

A STUDY ON ENVIRONMENTAL PROTECTION BY ADOPTING CAR POOL SHARING TO ASSIST NATIONAL DEVELOPMENT.

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ABSTRACT

This article presents the design and implementation of a ride sharing application for a mobile environment. It will enable users to share rides in an efficient and simple way. Use of this system should reduce significantly the number of private cars on the roads, providing ecological, economical, and social benefits. The system is designed for any device, thus enabling implementation of the sharing any time, from anywhere, anytime. The system requires an algorithm for finding routes in a user-defined path, according to the source and destination along the path. This system differs from the existing ride sharing in several ways.

INTRODUCTION

Population growth and increasing population density, particularly in metropolitan areas, have brought about an increase in the number of vehicles on the roads, by a few percentage points per year (3.6% increase in 2010 alone). The cumulative effect of this phenomenon is staggering. The main derivatives of this situation include (in addition to direct economic expenditures on car maintenance, insurance and fuel):

Traffic Congestion

On average, travelers in Delhi, Mumbai, Bengaluru and Asian cities during peak traffic times. India's biggest cities may be losing up to \$22 billion annually to traffic congestion, and its commutes are bearing the burden.

Parking

Parking is another obvious problem in large, crowded cities. Various solutions have been proposed, but due to increasing number of vehicles and population per year have much effect on parking. Also, parking is becoming expensive. e.g., "fast lane", which offers free passage to

vehicles with 4 or more passengers. In London, a heavy daily fee is exacted from commuter cars entering the city center.

Environmental Concerns

Congestion has heightened the awareness of the importance of environmental protection and there is a worldwide search for new, energy efficient ways to manage our daily mobility. Unfortunately, none of these efforts made a significant contribution to the situation.

LITERATURE REVIEW

The term “carsharing” can be defined as “a service that provides members with access to a fleet of vehicles on an hourly basis”. The first large-scale car sharing program was implemented in Switzerland in 1987, and the first car sharing organization in the United States appeared in 1998 in Portland, Oregon. As of January 2008, 18 car sharing services were operating in the United States with a combined membership of approximately 234,834 people and over 5,200,600 cars in use (McLaughlin, 2008). Brook (2008) reported that as of March 2008, nearly 100 U.S. cities have some sort of formal car sharing operation. [1]

Car Sharing is considered as a short-term car rental, allowing members to gain the benefits of private car use without the costs and responsibilities of ownership. According to Navigant Research, the worldwide number of cars sharing members will continue to grow from 2.3 million in 2013 to more than 12 million by 2020. Carsharing services revenue is estimated to grow from approximately \$1 billion in 2013 to \$12 billion by 2020. In order to improve overall efficiency, user-friendliness and operational manage ability of car sharing service.

Car sharing has been associated with a variety of social and environmental benefits. Interms of alternatives to the private automobile, car sharing has been described as the “missing link” because it provides users greater flexibility than public transit and per-day rental cars and enables them to travel longer distances than they can by foot, bicycles, or taxis. Car sharing also helps to mitigate environmental degradation and emissions production. First, it provides “mobility insurance” to users while they satisfy their daily travel needs via other modes; as a result, car sharing has been shown to encourage individuals to avoid purchasing new private cars or to sell cars they currently have. This helps to reduce demand for the production of new automobiles, which consumes energy, water, and raw materials and produces hazardous emissions and waste products. Second, users have greater incentives to “trip-chain” and reduce impulsive trips because car sharing highlights the costs per car trip and requires users to plan their trips further

in advance. Studies have shown that members of car sharing programs drive significantly less than non-members, which reduces the amount of carbon dioxide and other noxious emissions that enter the atmosphere. Car sharing offers numerous other benefits, including reduced parking demand, reduced traffic congestion, and opportunities for members to save money otherwise spent on car ownership costs.

PLANNING OF WORK

The system is built in Visual Studio Code, using HTML (Hypertext markup language), CSS (Cascading Style Sheet) & Bootstrap as frontend, MySQL as backend and php (Hypertext Preprocessor). It has been tested using the local server made on laptop. We chose to use above technologies for multiple reasons. First, it is supported by various types of devices. Second, they are more reliable. It can run on both system and smartphones. [2]

System

In this section we describe our system in which first user have to signup and create their account and then sign in with their new account and as per there chose, they can choose between “offer a ride” and “find a ride” If they are rider than they should give two addresses as inputs, and searches for the driver to travel on the route or between those routes. This is done by iterating and examining database of those two addresses and storing all found drivers. This concept narrows down the number of drivers that are a possible meeting point between the two locations. The system works bidirectional: first, it matches the passenger’s given address to the driver’s address, and then does to opposite. If the driver accepts the request of the passenger than the chat option for both the driver and the passenger will be open and they can chat with each other about the ride and decide what to meet and at what time and if they are not satisfied by the arrangement, they see for other rides.[4]

PHP

We have used PHP in our project for sending request to server and finding response from server. PHP is very important server scripting language for our WORK. Using PHP, we communicate Using php we send our data of our pages on data base. The following pages are sign up page find using Php we retrieve data in profile page and showing response of rider to driver of booking page after that driver accept request or reject the booking it depends on driver.

If driver accept request, then response goes back to rider. Rider and driver both can see the response of each other.[3]

There is communication network in which we also have used php for sending and showing messages that is chat box. Using chat box, they can communicate with each other. They can know each other by talking.

MySQL is the database that we use in our project with PHP. MySQL is also very important data base language for creating database add tables.

The format of storing data in database using MySQL language is very nice. For this PHP works very easily and very compatible for it.

Even now in the world use of PHP much more than other server languages because of its simplicity and compatibility with MySQL on Apache Server.

METHODOLOGY

Home Page before Sign in or Sign up



FUTURE WORK

There are some research possibilities to further work that can be added to the current application:

- Voice recognition: How convenient would that be if we could just talk to our phone and say in our own words: "I' m driving from Me mph is Tennessee to Chicago Illinois at 5pm, 2 available seats". Since our application is built in a modularly way, it would be very easy to add unique and special features like this. Using voice recognition will substantially increase the use of people. As technology becomes more and more advanced, we expect things to be faster and easier to handle. Talking to a phone in a free manner is, generally speaking, more user friendly, and will save him precious time.

- Account Ratings: In order to increase and attract more users the system must have a way to rate users with ratio to their use of the application [11]. The more they use the application the more benefits they should receive. Adding a system that gives points for each drive, points for good service to the hitch-hiker, will come into considerations when the hitch-hiker enters his feedback from the drive.

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