



## Real-Time Carpooling System

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Abstract- Real time lots of people commuting from place. eg people going back to the home from company etc. Many people commuting via car, bick etc. But the problem is there is no easy way to how many people a person can tack and co-ordination is a huge issue that there is no effort by people to help each other by giving lift and more over this saves the environment in reducing the problem of traffic jams, fuel combustion,also help in controlling pollution, reducing traffic with fewer vehicle etc. carpooling is also seen as a more environment friendly and sustainable way to travel as sharing journeys reduce carbon emission.

Real time carpooling is a android based system. The people having this application on there mobile phone or laftop an easily carpool with unacquainted people without worrying about security.this system is used for avoide the drawback of previous application.

Index Terms—: Carpooling mobile phone,trust,automatic system,credit system,driver safety.

### INTRODUCTION

Now a day transporting is a main issue in our country. For the transporting car, bick ,bus etc are used. Due to increasing number of vehicles, problems of fuel combustion, pollution are increasing at an alarming rate. This will result in extinction of natural resources like petrol, diesel and also harming the environment by releasing

the contents of carbon dioxide, and other harmful gases in surrounding. To overcome or to find accurate solution a concept of carpooling comes into picture. A carpool is a system in which several people share rides to work school or other destinations. This system helps save money by dividing fuel costs among several individuals, instead of each person bearing the cost of his own fuel.

It also reduces environmental pollution by limiting fuel consumption and reducing the number of vehicles on the road and subsequent emissions. Carpooling is also called as ride-sharing. Carpooling is an android based application which will provide the advanced searching technique and provide most relevant result for the carpooling in the city. Taking an idea of previous system we developed an application for android devices and which can track both passenger and driver. This system is a user friendly.

Carpooling system have many application in real time system. Some are following

1. It reduces the traffic problem.
2. It is a environment friendly and the user friendly.
3. It also reduces environmental pollution by limiting fuel consumption.
4. Carpooling is an easy and effective way to reduce your environmental impact and save cash.
5. reduction in the number of vehicle on the road.
6. reduce in expense of gas.

So we developed an application on android which is easily handle to the users. Now everyone has a smartphone with android operating system. This system will be designed tacking into consideration the user need about safety.

### PREVIOUS SYSTEM

In previous system there is no security and no environment friendly. There are more problems occurred in this system to overcome this problem we proposed this system for carpooling application. The Participate carpool application is not susceptible

because it was not able to fulfil the requirement which are listed below:-

1. Passenger cannot track the driver.
2. Cannot be used on other operating systems.
3. More Expensive.

### PROPOSED SYSTEM

There is increasing fuel prices add to the misery of daily users of personal vehicle. But also there are more problem like environment pollution are occurred. Car sharing is the solution of this problem but there is no security and trust come into this picture. To avoid this problem we proposed the Real Time Carpooling System. In this system we also used the mobile phone. Now a day many people have a android phone to used this system. This is a too much simple and easy system to use. To consider all this problem and we proposed this application. This system is used for city-city travel or long travel. Now a day this system is very important for environment. This system give the security as well as both driver and passenger can stay in touch with each-other. For this purpose we use the registration online. Path is to be important into this system. Using this system we reduce pollution and help to the environment. For this purpose we proposed the carpooling system.

### SYSTEM DESIGN

Waterfall model is used as the method in our system. SHA1 algorithm is used in our system. SHA1 stands for "Secure Hashing Algorithm". This algorithm is used for the security purpose. For the use of this system user firstly register online. For that path,

time is to be important . GPS navigation device is also used in this system . A android phone is required for online registration. At the time of registration user know that the now actually where the car and how much time is required to come on the stop. From this information the user know the time required for other work and he come on stop at exact time. Hence the time will be save of the passenger. Also this system give the security of user.

The figure show the architecture of the carpooling system. From figure we understand that how actually driver and passenger interact with each other through internet.

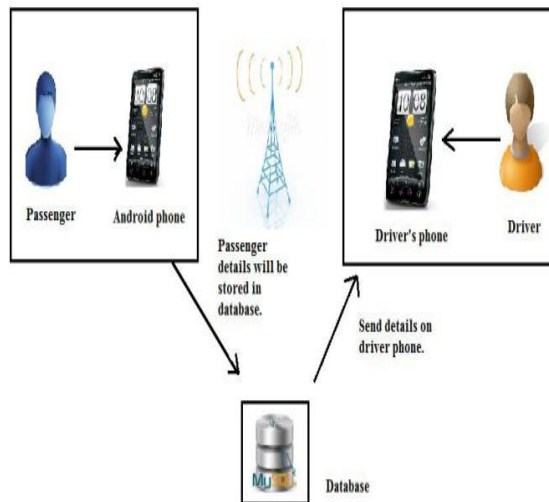


Fig. system architecture

The main module is the passenger and driver.this application install on both the devices and they will interact with each other.

## ALGORITHM

- 1.Start
- 2.Take message bit

3.Zero padding: add zero to get required size 448bit in last block.

4.Initialize 5 hash block...h01,h02,h03,h04.

5.Each hash block is 512-bit block.

6.Calculate SHA function() and the constant K these are based on the current round number.

$e=d$

$d=c$

$c=b$  (rotated left 30)

$b=a$

$a = a$  (rotated left 5) + SHA function() +  $e + k + \text{word}[i]$

Add a ,b ,c , d and e to the hash output.

output the concatenation (h0,h1,h2,h3,h4) which is the message digest.

## MATHEMATICAL MODEL

Memory utilization:- The experiment was done to find space saving capability. We implemented vc for Java (jdk 1.6.0), TURBO C/C++ compilers, .NET, Assembly(TA,MA). The sizes of the remote compiler client and the server programs were 75KB and 160KB, respectively. It was required for server having Windows XP installed. Clients were working fine for Windows as well as Linux operating system. Consider a network with N systems. The software/resource to be installed is S Variable (size of S in MB).In general the total memory occupied in the network is the sum of all the memory installed on each system

$$M_t = N * S \text{ MB.}$$

Where,

$M_t$  is Temporary variable

N is Number of Systems.

Consider N-1 systems to be clients and one system as server (host) So N-1 system must installed with client program. So

Clients occupy:  $(N-1) * S_c$  MB.

One (At least One) system must be installed with server program. So

Server occupy :  $(1) * S_s$  MB + S MB

Then the total memory occupied in the network is

$M_{tvc} = (N-1)S_c + S_s + S$  MB.

Then the total memory saved in this network is

$M_{svc} = NS - ((N-1)S_c + S_s + S)$  MB.

Percentage utilization of memory on this network using our concept:

$((NS - ((N-1)S_c + S_s + S)) / NS) * 100$

The database size at server side will grow dynamically so it is not taken into consideration in above calculations.

Number of systems in the lab,  $N = 5$ ; Size of the software to be shared

$S = 162\text{MB}(\text{jdk1.6.0}) + 9\text{MB}(\text{TurboC/C++}) + 230\text{MB}(\text{.NET}) + 200\text{KB}(\text{TASM}) + 408\text{KB}(\text{MASM}) = 401\text{MB}.608\text{KB}$

So, in normal lab if each system has installed this software, then total memory occupied is

$M_t = 5 * 401\text{MB}.608\text{KB} = 2008.04 \text{ MB};$

Using this concept designed two utilities one for clients (i.e. client program) and one for sharing the resource (i.e. server program)

$M_{tvc} = (5-1) * 75\text{KB} + 1 * 160\text{KB} + 401\text{MB}.608\text{KB} = 861.608 \text{ MB};$

$M_{svc} = 955 \text{ MB} - 861.608 \text{ MB} = 93.392\text{MB};$

$N = 684/955 = 71.62\%$

## FUTURE AND SCOPES

We always strive to bring new change in society, which will change the life of people so will help in bringing an emergent change to society, individual and last but not least environment.

1. Notifications from company
2. Advertisements

## ADVANTAGES

1. Will help in reducing the pollution and traffic problem
2. Save personal expences .
3. Time saving and also reduces stress of driving in traffic.
4. Reduction in fuel consumption.
5. Environment friendly.

## CONCLUSION

Thus we presented a solution to an ever-rising traffic problems which will prove a boon to next generation driving way. We always strive to bring new change in society, which will change the life of people so Carpooling will help in bringing an emergent change and also help in providing beneficial features to society, individual and last but not least environment. In next phase we will be working on bike-pooling and also

providing features like artificial passengers which will find the people on the way automatically. This system very beneficial for the environment. By using this system we save the fuel and also reduce pollution. Thus the purpose of this system is to reduce the environment pollution.

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