**A**

**MINI PROJECT REPORT**

ON

**“Carpooling System”**

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BY

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**CERTIFICATE**

Certified that the project work entitled Player Selection Guide carried out by Mr. Dhanush Biligiri N H, USN 1NH18IS030, a bonafide student of III semester in partial fulfilment for the award of Bachelor of Engineering in Information Science and Engineering of the VTU, Belgaum during the year 2019-20. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said Degree.

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**ABSTRACT**

Carpooling is a concept in which people who travel to the same destination can share their vehicle with others which reduces the fuel cost, the traffic on the road and ultimately pollution and global warming. Carpooling helps to cut down traffic on the roads, carbon emissions and overall parking space required, hence proving to be environmental friendly. This system has many benefits. Few of them are, the user gets an option to choose their choice of car. The user can enter their preferred route between the cities. the actual expenditure is reduced. **:** The tasks that this system can perform are it can enter their required pickup and drop location from the prescribed cities. It gives the option of choosing their own choice of car. It displays the cost of transportation by gazing the distance between the city. It is portable, highly flexible, low cost and most importantly easy to use.

Considering all these points the user can easily access the proposed system. This application-project helps participants in carpooling to share journey expenses such as fuel, tolls etc. which reduces the expenses incurred on each participant. This also helps the passenger to choose their own choice of car. In case the same car and destination is chosen then pooling would take place or else the required car will be sent.

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Chapter 1

Introduction

Carpooling is a concept in which people who travel to the same destination can share their vehicle with others which reduces the fuel cost, the traffic on the road and ultimately pollution and global warming. With the ever-increasing population worldwide, it is necessary to carpool to preserve the world for our descendants. This application program is an attempt to allow the user to indulge themselves in pooling with their own requirement of car.

**• Purpose of Study**

Carpooling is a very convenient option for people in need of rides: common vehicle costs show that this is the most efﬁcient decision for less than 10.000 km/year. With an annual fee, and paying by hour when needing a ride, one could avoid buying a car and paying for its registration, insurance, maintenance, etc. Participants in carpooling share journey expenses such as fuel, tolls etc. which reduces the expenses incurred on each participant. Carpooling helps to cut down traffic on the roads, carbon emissions and overall parking space required, hence proving to be environmental friendly. This system has many benefits. Few of them are listed below:

• The user gets an option to choose their choice of car.

• The user can enter their preferred route between the cities.

• The actual expenditure is reduced.

• It provides new friendship and company for commute.

• Reduces the stress and saves time.

**1.2 Problem Statement**

To design and implement Carpooling based on the requirement of the user over the traditional way of usage of transportation.

**Chapter 2**

Materials and Methods

**Purpose:** The purpose of this project is to allow the user to share a car from one city to another ultimately linking to a reduce of expenditure. The user can enter their required pickup and drop location from the respective prescribed cities. They will even get an option of choosing their own choice of car w.r.t the number of passengers so that they remain in a comfortable zone.

**Scope:** The tasks that this system can perform are as follows:

• Can enter their required pickup and drop location from the prescribed cities.

• It gives the option of choosing their own choice of car.

• It displays the cost of transportation by gazing the distance between the city.

• It is portable, highly flexible, low cost and most importantly easy to use.

Considering all these points the user can easily access the proposed system.

**2.1 Materials Used**

**Hardware System Configuration:**

Processor - Intel Core i7

Speed - 1.8 GHz

RAM - 256 MB (min)

Hard Disk - 10 GB

**Software System Configuration:**

Operating System - Windows 10

Programming Language - C

Compiler - Code Blocks

**2.2 Methods Used**

• Input the User Details

**• Name –** The name of User.

**• Address-** The address of User.

**• Phone no. –** The phone no. of the User.

**• Number of people-**  The number of people who are traveling with User.

**• Pick up point-** The pickup location of User.

**• Drop Point-** The drop location of User.

**• Preferred route-** Any preferred route by the User.

**• Choice of trip-** Two choices will be given \*One way or \*Round trip

**• Choice of Car-** The list of the car will be displayed.

• Ritz

• Micra

• Indica

• Dzire

• Etios

• Sunny

• Innova

• Enjoy

• Ertiga

• Benz

• BMW

• Audi

• Accord

**• Ride Estimate-** The total expenditure including taxes, driver allowance

**• Confirm and book**

**2.2.1. Architecture[Flow-Diagram]**

**Figure 2.1: Flowchart for Carpooling System**

**2.2.2 Algorithm**

START

Step 1: Input of details from Passenger A is taken.

Step 2: List of cars and destination point is displayed.

Step 3: Choice of car and destination point is taken and estimated rate is displayed.

Step 4: Input of details from Passenger B is taken.

Step 5: List of cars and destination point is displayed.

Step 6: Choice of car and destination point is taken and estimated rate is displayed.

Step 7: if (car1==car2 && dest1==dest2)

then go to step 8

else go to step 10

Step 8: if (pass1<=2 && pass2<=2)

then go to step 9

else go to 10

Step 9: Confirmation for pooling is displayed.

Step 10: Confirmation for separate ride is displayed.

STOP

**2.2.3. Code and Implementation**

#include<stdio.h>

#include<conio.h>

char persona[40];

char personb[40];

char aphno[20];

char bphno[20];

int ch= 0, pass1= 0, pass2= 0, car1= 0, car2= 0, dest1= 0, dest2= 0, i=0;

int main()

{

start:

clrscr();

printf("\n\t\t\t\t\tCAR POOLING");

printf("\n\n\t\tEnter \n\t\t\t1.For Booking \n\t\t\t2.For Exit \n\t\tEnter Option: ");

scanf("%d", &ch);

switch(ch)

{

case 1:

{

for(i=1; i<=2; i++)

{

if(i==1)

{

printf("\n\t\tEnter Name: ");

scanf("%s", persona);

printf("\n\t\tEnter Phone no: ");

scanf("%s", aphno);

printf("\n\t\tEnter number of passengers: ");

scanf("%d", &pass1);

carr1:

printf("\n\t\t\t\t\tSelect Car \n\t\tEnter \n\t\t\t1.Dzire \n\t\t\t2.Etios \n\t\t\t3.Ritz \n\t\t\t4.Ertiga \n\t\t\t5.Benz \n\t\t\t6.BMW \n\t\t\t7.Audi \n\t\t\t8.Accord \n\t\tEnter option: ");

scanf("%d", &car1);

switch(car1)

{

case 1: printf("\n\t\tDzire is the chosen car");

break;

case 2: printf("\n\t\tEtios is the chosen car");

break;

case 3: printf("\n\t\tRitz is the chosen car");

break;

case 4: printf("\n\t\tErtiga is the chosen car");

break;

case 5: printf("\n\t\tBenz is the chosen car");

break;

case 6: printf("\n\t\tBMW is the chosen car");

break;

case 7: printf("\n\t\tAudi is the chosen car");

break;

case 8: printf("\n\t\tAccord is the chosen car");

break;

default : printf("\n\t\tInvalid option");

goto carr1;

}

destt1:

printf("\n\t\t\t\t\tSelect Destination \n\t\tEnter \n\t\t\t1.Mysore \n\t\t\t2.Chennai \n\t\t\t3.Mumabi \n\t\t\t4.Hydrabad \n\t\t\t5.Kochi \n\t\t\tEnter option: ");

scanf("%d", &dest1);

switch(dest1)

{

case 1: if(car1<=4)

printf("\n\t\tMysore is the chosen destination. Price is ₹ 2338");

else

printf("\n\t\tMysore is the chosen destination. Price is ₹ 6462");

break;

case 2: if(car1<=4)

printf("\n\t\tChennai is the chosen destination. Price is ₹ 6643");

else

printf("\n\t\tChennai is the chosen destination. Price is ₹ 11310");

break;

case 3: if(car1<=4)

printf("\n\t\tMumbai is the chosen destination. Price is ₹ 10771");

else

printf("\n\t\tMumbai is the chosen destination. Price is ₹ 16101");

break;

case 4: if(car1<=4)

printf("\n\t\tHydrabad is the chosen destination. Price is ₹ 4969");

else

printf("\n\t\tHydrabad is the chosen destination. Price is ₹ 9778");

break;

case 5: if(car1<=4)

printf("\n\t\tKochi is the chosen destination. Price is ₹ 5289");

else

printf("\n\t\tKochi is the chosen destination. Price is ₹ 11286");

break;

default :

printf("\n\t\tInvalid option");

goto destt1;

}

}

if(i==2)

{

printf("\n\t\tEnter Name: ");

scanf("%s", personb);

printf("\n\t\tEnter Phone no: ");

scanf("%s", bphno);

printf("\n\t\tEnter number of passengers: ");

scanf("%d", &pass2);

carr2:

printf("\n\t\t\t\t\tSelect Car \n\t\tEnter \n\t\t\t1.Dzire \n\t\t\t2.Etios \n\t\t\t3.Ritz \n\t\t\t4.Ertiga \n\t\t\t5.Benz \n\t\t\t6.BMW \n\t\t\t7.Audi \n\t\t\t8.Accord \n\t\tEnter option: ");

scanf("%d", &car2);

switch(car2)

{

case 1: printf("\n\t\tDzire is the chosen car");

break;

case 2: printf("\n\t\tEtios is the chosen car");

break;

case 3: printf("\n\t\tRitz is the chosen car");

break;

case 4: printf("\n\t\tErtiga is the chosen car");

break;

case 5: printf("\n\t\tBenz is the chosen car");

break;

case 6: printf("\n\t\tBMW is the chosen car");

break;

case 7: printf("\n\t\tAudi is the chosen car");

break;

case 8: printf("\n\t\tAccord is the chosen car");

break;

default : printf("\n\t\tInvalid option");

goto carr2;

}

destt2:

printf("\n\t\t\t\t\tSelect Destination \n\t\tEnter \n\t\t\t1.Mysore \n\t\t\t2.Chennai \n\t\t\t3.Mumabi \n\t\t\t4.Hydrabad \n\t\t\t5.Kochi \n\t\t\tEnter option: ");

scanf("%d", &dest2);

switch(dest2)

{

case 1:

if(car2<=4)

printf("\n\t\tMysore is the chosen destination. Price is ₹ 2338\n");

else

printf("\n\t\tMysore is the chosen destination. Price is ₹ 6462\n");

break;

case 2:

if(car2<=4)

printf("\n\t\tChennai is the chosen destination. Price is ₹ 6643\n");

else

printf("\n\t\tChennai is the chosen destination. Price is ₹ 11310\n");

break;

case 3:

if(car2<=4)

printf("\n\t\tMumbai is the chosen destination. Price is ₹ 10771\n");

else

printf("\n\t\tMumbai is the chosen destination. Price is ₹ 16101\n");

break;

case 4:

if(car2<=4)

printf("\n\t\tHydrabad is the chosen destination. Price is ₹ 4969\n");

else

printf("\n\t\tHydrabad is the chosen destination. Price is ₹ 9778\n");

break;

case 5:

if(car2<=4)

printf("\n\t\tKochi is the chosen destination. Price is ₹ 5289\n");

else

printf("\n\t\tKochi is the chosen destination. Price is ₹ 11286\n");

break;

default :

printf("\n\t\tInvalid option");

goto destt2;

}

}

}

if (car1 == car2 && dest1 == dest2)

{

if(pass1 <=2 && pass2 <=2)

{

printf("\n\t\t Pool car %s and %s are going together\n\n", persona, personb);

}

}

else

{

printf("\n\t\t %s has booked car %d to %d", persona, car1, dest1);

printf("\n\t\t %s has booked car %d to %d\n", personb, car2, dest2);

}

}

case 2:

return 0;

default:

printf("\n\t\tInvalid option\n");

goto start;

}

return 0;

}

**Chapter 3**

**Results and Discussion**

The project is successfully completed. This application-project helps participants in carpooling to share journey expenses such as fuel, tolls etc. which reduces the expenses incurred on each participant. This also helps the passenger to choose their own choice of car. In case the same car and destination is chosen then pooling would take place or else the required car will be sent.

**3.1 Output**

Fig 3.1. Here the option for booking will be shown asking for details of user and their requirement of car and destination.

Fig 3.2. Here the details of the passenger will be compared and the since the choice of car and destination place is same the pooled message will be displayed.

Fig 3.3. Here the details of passenger will be compared and since the choice of car and destination is different the ride won’t be pooled and normal message will be displayed.

**Chapter 4**

**Conclusion**

The project was a great source of knowledge. From this system I came to know how exactly the carpooling technique works and how it is implemented; and the attempt made by giving choice of car made a plus point in this project. The only thing that could not be implemented in here is the real-time allotment of cars. I learnt a lot from this mini-project about C language and its implementation.

So, I can conclude that the project was a great learning experience for me which will definitely help me in the coming years.

**Reference**

The following websites and books were used for the completion of project:

• The C programing language – Brain W Kernighan

• C in Depth- Deepali Srivatsava

• http://www.cscprogrammingtutorials.com

• https://www.google.com

• https://www.wikipedia.org