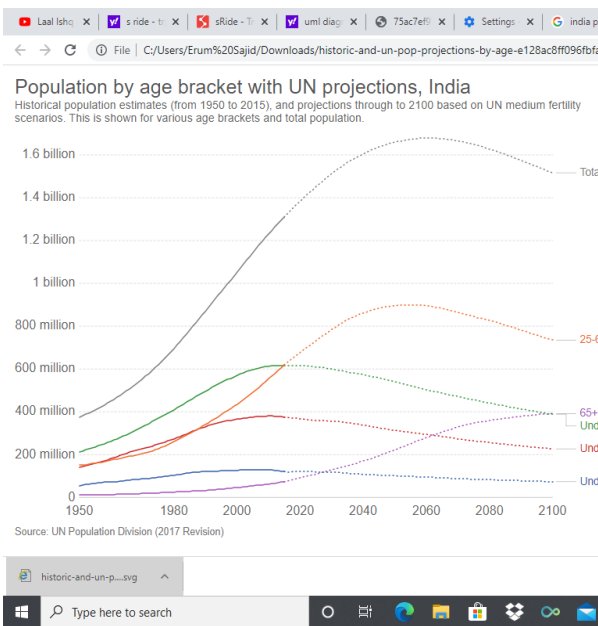


FIG- UML DIAGRAM FOR QUICKPARKING



Graph- showing population of India.

The QuickRide application will contain the most important things:

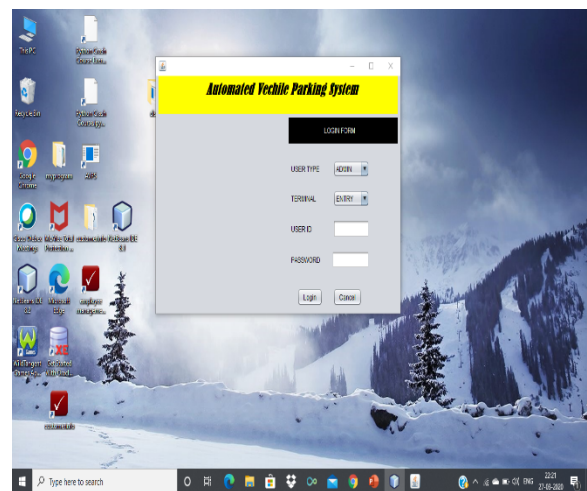
- 1.The application will be deployed on the user and driver.
- 2.The database which will allot id to the owner and user.

3.The central database which will manage other database and control the activities.

4. feedback and comments history will be displayed on application server.

ENVIRONMENTAL SETUP

1.The user or owner has to register themselves if they are using the application for first time.



2.if they are already Registered they have to login using email id and password.

3.if he/she is a user/owner then the details of quickride will be filled and it will be stored in database.

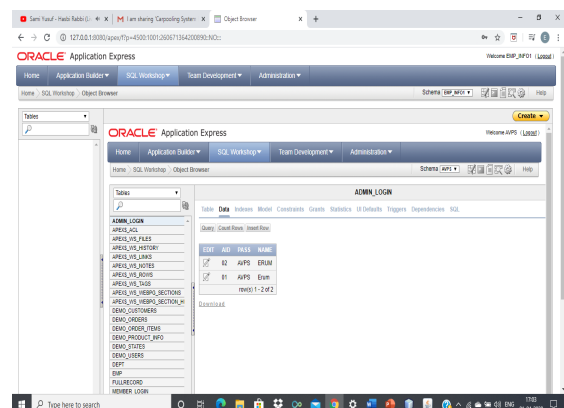


FIG-LOGIN DATABASE

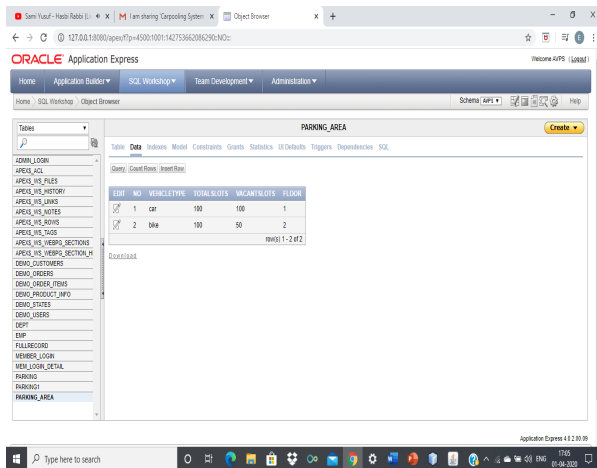
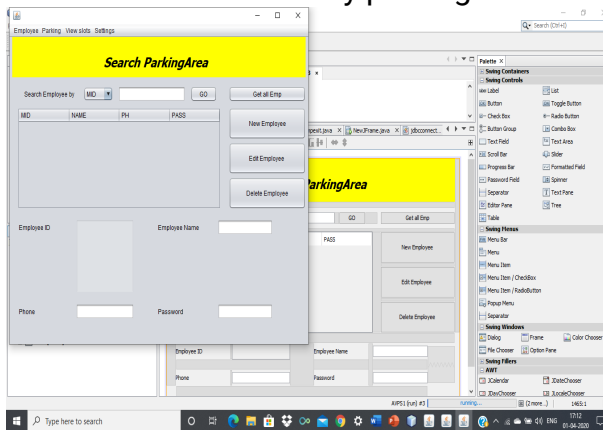
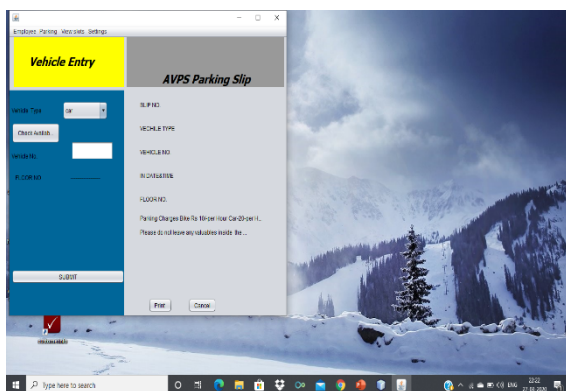


FIG-PARKING DETAIL DATABASE

4. User will search nearby parking area.

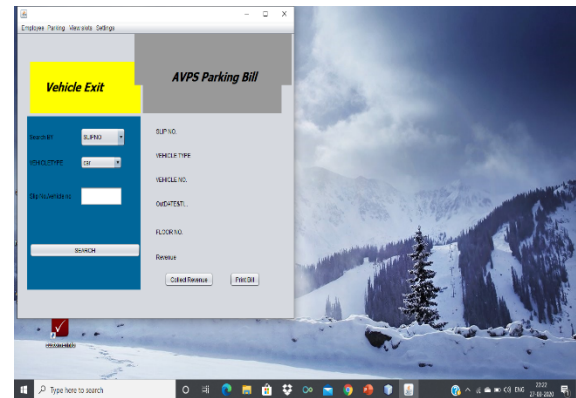


5. Vehicle entry intime and outtime will be taken by system.



6. Vehicle exit page will automatically calculate the cost of parking depending on the time for which

vehicle is parked.



RESULT AND CONCLUSION

By using QuickParking ,traffic problem will be solved.

- ❑ It helps to maximize the space for parking.
- ❑ It create an opportunity for money earning.It will reduce traffic problem.

REFERENCES

- [1] Quick Ride - Carpool, Bikepool
- [2] Swati. R. Tare, Neha B. Khalate and Ajita A. Mahapadi
- [3] sRide is a trusted social carpooling app for easy and cheaper commute.
- [4] Android & Web based Application for Carpooling System Sujata D. Sonawane1, Aditi D. Shahane2, Amruta K. Gangurde3, Aarti Rahatal4, Prof. R. M. Gawande5

[5] www.wikipedia.com

[6] Maximilian Schüßler; Klaus Bogenberger "Fusion of Carsharing and Charging Station Data to Analyze Behavior of Free-Floating Carsharing BEVs" 2015 IEEE 18th International Conference on Intelligent Transportation Systems Year: 2015 Pages: 541 - 546, DOI:

10.1109/ITSC.2015.95



Edit with WPS Office