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Car Pooling System

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Abstract: ***Car pooling System is an automated system which reduces the misery of travelers and makes them find cars in short period of time. Car pooling is an application of finding car in which drivers who are traveling to work alone can ask for fellow passengers through our application. For those who use public-transport system to go to work daily can use this application to find drivers who are traveling to the same destination in a short path. It provides with a simple riding platform between the car owner and car user. This project enables users to access mobility assets own by others exactly when they need. It shows a medium for available cars to pick up them on the interest of car owner with time and capacity. This project aims at creation of a Car-pooling System.***

Keywords: carpooling, environment friendly

I. INTRODUCTION

The purpose of this project is to develop an application that tries to overcome the hassle of travelling. Application creates an environment friendly and cheap way of travelling. The project Car Pooling System is a web application of finding car in which drivers who are traveling to work alone can ask for fellow passengers and for those who use public-transport system to go to work daily can use this system to find drivers who are traveling to the same destination in a short path. This project enables users to access mobility assets own by others exactly when they need. It shows a medium for available cars to pick up them on the interest of car owner with time and capacity. Carpooling (also car-sharing, ride-sharing and lift-sharing) is the sharing of car journeys so that more than one person travels in a car, and prevents the need for others to have to drive to a location themselves. Carpooling usually means to divide the travel expenses equally between all the occupants of the vehicle (driver or passenger).The driver doesn't try to earn money, but to share with several people the cost of a trip he would do anyway. Carpool commuting is more popular for people who work in places with more jobs nearby, and who live in places with higher residential densities. Carpooling is significantly correlated with transport operating costs, including fuel prices and commute length.

By having more people using one vehicle, carpooling reduces each person's travel costs such as: fuel costs, tolls, and the stress of driving. Carpooling is also a more environmentally friendly and sustainable way to travel as sharing journeys reduces air pollution, carbon emissions, traffic congestion on the roads, and the need for parking spaces

II. LITERATURE REVIEW

Mayur K. Thorat and Rahul M. Lahakare [1] have given an overview of Carpooling system With SMS alerts emphasizing more on overcoming issues encountered before and how to make it more secure. They gave the idea of using it for both inter-city and intra-city travels. They tried to expand their user base to blind people also who can use speech recognition technique to precisely know the location at any time.

R. Manzini and A. Pareschi [2] have given a decision support system for the application of carpooling system. This will be used to support passengers to in determining which cars to use. Swati. R. Tare, Neha B. Khalate and Ajita A. Mahapadi [3] have contributed by suggesting ideas on how make this application more user-friendly for passengers and not only for drivers.

They especially worked on reliability of Real time System and security of woman travellers. BlaBlaCar is the world's largest long-distance ridesharing community [4]. Conceived in December 2003 by Frédéric Mazzella, and founded in 2006, BlaBlaCar connects drivers and passengers willing to travel together between cities and share the cost of the journey. BlaBlaCar has more than 20 million members across 19 countries. [3] Members must register and create a personal online profile, which includes ratings and reviews by other members, social members show how much experience they have of the service, meaning those with more-known as "ambassadors" - attract more ride shares.

One major shortcoming of this application is that it only offers inter-city carpooling options which our application aims to rectify and add intra-city commuting options too. FolksVagn offers a community-based system that helps people share rides with others. While the passengers get rides at costs much cheaper than a regular taxi service, the car owner gets a share of the fare. It is open only to corporate clients as it requires a corporate email for registration and has a prepaid account or online wallet system to pay for the ride.

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The famous taxi-hire application “taxifares” [5] on android platform is the first car sharing application who took the initiative and introduced Carpooling for “Vacationers” .i.e. for those who are on vacations and want to spend less on travelling to save their pocket. They started it for some particular routes only like “Chandigarh-Delhi”, “Mysore-Manali” etc. and they are looking forward to reach out the masses in coming future.

III. PROPOSED SYSTEM

The proposed system is user friendly. Good communication is maintained between admin and driver. All user requests can be viewed by the administrator immediately. Details of the driver and car are maintained in the database. High level security is assigned in the proposed system.

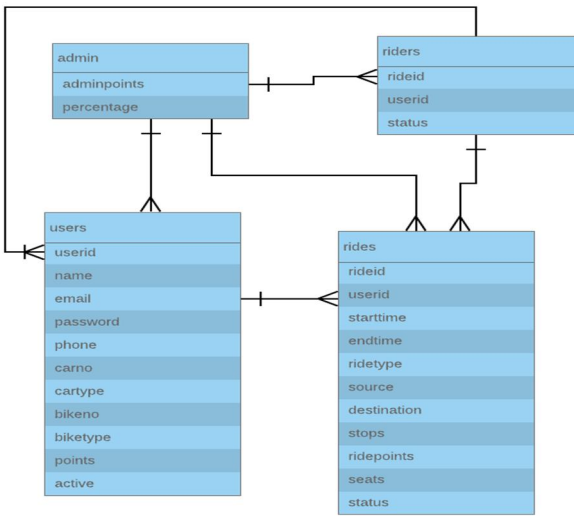
A. Advantages over Existing System

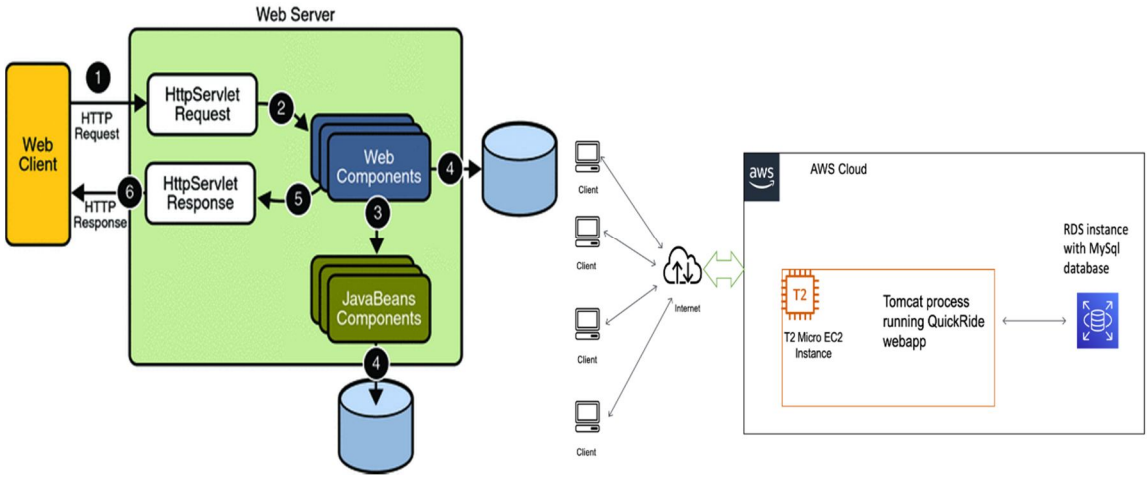
The performance is increased due to well-designed database. Security is increased. Time saving in ride creation. Easy to search and track rides. Economic feasibility attempts 2 weigh the costs of developing and implementing a new system, against the benefits that would accrue from having the new system in place. This feasibility study gives the top management the economic justification for the new system. A simple economic analysis which gives the actual comparison of costs and benefits are much more meaningful in this case. In addition, this proves to be a useful point of reference to compare actual costs as the project progresses. There could be various types of intangible benefits on account of automation. These could include increased customer satisfaction, improvement in product quality better decision making timeliness of information, expediting activities, improved accuracy of operations, better documentation and record keeping, faster retrieval of information, better employee morale. Proposed project is beneficial only if it can be turned into information systems that will meet the organizations operating requirements. Simply stated, this test of feasibility asks if the system will work when it is developed and installed. Are there major barriers to Implementation? Here are questions that will help test the operational feasibility of a project: Is there sufficient support for the project from management from users? If the current system is well liked and used to the extent that persons will not be able to see reasons for change, there may be resistance.

Are the current business methods acceptable to the user? If they are not, Users may welcome a change that will bring about a more operational and useful systems. Have the user been involved in the planning and development of the project? Early involvement reduces the chances of resistance to the system and in general and increases the likelihood of successful project. Since the proposed system was to help reduce the hardships encountered. In the existing manual system, the new system was considered to be operational feasible. Evaluating the technical feasibility is the trickiest part of a feasibility study. This is because, .at this point in time, not too many detailed designs of the system, making it difficult to access issues like performance, costs on (on account of the kind of technology to be deployed) etc. A number of issues have to be considered while doing a technical analysis.

Understand the different technologies involved in the proposed system before commencing the project we have to be very clear about what are the technologies that are to be required for the development of the new system. Find out whether the organization currently possesses the required technologies. Is the required technology available with the organization?

B. Architecture Diagram





1) *Admin:* This module has the entire access to all other modules, admin will accept the registration requests of the users, after which only a user can login. Generating reports of all rides and registered users.
2) *User:* The users of the application are travelers and commuters who want to go from one place to another or users that are driving a trip and want to find passengers. Users can act as both passengers and drivers while using an application. Any user of the application can act as:
3) *Driver:* If owns a Car/Bike can register the vehicle details. He can publish his trip on the application in order to find passengers to share the ride with. He can check the points collected for the trip and change the trip status.
4) *Rider:* He can search for rides based on source and destination and join ride of his interest. View the ride details and check the status of the ride joined.
5) *Functions*

a) Admin

b) User: Driver & Rider

IV. CONCLUSION

This project Car Pooling System is an effort to reduce consumption of fuel, our most important non-renewable resource and traffic congestion on roads by encouraging people to use cars/bikes sharing. So it is an environment-friendly social application and also helps people to reduce their journey time. This project will be accessible to all developers and its facility allows developers to focus on creating the database schema and while letting the application server define table based on the fields in JSP and relationships between them.This application software has been computed successfully and was also tested successfully by taking “test cases”. It is user friendly, and has required options, which can be utilized by the user to perform the desired operations.

The software is developed using Java as front end and Oracle as back end in Windows environment. The goals that are achieved by the software are: Instant access. Improved productivity. Optimum utilization of resources. Efficient management of records. Simplification of the operations. Less processing time and getting required information.

User friendly.Portable and flexible for further enhancement.

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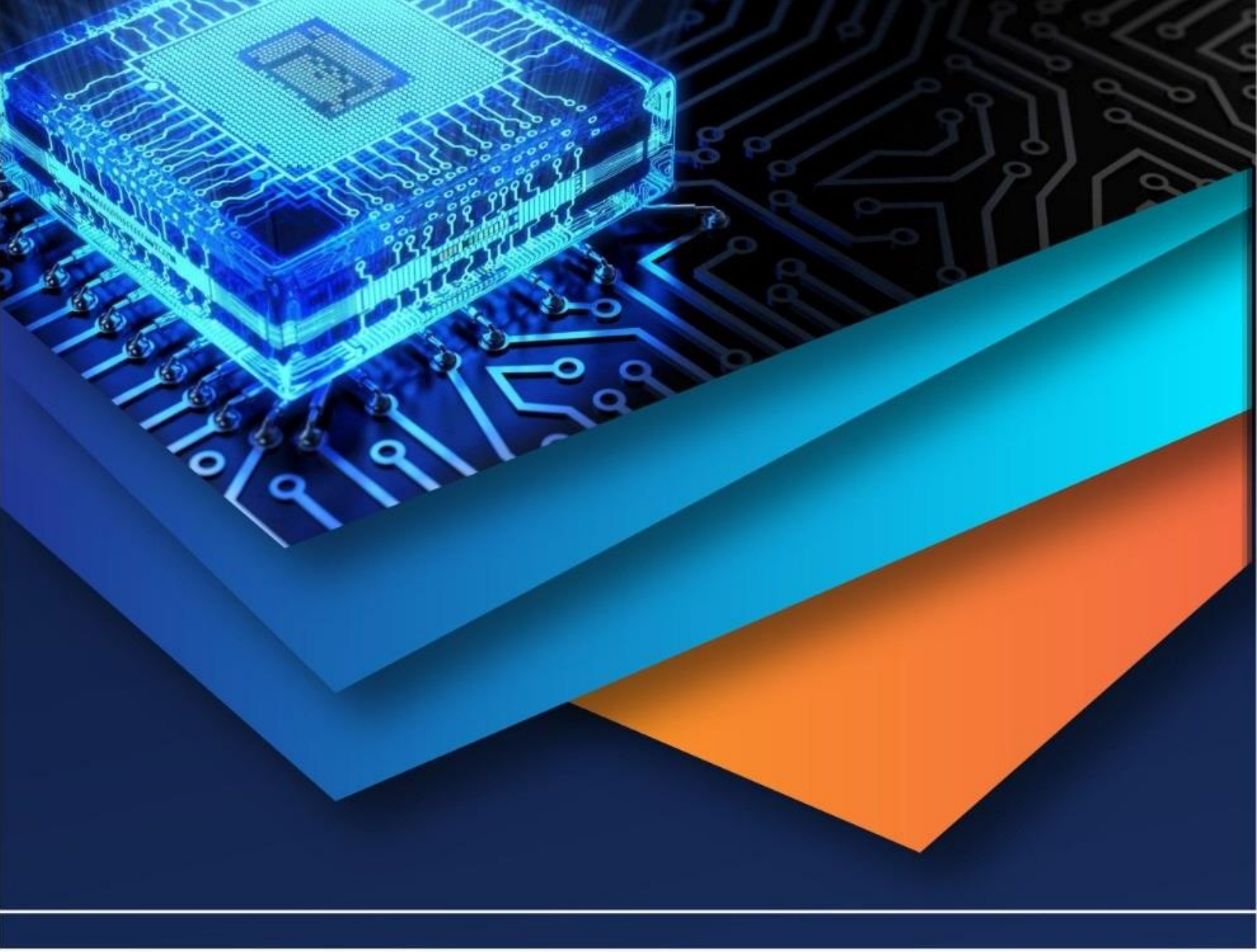

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