

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

**BELAGAVI-590014**



**A File Structure Mini Project Report On**

**“ TRANSPORTATION RESERVATION SYSTEM”**

*Submitted in the partial fulfilment of the requirements for the award of the Degree of*

***Bachelor of Engineering in Information Science and Engineering***

Submitted by,

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Under the guidance of

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Project Guide



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**2020-2021**

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**CERTIFICATE**

Certified that the project work entitled “**TRANSPORTATION RESERVATION SYSTEM**” carried out by **CHANDRASHEKAR V(10X18IS017)** Bonifide students of The Oxford College of Engineering, Bangalore in partial fulfilment for the award of the Degree of **Bachelor of Engineering in Information Science and Engineering** of Visvesvaraya Technological University, Belgaum during the year 2020-2021. The Mini 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**

The project is a complete management based software. The purpose of Transportation Reservation system is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their data/information can be stored for a longer period with easy accessing and manipulation of the same. It can assist the workers to concentrate on their activities rather than to concentrate on the record keeping. Thus, it will help the user in better utilization of its files. The system can maintain computerized records without redundant entries. That means one need not be distracted by information that is not relevant, while being able to reach the information. Basically, the project describes how to manage for good performance and better services for the customers. Stored procedures are used to categorize transport details based on the name and booking them. The project introduces a cancel ticket relation to the customer, whose role is to cancel booked tickets of the customers. It is very useful for those small and large scale business people without costing scanners and a very fast processing and provides facilities like storing transport names, details and ticket information details, the run days, number of passengers and ticket price details.

# TABLE OF CONTENTS

<b>1 Introduction</b>	<b>1</b>
1.1 Preamble	1
1.2 Purpose	1
1.3 Scope	1
1.4 File Structure concept	1
<b>2 Analysis and System Requirements</b>	<b>2</b>
2.1 System requirement specification	2
<b>3 System Design and Analysis</b>	<b>3</b>
3.1 Preliminary design	3
3.1.1 Flow Chart	3
3.1.2 Data Flow Diagram	3
<b>4 Design</b>	<b>4</b>
4.1 Introduction to file System	4
4.2 Indexing	4
4.3 Secondary Indexing	4
<b>5 Implementation</b>	<b>6</b>
5.1 Module 1 Description	6
5.2 Module 2 Description	12
<b>6 Testing</b>	<b>27</b>
6.1 Test description	27
6.2 Test Cases	27
<b>Conclusion</b>	<b>31</b>
<b>References</b>	<b>32</b>

# LIST OF FIGURES

Fig 3.1.2.1: Data flow Model	3
Fig :4.3.1 Indexing	5
Fig 5.1.1 Admin page.	6
Fig 5.1.2 File creation page.	7
Fig 5.1.3 Entering transport details page.	7
Fig 5.1.4 Modifying transport details page.	8
Fig 5.1.5 Deleting transport details page.	8
Fig 5.1.6 Booking transport details page.	9
Fig 5.1.7 Transport details for booking page.	9
Fig 5.1.8 Viewing ticket information page.	10
Fig 5.1.9 Canceling ticket information page.	10
Fig 5.1.10 Output for entering wrong option page.	11
Fig 5.1.11 File storage	11

# CHAPTER 1:INTRODUCTION

## 1.1 Preamble

The project transportation reservation system is a management-based application that allows the travel agent to handle all reservation activities. The ability to manage various transport entries and booking as well as canceling tickets make this system very flexible and convenient.

The travel agency is a very busy person and does not have the time to sit and manage the entire activities manually on paper. This application gives him the power and flexibility to manage the entire system from a single online system.

Transportation reservation system project provides transport details and other necessary reservation management functions. The system allows the government travel agency to entry the present running transport details and the passengers to book the selected transports type, date and time. Passengers can select and book their selected transport. The agency has the option of either booking the selected transport or canceling the booked ticket from the passengers mobile reference. The system is hence useful in the point where people who have problem in online ticket reservation can approach such government agencies in order to avoid fraud activities by the local agencies.

## 1.2 Purpose

Customers always spend a lot of their time visiting reservation websites to check the prices of each ticket and book the reservation. But the problem is the ticket wont be reserved immediately and sometimes server down in websites may crash the cash out of the debit card without proper process done and a huge amount of replacement is required. Also, many passengers suffer from visiting wrong websites and could give their personnel details needs.

Hence there was a need for more efficient system to route product details to local owners with availability while saving valuable time that could be inverted in other community services.

## 1.3 Scope

The name of the software is” TRANSPORTATION RESERVATION SYSTEM”. This software provides options for viewing different transport available with different timings for a particular date and provides passengers with the facility to book a ticket ,or cancel a particular reservation but it does not provide the passengers to modify a particular part of his reservation.

## 1.4 FILE STRUCTURE CONCEPT

### Direct access file organization

It is also known as random access, the records are randomly accessed throughout the file using a key. This file organization is useful for immediate access to a large amount of information. It updates several files quickly, has better control over record allocation. The records can be of different sizes. Records are stored randomly but accessed directly.

## CHAPTER 2: ANALYSIS AND SYSTEM REQUIREMENTS

### 2.1 System Requirement Specification

#### Definition of Software:

- Computer software or just software is any set of machine-readable instructions that directs a computer's processor to perform specific operations. The term is used to construct with computer hardware, the physical objects (processor and related devices) that carry out the instructions. Computer hardware and software require each other and neither can be realistically used without the other.
- Should describe functional and non-functional requirements so that they are understandable by system users who don't have detailed technical knowledge.
- User requirements are defined using natural language, tables and diagrams.

#### Software Requirement Specification:

Operating System: Windows 10

Programming Languages: C++

IDE: Dev C++.

#### Definition of Hardware:

Computer hardware is the collection of physical elements that constitute a computer system. Computer hardware refers to the physical components of a computer such as the monitor, mouse, keyboard, computer data storage, hard drive disk, system unit (graphic cards, memory, motherboard and chips) etc. all of which are physical objects that can be touched. In contrast, software is instructions that can be stored and run by hardware.

#### Hardware Requirement Specification:

<u>Processor</u>	:	Intel CORE i3 7 <sup>th</sup> Gen
<u>Processor speed</u>	:	2.0 Ghr
<u>RAM</u>	:	4GB RAM
<u>Storage space</u>	:	1TB
<u>Resolution</u>	:	1024*768 or 1336*768 or 1280*1024 2.2



## CHAPTER 3:SYSTEM DESIGN AND ANALYSIS

### 3.1 Preliminary Design

#### 3.1.1 FLOWCHART

A flowchart is a type of diagram that represent an algorithm, workflow or process, showing the steps as boxes of various kinds, and their order by connecting them with arrows. This diagrammatic representation illustrates a solution model to a given problem. Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

#### 3.1.2 DATA FLOW MODEL

##### CONTEXT LEVEL DATA FLOW DIAGRAM FOR TRANSPORTATION RESERVATION SYSTEM

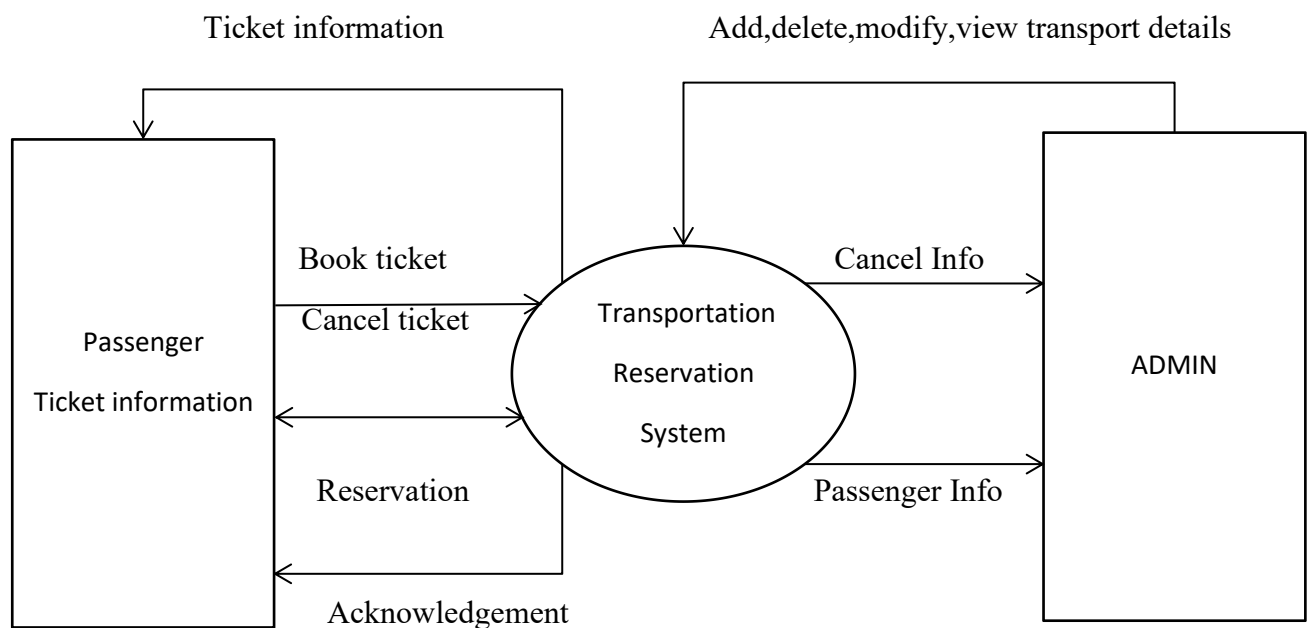


Fig 3.1.2.1: Data flow Model

## CHAPTER 4: DESIGN

### 4.1 Introduction to File System

File system is used to control how data is stored and retrieved. Without a file system, information placed in a storage medium would be one large body of data with no way to tell where one piece of information stops and the next begins. By separating the data into pieces and giving each piece a name, the information is easily isolated and identified. Taking its name from the way paper-based information systems are named, each group of data is called a "file". The structure and logic rules used to manage the groups of information and their name is called a "file system".

There are many different kinds of file systems. Each one has different structure and logic, properties of speed, flexibility, security, size and more. Some file systems have been designed to be used for specific applications. For example, the ISO 9660 file system is designed specifically for optical discs. File systems can be used on numerous different types of storage devices that use different kinds of media. The most common storage device in use today is a hard disk drive. Other kinds of media that are used include flash memory, magnetic tapes, and optical discs. In some cases, such as with tmpfs, the computer's main memory (random-access memory, RAM) is used to create a temporary file system for shortterm use.

Some file systems are used on local data storage devices others provide file access via a network protocol (for example, NFS, SMB, or 9P clients). Some file systems are "virtual", meaning that the supplied "files" (called virtual files) are computed on request (e.g. procfs) or are merely a mapping into a different file system used as a backing store. The file system manages access to both the content of files and the metadata about those files. It is responsible for arranging storage space; reliability, efficiency, and tuning with regard to the physical storage medium are important design considerations.

File systems allocate space in a granular manner, usually multiple physical units on the device. The file system is responsible for organizing files and directories, and keeping track of which areas of the media belong to which file and which are not being used. For example, in Apple DOS of the early 1980s, 256-byte sectors on 140 kilobyte floppy disk used a track/sector map.

This results in unused space when a file is not an exact multiple of the allocation unit, sometimes referred to as slack space. For a 512-byte allocation, the average unused space is 256 bytes. For 64 KB clusters, the average unused space is 32 KB. The size of the allocation unit is chosen when the file system is created.

Choosing the allocation size based on the average size of the files expected to be in the file system can minimize the amount of unusable space. Frequently the default allocation may provide reasonable usage.

### 4.2 INDEXING

An indexed file is a computer file with an index that allows easy random access to any record given its file key. The key must be such that it uniquely identifies a record. If more than one index is present the other ones are called alternate indexes. The indexes are created with the file and maintained by the system.

An index for a file works like a catalogue in a library. Cards in alphabetic order tell us where to find books by a particular author. In real-world databases, indices like this might be too large to be efficient.

There are two kinds of indices

1. Ordered indices: indices are based on a sorted ordering of the values.
2. Hash indices: indices are based on the values being distributed uniformly across a range of buckets.

### 4.3 SECONDARY INDEXING

Secondary index may be generated from a field which is a candidate key and has a unique value in every record, or a non-key with duplicate value. Often one wants to find all records whose values in a certain field (which is not the search key of the primary index) satisfy some condition. One can specify a secondary index with an index entry for each search key value; index entry points to a bucket, which contains pointers to all the actual records with that particular search key.

#### INDEXING TYPES

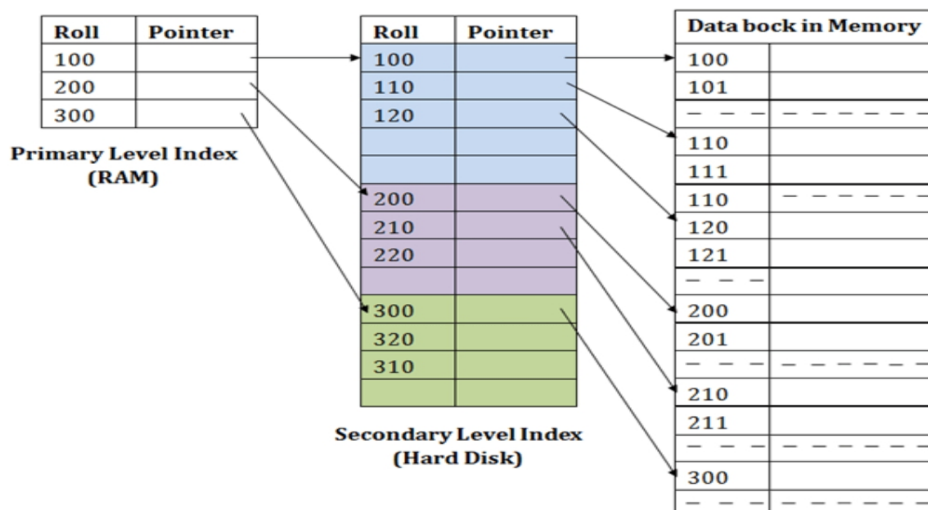
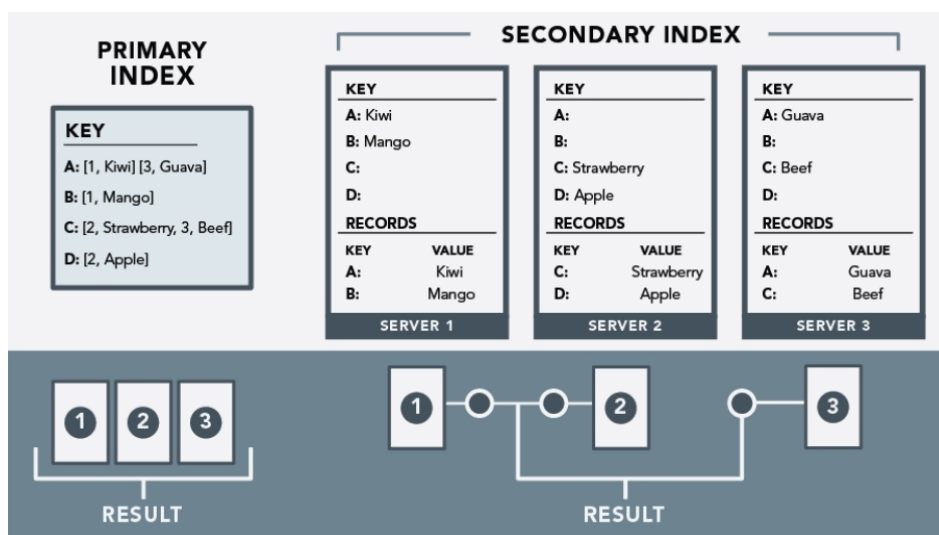


Fig :4.3.1 Indexing

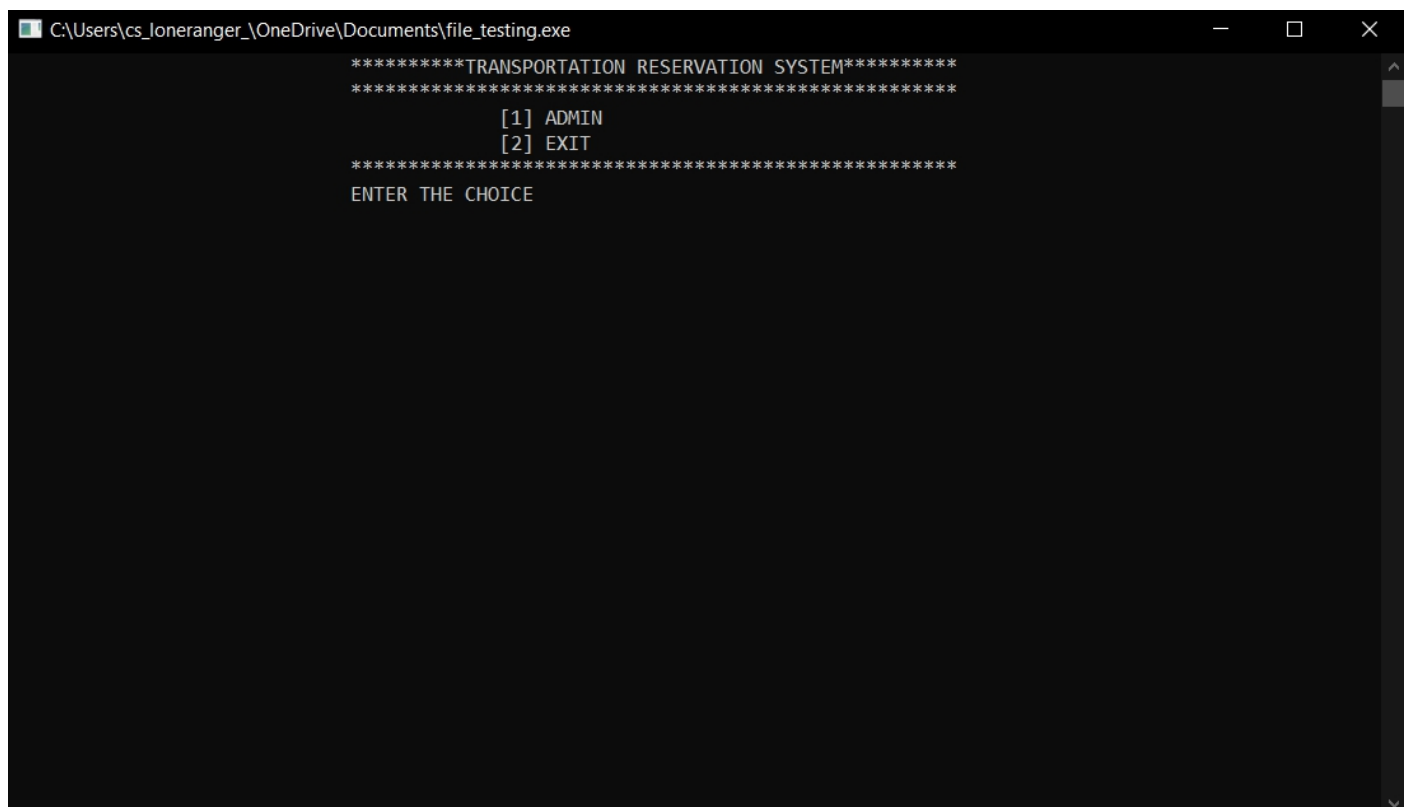
## CHAPTER 5:IMPLEMENTATION

Implementation is the realization of an application or execution of a plan, idea, model, design, specification, standard, algorithm or policy. In other words, an implementation is a realization of a technical specification or algorithm as a program, software component or other computer system through programming and deployment. Many implementations may exist for a given specification or standard.

### 5. MODULE IMPLEMENTATION

Pseudo code is an informal high-level description of the operating principle of a computer program or other algorithm. The purpose of using a pseudo code is that it is easier for people to understand than conventional programming language code and that it is an efficient and environmental-independent description of the key principles of an algorithm. It is commonly used in textbooks and scientific publications that are documenting various algorithms and also is planning of a computer program development for sketching out the structure of the program before the actual coding takes place.

#### 5.1 MODULE 1 DESCRIPTION



```
C:\Users\cs_loneranger_\OneDrive\Documents\file_testing.exe

*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] ADMIN
[2] EXIT
*****
ENTER THE CHOICE
```

Fig 5.1.1 Admin page.

```

C:\Users\cs_loneranger_\OneDrive\Documents\file_testing.exe

*****ADMINISTRATION*****
*****
[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK
*****
enter the choice 2
      ADD      [NEW TRANSPORTATION]
*****
enter the new Serial number      R001

enter the new transpoartation name      RAILWAYS

*****
      FILE CREATED SUCCESSFULLY
*****
*****ADMINISTRATION*****
*****
[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK
*****
enter the choice _

```

Fig 5.1.2 File creation page.

```

C:\Users\cs_loneranger_\OneDrive\Documents\file_testing.exe

[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK
*****
enter the choice 1
*****
      SERIAL No.  TRANSPORT NAME
      [R001]      RAILWAYS
Enter the serial number R001

*****
ROUTE_NO  DEPARTURE  DESTINATION  TRANSP NAME  TYPE  RUN DAYS  DEPARTURE TIME  ARRIVAL TIME  PRICE
*****
[1] ADD DETAILS
[2] MODIFY DETAILS
[3] DELETE DETAILS
[4] BACK
ENTER THE CHOICE 1
Enter RAILWAYS Number      15879

Enter RAILWAYS Departure  BANGALORE
Enter RAILWAYS Destination  MANGALORE
Enter RAILWAYS Name  SHATABDHI
Enter RAILWAYS Type  EXP
Enter RAILWAYS Run days  M,T,W,TH,F,SA,SU
Enter RAILWAYS Dept_time  9:00
Enter RAILWAYS Arrival_time  19:00
Enter RAILWAYS Price  840

*****
      DETAILS ADDED SUCCESSFULLY
*****
ROUTE_NO  DEPARTURE  DESTINATION  TRANSP NAME  TYPE  RUN DAYS  DEPARTURE TIME  ARRIVAL TIME  PRICE
15879  BANGALORE  MANGALORE  SHATABDHI  EXP  M,T,W,TH,F,SA,SU  9:00  19:00  840
*****
[1] ADD DETAILS
[2] MODIFY DETAILS
[3] DELETE DETAILS
[4] BACK
ENTER THE CHOICE

```

Fig 5.1.3 Entering transport details page.

```

C:\Users\cs_loneranger_\OneDrive\Documents\file_testing.exe

*****ADMINISTRATION*****
[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK

enter the choice 3

SERIAL No.  TRANSPORT NAME

[R001]      RAILWAYS

[A001]      AIRLINES
Enter the serial number A001

*****
(1) SERIAL NO
(2) TRANSPORT NAME
(3) EXIT
Enter the choice 1
ENTER THE NEW SERIAL NUMBER KAIR01
serial num changed successfully

```

Fig 5.1.4 Modifying transport details page.

```

C:\Users\cs_loneranger_\OneDrive\Documents\file_testing.exe

*****ADMINISTRATION*****
[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK

enter the choice 4

SERIAL No.  TRANSPORT NAME

[R001]      RAILWAYS

[KAIR01]    AIRLINES
Enter the serial number KAIR01

file deleted successfully

*****ADMINISTRATION*****
[1] VIEW TRANSPORT LIST
[2] ADD TRANSPORTATION
[3] MODIFY TRANSPORT LIST
[4] DELETE TRANSPORTATION
[5] BACK

```

Fig 5.1.5 Deleting transport details page.

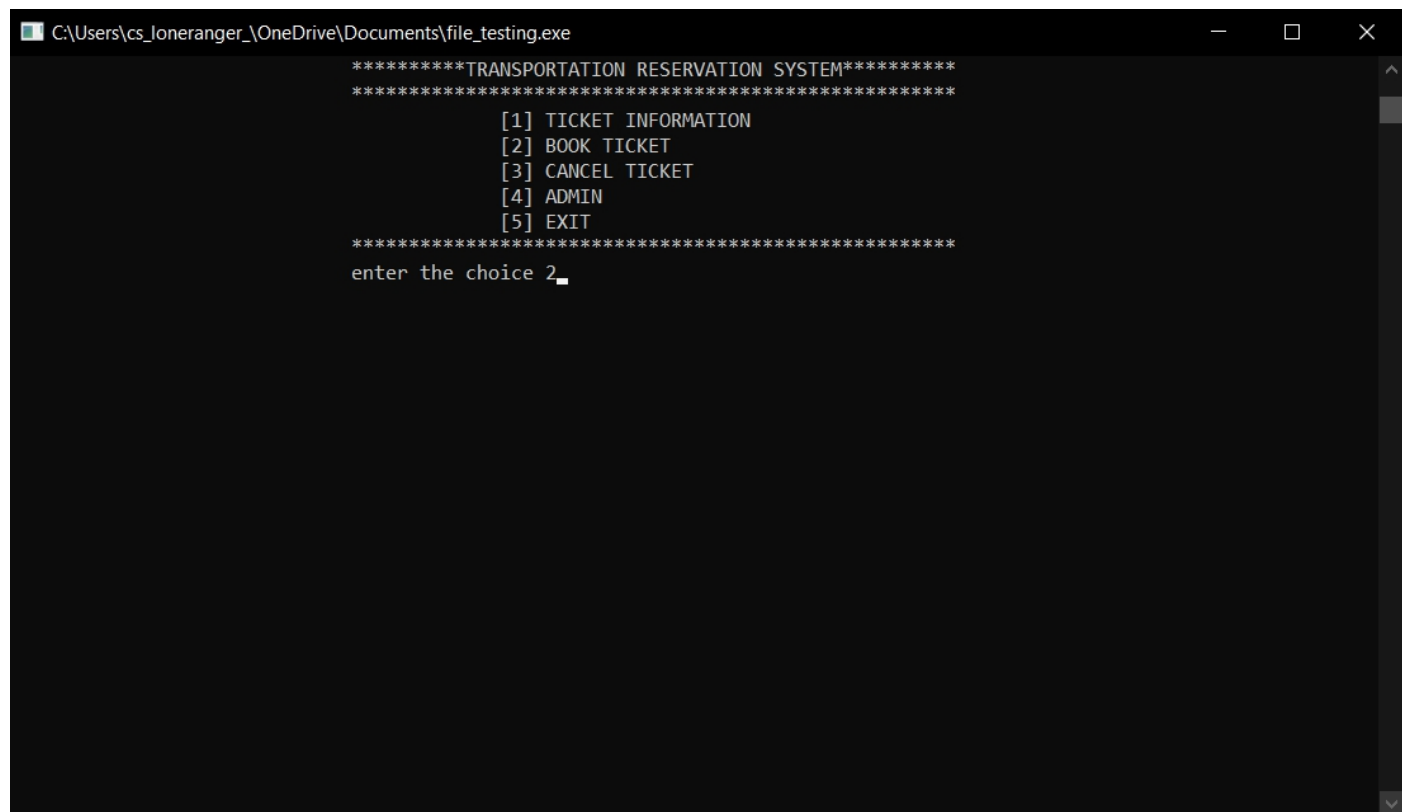


Fig 5.1.6 Booking transport details page.

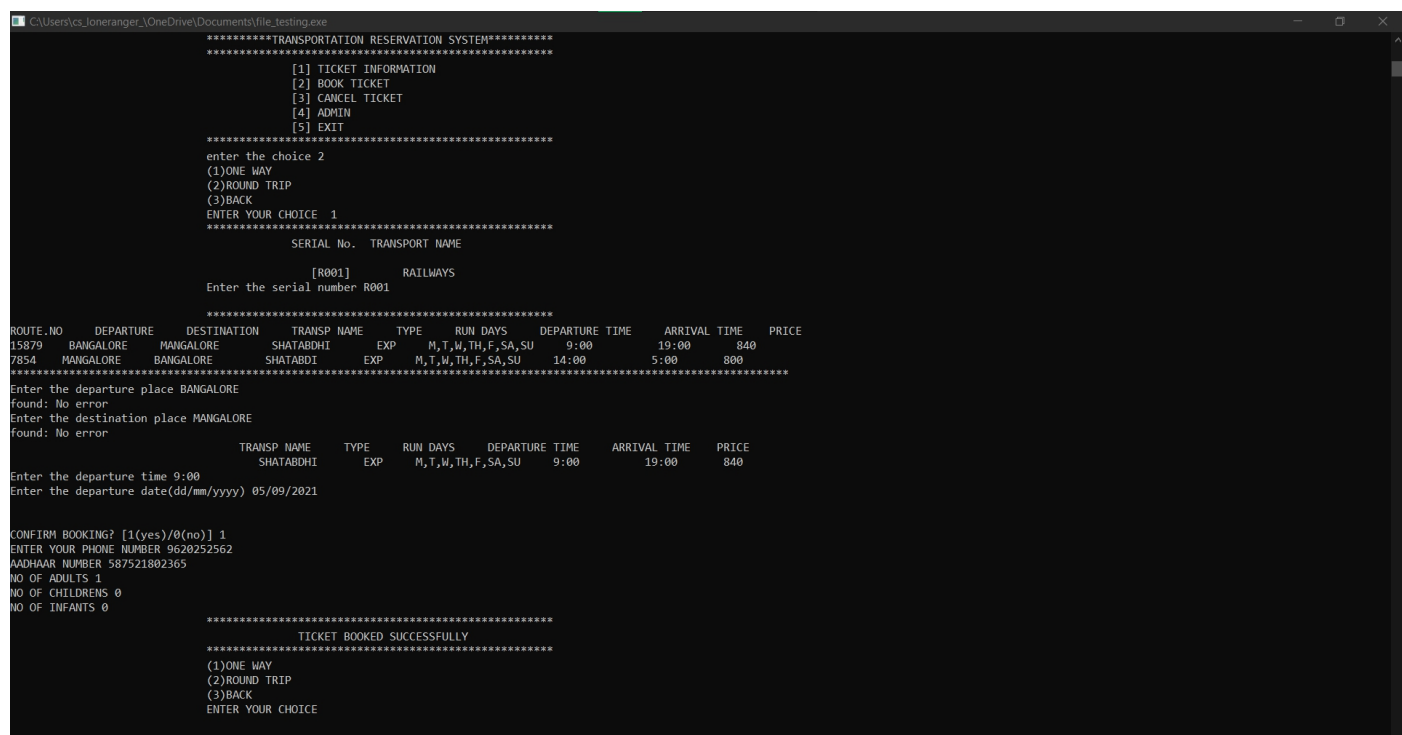


Fig 5.1.7 Transport details for booking page.

```

C:\Users\cs_loneranger\OneDrive\Documents\file_testing.exe
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice 1
*****
SERIAL No.  TRANSPORT NAME
[R001]      RAILWAYS
Enter the serial number R001
*****
ROUTE.NO  DEPARTURE  DESTINATION  TRANSP NAME  TYPE  RUN DAYS  DEPARTURE TIME  ARRIVAL TIME  PRICE
15879    BANGALORE    MANGALORE    SHATABDHI    EXP    M,T,W,TH,F,SA,SU    9:00    19:00    840
7854    MANGALORE    BANGALORE    SHATABDI    EXP    M,T,W,TH,F,SA,SU    14:00    5:00    800
*****
Enter your phone number
9620252562
[1]
1)Departure date 05/09/2021      2)Departure date NULL
1)Departure place BANGALORE      2)Departure place NULL
1)Destination place MANGALORE    2)Destination place NULL
1)Vehicle 1 number 15879         2)Vehicle 2 number NULL
1)Vehicle 1 name SHATABDHI      2)Vehicle 2 name NULL
1)Departure time 9:00           2)Departure time NULL
Number of adults 1
Number of childrens 0
Number of Infants 0
Total price 840
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice

```

Fig 5.1.8 Viewing ticket information page.

```

C:\Users\cs_loneranger\OneDrive\Documents\file_testing.exe
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice 3
*****
SERIAL No.  TRANSPORT NAME
[R001]      RAILWAYS
Enter the serial number R001
*****
ROUTE.NO  DEPARTURE  DESTINATION  TRANSP NAME  TYPE  RUN DAYS  DEPARTURE TIME  ARRIVAL TIME  PRICE
15879    BANGALORE    MANGALORE    SHATABDHI    EXP    M,T,W,TH,F,SA,SU    9:00    19:00    840
7854    MANGALORE    BANGALORE    SHATABDI    EXP    M,T,W,TH,F,SA,SU    14:00    5:00    800
*****
Enter your phone number
9620252562
[1]
1)Departure date 05/09/2021      2)Departure date NULL
1)Departure place BANGALORE      2)Departure place NULL
1)Destination place MANGALORE    2)Destination place NULL
1)Vehicle 1 number 15879         2)Vehicle 2 number NULL
1)Vehicle 1 name SHATABDHI      2)Vehicle 2 name NULL
1)Departure time 9:00           2)Departure time NULL
Number of adults 1
Number of childrens 0
Number of Infants 0
Total price 840
Enter the serial number to cancel 1
*****
TICKET CANCELLED SUCCESSFULLY
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice 5

```

Fig 5.1.9 Canceling ticket information page.



```

*****
TICKET CANCELLED SUCCESSFULLY
*****
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice 8
Ofcourse I love you! please enter the correct choice :)
*****
*****TRANSPORTATION RESERVATION SYSTEM*****
*****
[1] TICKET INFORMATION
[2] BOOK TICKET
[3] CANCEL TICKET
[4] ADMIN
[5] EXIT
*****
enter the choice _

```

Fig 5.1.10 Output for entering wrong option page.

```

passenger - Notepad
File Edit Format View Help
ROO1|1|587521802365|05/08/2021|NULL|BANGALORE|NULL|MANGALORE|NULL|4|3|0|9620252562|5875|NULL|SHATABDHI|NULL|9:00|NULL|3780.000
ROO1|2|587521802365|05/09/2021|09/07/2021|BANGALORE|MANGALORE|MANGALORE|BANGALORE|5|6|0|9620252562|5875|7412|SHATABDHI|RANICHE
ROO1|3|587521802365|05/08/2021|NULL|MANGALORE|NULL|BANGALORE|NULL|4|6|5|9620252562|7412|NULL|RANICHENEXP|NULL|14:00|NULL|6450

```

Ln 1, Col 1 100% Windows (CRLF) UTF-8

Fig 5.1.11 File storage

**5.2 MODULE 2 DESCRIPTION****Source code:**

```

#include<iostream>

#include<cstring>

#include<conio.h>

#include<fstream>

using namespace std;

class transportation
{
public: void unpack1_names();void display1_names();int enter_new_trans_names(),op;void pack1_names();
string trans_names,dp1,dp2,b1;string a,AD,ph_num,deplace1,deplace2;
string adult_num,child_num,infant_num;string dept_time,arr_time,buffer;string sn,dmy1,dmy2,total1,total2;
string number,name,type,run_days,to;string arrival_time,from,number2,name2,type2;
string cost_per_tic,cost_per_tic2,arrival_time2,dept_time2;void enter_new_trans_props(string,string,int);
void pack1_props(),pack2_props(int),mod_trans(int,string);void unpack1_props(),unpack2_pass();
void display1_props();
}t[100],temp;int indexnums[20],find_cnt;
class passenger:public transportation
{public:void search();void add_det(string,string,int),trip_type(int);
void mod_det(string,string),del_det(string,string);
}s;
char chars(string);fstream fp;
int file_check(),check2(string,string,string,string),validate(string,string,string,string,string,string);
string display_trans_props(string,string,int),view_trans(char);
void design1(),design2(),design3(),space(),star();int check(string);
void design4(),add_trans(),del_trans(),design5(),updated_table(string);
void view_info(),book_tic(),cancel_tic(),admin();
int main()
{
int choice,flag1;while(1){flag1=file_check();flag1=file_check();
if(flag1>1)
{
fp.open("passenger.txt",ios::out|ios::app);fp.close(); design1();cin>>choice;

```

```

switch(choice)
{
case 1:view_info();break;
case 2:book_tic();break;
case 3:cancel_tic();break;
case 4:admin();break;
case 5:exit(0); default: space(); cout<<"Ofcourse I love you! please enter the correct choice :)\n";space();
star();cout<<endl;}
}
else{
space();for(int k=0;k<10;k++){
cout<<"*";
}
cout<<"TRANSPORTATION RESERVATION SYSTEM";
for(int k=0;k<10;k++)
{
cout<<"*";
}
cout<<endl;
space();star();for(int i=0;i<43;i++)
{
cout<<" ";
}
cout<<"[1] ADMIN\n";
for(int i=0;i<43;i++)
{
cout<<" ";
}
cout<<"[2] EXIT\n";space();star();space();
cout<<"ENTER THE CHOICE ";cin>>choice;
switch(choice){
case 1:admin();break;
case 2:exit(0);

```

```

default:    space();    cout<<"Ofcourse    I    love    you!    please    enter    the    correct
choice :)\n";space();star();cout<<endl;}} }return 0;}int file_check() {int i=0,flag2=1;

fp.open("transport_names.txt",ios::in);

if(fp){

while(fp){

t[i].unpack1_names();i++;

}

flag2=i;fp.close();

}

Else

{

fp.open("transport_names.txt",ios::out|ios::app);fp.close();flag2=1; } fp.close();return flag2;}

void transportation::unpack1_names() {string seg;getline(fp,sn,"");getline(fp,trans_names,"");

getline(fp,seg);

}

void transportation::unpack1_props()

{

string seg;

getline(fp,number,"");

getline(fp,from,"");

getline(fp,to,"");

getline(fp,name,"");

getline(fp,type,"");

getline(fp,run_days,"");

getline(fp,dept_time,"");

getline(fp,arrival_time,"");

getline(fp,cost_per_tic,"");

getline(fp,seg);}

void transportation::unpack2_pass() {

string seg;

getline(fp,sn,"");

getline(fp,b1,"");

getline(fp,AD,"");

getline(fp,dmy1,"");

```

```

getline(fp,dmy2,"");
getline(fp,deplace1,"");
getline(fp,dp1,"");
getline(fp,deplace2,"");
getline(fp,dp2,"");
getline(fp,adult_num,"");
getline(fp,child_num,"");
getline(fp,infant_num,"");
getline(fp,ph_num,"");
getline(fp,number,"");
getline(fp,number2,"");
getline(fp,name,"");
getline(fp,name2,"");
getline(fp,dept_time,"");
getline(fp,dept_time2,"");
getline(fp,total1,"");
getline(fp,total2,"");
getline(fp,seg);}

void transportation::display1_names(){for(int i=0;i<43;i++){cout<<" ";}cout<<" "<<"["+sn+"]"<<"
"<<trans_names<<endl;

}

void transportation::display1_props()
{
if(number=="")
{
return;
}

cout<<number<<" "+from<<" "+to<<" "+name<<" "+type<<" "+run_days<<"
"+dept_time<<" "+arrival_time<<" "+cost_per_tic<<endl;

}

int transportation::enter_new_trans_names()
{
int i=0;space();

```

```

while(1)
{
cout<<"enter the new Serial number\t";cin>>sn;cout<<endl;space();int a=check(sn);if(a){cout<<sn<<"
"<<"Already exists in your Document folder\n";return 0;}else{break;}}cout<<"enter the new transpoartation
name\t";cin>>trans_names;cout<<endl;fp.open(sn+".txt",ios::out|ios::app);fp.close();design3();space();cout
<<"      FILE CREATED SUCCESSFULLY\n";design3();return 1;
}

void transportation::enter_new_trans_props(string sn,string trans_names,int c=0){
space();cout<<"Enter "<<trans_names<<" Number\t";cin>>number;cout<<endl;space(); cout<<"Enter
"<<trans_names<<"   Departure   \t";cin>>from;cout<<endl;space();cout<<"Enter   "<<trans_names<<"
Destination           \t";cin>>to;cout<<endl;space();cout<<"Enter           "<<trans_names<<"
Name\t";cin>>name;cout<<endl;space();

cout<<"Enter "<<trans_names<<" Type\t";cin>>type;cout<<endl;space();cout<<"Enter "<<trans_names<<"
Run           days\t";cin>>run_days;cout<<endl;space();cout<<"Enter           "<<trans_names<<"
Dept_time\t";cin>>dept_time;cout<<endl;space();cout<<"Enter           "<<trans_names<<"
Arrival_time\t";cin>>arrival_time;cout<<endl;space();cout<<"Enter           "<<trans_names<<"
Price\t";cin>>cost_per_tic;cout<<endl;int val=validate(sn,from,to,dept_time,name,number);

if(val!=1){

fp.open(sn+".txt",ios::out|ios::app);s.pack1_props();fp.close();design3();space();cout<<"      DETAILS
ADDED  SUCCESSFULLY\n";design3();}else{design3();space();cout<<"      Detail
exist!!\n";design3();

}

}

void updated_table(string sn)
{

cout<<"ROUTE.NO"<<"      DEPARTURE"<<"      DESTINATION"<<"      TRANSP NAME"<<"
TYPE"<<"   RUN DAYS"<<"   DEPARTURE TIME"<<"   ARRIVAL TIME"<<"   PRICE"<<endl;int
i=0,a;fp.open(sn+".txt",ios::in);

while(fp){

t[i].unpack1_props();i++;}a=i;

for(int j=0;j<a-1;j++){t[j].display1_props();}
cout<<"*****\n";fp.close();}

int validate(string sn,string from,string to,string dept_time,string name,string number)
{

int i=0,count,val=0,a;

fp.open(sn+".txt",ios::in);

if(fp)

```

```

{
while(fp)
{
t[i].unpack1_props();i++;
}
}
fp.close();count=i;
for(i=0;i<count;i++)
{
if(t[i].from==from&& t[i].number==number&& t[i].dept_time!=dept_time||t[i].from==from&& t[i].number!=
number&& t[i].dept_time==dept_time)
{
val=1;
}
if(t[i].from==from&& t[i].number==number&& t[i].dept_time!=dept_time||t[i].from==from&& t[i].to==to&
& t[i].number==number&& t[i].dept_time==dept_time)
{
val=1;
}
}
if(count==1)
{
val=0;
}
return val;
}

void transportation::pack1_names()
{
if(trans_names==""){
return;
}
string buf=sn+"|"+trans_names+"|";
fp<<buf<<endl;
}

```

```

void transportation::pack1_props(){
if(number=="")
{
return;
}
Stringbuf=number+"|"+from+"|"+to+"|"+name+"|"+type+"|"+run_days+"|"+dept_time+"|"+arrival_time+"|"+cost_per_tic+"|";fp<<buf<<endl;}

void transportation::pack2_props(int op1)
{
if(t[op1].ph_num=="")
{
return;
}
stringf1=a+"|"+b1+"|"+AD+"|"+dmy1+"|"+dmy2+"|"+deplace1+"|"+dp1+"|"+deplace2+"|"+dp2+"|"+adult_num+"|"+child_num+"|"+infant_num+"|";
stringf2=ph_num+"|"+t[op1].number+"|"+number2+"|"+t[op1].name+"|"+name2+"|"+t[op1].dept_time+"|"+dept_time2+"|";string f=f1+f2+total1+"|"+total2+"|";}

void design1()
{
space();
for(int k=0;k<10;k++)
{
cout<<"*";
}
cout<<"TRANSPORTATION RESERVATION SYSTEM";for(int k=0;k<10;k++){cout<<"*";}cout<<endl;
space();star();
for(int i=0;i<43;i++)
{
cout<<" ";
}
cout<<"[1] TICKET INFORMATION\n";
for(int i=0;i<43;i++)
{

```



```

cout<<" ";
}

cout<<"[2] BOOK TICKET\n";
for(int i=0;i<43;i++)
{
cout<<" ";
}
cout<<"[3] CANCEL TICKET\n";
for(int i=0;i<43;i++)
{
cout<<" ";cout<<"[4] ADMIN\n";for(int i=0;i<43;i++){cout<<" ";cout<<"[5]
EXIT\n";space();star();space();cout<<"enter the choice ";
}
void design2(){space();star(); for(int i=0;i<43;i++){ cout<<" ";cout<<"SERIAL No."<<"
"<<"TRANSPORT NAME"<<endl;}

void design3(){
space();star();
}
void design4(){
space();
for(int k=0;k<19;k++){cout<<"*";}
cout<<"ADMINISTRATION";for(int k=0;k<20;k++){cout<<"*";}cout<<endl;space();star();
for(int i=0;i<43;i++){cout<<" ";cout<<"[1] VIEW TRANSPORT LIST\n";for(int i=0;i<43;i++){cout<<"
";}cout<<"[2] ADD TRANSPORTATION\n";for(int i=0;i<43;i++){cout<<" ";cout<<"[3] MODIFY
TRANSPORT LIST\n";for(int i=0;i<43;i++){cout<<" "; cout<<"[4] DELETE TRANSPORTATION\n";
for(int i=0;i<43;i++){ cout<<" ";cout<<"[5] BACK\n";space();star();space();cout<<"enter the choice ";}
void design5(){space();cout<<"[1] ADD DETAILS"<<endl;space();cout<<"[2] MODIFY
DETAILS"<<endl;space();cout<<"[3] DELETE DETAILS"<<endl;space();cout<<"[4]
BACK"<<endl;space();cout<<"ENTER THE CHOICE ";}
void space(){for(int i=0;i<30;i++){cout<<" ";}}

void star(){for(int k=0;k<53;k++){cout<<"*";}cout<<endl; }
void admin(){int flag1,i=0,count,choice;string ch;design3();cout<<"\n";while(1){design4();cin>>choice;

```

```

switch(choice){case 1:view_trans('0');break; case 2:add_trans();break;case 3:ch=view_trans('*');
    if(ch=="0"){break;};s.mod_det("",ch);break;case 4:del_trans();break;case 5:return;default: space();
cout<<"Ofcourse I love you! please enter the correct choice :)\n";space(); star();cout<<endl;}}
string view_trans(char q='0'){design2();string choice,trans_name;int i=0,count1,count,a;
fp.open("transport_names.txt",ios::in);while(fp){ t[i].unpack1_names();i++;}count=i;
for(int j=0;j<count-1;j++){cout<<"\n";t[j].display1_names();}fp.close();count1=i; if(count1==1){

space();cout<<"      LIST IS EMPTY!ADD TRANSPORT DETAILS\n";return "0";}else{while(1){
space();cout<<"Enter the serial number ";cin>>choice;cout<<endl; space();star();int a=check(choice);
if(a){if(q=='*'){return choice;}cout<<"ROUTE.NO"<<"      DEPARTURE"<<"      DESTINATION"<<"
TRANSP NAME"<<"      TYPE"<<"      RUN DAYS"<<"      DEPARTURE TIME"<<"      ARRIVAL
TIME"<<"      PRICE"<<endl;int i=0,a;fp.open(choice+".txt",ios::in);while(fp){t[i].unpack1_props();i++; }
a=i;for(int j=0;j<a-1;j++){t[j].display1_props();}

    cout<<"*****
*****\n";fp.close();break;}else{space();cout<<choice<<"
"<<"Don't exist\n";}}for(i=0;i<count;i++){ if(t[i].sn==choice){trans_name=t[i].trans_names;}} if(q=='0'){

display_trans_props(choice,trans_name,1);}else{return choice;} return "0";}

void add_trans(){int i=0;for(i=0;i<43;i++){ cout<<" ";cout<<"      "<<"ADD"<<"      "<<"[NEW
TRANSPORTATION]\n";space();star();int a=t[i].enter_new_trans_names();

fp.open("transport_names.txt",ios::out|ios::app);if(a){t[i].pack1_names();}fp.close();i++;}

string display_trans_props(string sn,string trans_names,int d=0){int choice;while(1){if(d==0){
updated_table(sn);}design5();cin>>choice;switch(choice){case 1:s.add_det(sn,trans_names,choice);d=0;
break;case 2:s.mod_det(sn,trans_names);d=0;break;case 3:s.del_det(sn,trans_names);d=0;break;
case 4:return "0";default:space();cout<<"Of course I Love you!! Enter the correct choice :)\n";}}}

void view_info(){string a=view_trans('1');design3();string ph;space();cout<<"Enter your phone
number"<<endl;space();cin>>ph;int i=0,count=0,flag2=0;fp.open("passenger.txt",ios::in);if(fp){while(fp){

t[i].unpack2_pass();i++;}}fp.close();count=i;for(i=0;i<count-1;i++){if(t[i].ph_num==ph&& t[i].sn==a){

flag2=1;cout<<"["<<t[i].b1<<"]"<<endl;cout<<"\n1)Departure date "<<t[i].dmy1<<"\t\t"<<"2)Departure
date "<<t[i].dmy2<<endl;cout<<"1)Departure place "<<t[i].deplace1<<"\t\t"<<"2)Departure place
"<<t[i].dp1<<endl;cout<<"1)Destination place "<<t[i].deplace2<<"\t\t"<<"2)Destination place
"<<t[i].dp2<<endl;cout<<"1)Vehicle 1 number "<<t[i].number<<"\t\t\t"<<"2)Vehicle 2 number
"<<t[i].number2<<endl;cout<<"1)Vehicle 1 name "<<t[i].name<<"\t\t"<<"2)Vehicle 2 name
"<<t[i].name2<<endl; cout<<"1)Departure time "<<t[i].dept_time<<"\t\t\t"<<"2)Departure
time"<<t[i].dept_time2<<endl;cout<<"Number of adults "<<t[i].adult_num<<endl;cout<<"Number of
childrens "<<t[i].child_num<<endl;cout<<"Number of Infants "<<t[i].infant_num<<endl;cout<<"Total

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price                "<<(stoi(t[i].total1)+stoi(t[i].total2))<<endl;}} if(flag2==0){design3();space();cout<<"
NOT FOUND"<<endl;design3();}}

void book_tic(){int choice;while(1){space();cout<<"(1)ONE                WAY\n";space();cout<<"(2)ROUND
TRIP\n";space();cout<<"(3)BACK\n";space();cout<<"ENTER YOUR CHOICE  ";cin>>choice;

switch(choice) {case 1:s.trip_type(1);break;case 2:s.trip_type(2);break;case 3:return;default: space();
cout<<"Ofcourse I love you! please enter the correct choice :)\n";space();star();cout<<endl;}}}

void  cancel_tic(){string  a=view_trans('1');design3();string  ph,f;space();cout<<"Enter  your  phone
number"<<endl;space();cin>>ph;design3();int i=0,count=0,count2,flag=0,flag1,flag2=0,k=1;

fp.open("passenger.txt",ios::in);if(fp){while(fp){t[i].unpack2_pass();i++;}} fp.close();count=i;count2=count;
for(i=0;i<count-1;i++){if(t[i].ph_num==ph&& t[i].sn==a){flag2=1;cout<<"["<<t[i].b1<<"]"<<endl;
cout<<"\n1)Departure date "<<t[i].dmy1<<"\t\t"<<"2)Departure date "<<t[i].dmy2<<endl;
cout<<"1)Departure place "<<t[i].deplace1<<"\t\t"<<"2)Departure place "<<t[i].dp1<<endl;
cout<<"1)Destination place "<<t[i].deplace2<<"\t\t"<<"2)Destination place "<<t[i].dp2<<endl;
cout<<"1)Vehicle 1 number "<<t[i].number<<"\t\t\t"<<"2)Vehicle 2 number "<<t[i].number2<<endl;
cout<<"1)Vehicle 1 name "<<t[i].name<<"\t\t"<<"2)Vehicle 2 name "<<t[i].name2<<endl;
cout<<"1)Departure time "<<t[i].dept_time<<"\t\t\t"<<"2)Departure time"<<t[i].dept_time2<<endl;
cout<<"Number of adults "<<t[i].adult_num<<endl;cout<<"Number of childrens "<<t[i].child_num<<endl;
cout<<"Number          of          Infants          "<<t[i].infant_num<<endl;cout<<"Total          price
"<<(stoi(t[i].total1)+stoi(t[i].total2))<<endl;}}

if(flag2!=1){design3();space();cout<<"                NOT FOUND"<<endl;design3();return;}string
serial_num;cout<<"Enter the serial number to cancel ";cin>>serial_num;for(i=0;i<count2;i++){

if(t[i].sn==a&&t[i].b1==serial_num&&t[i].ph_num==ph){flag=1;flag1=i;
    }} if(flag==1){fp.open("passenger.txt",ios::out);t[flag1].ph_num="",t[flag1].sn="",t[flag1].b1="";

for(i=0;i<count2-1;i++){if(t[i].ph_num!=""&&t[i].sn==a){string
f1=t[i].sn+"|"+to_string(k)+"|"+t[i].AD+"|"+t[i].dmy1+"|"+t[i].dmy2+"|"+t[i].deplace1+"|"+t[i].dp1+"|"+t[i].
deplace2+"|"+t[i].dp2+"|"+t[i].adult_num+"|"+t[i].child_num+"|"+t[i].infant_num+"|";

string
f2=t[i].ph_num+"|"+t[i].number+"|"+t[i].number2+"|"+t[i].name+"|"+t[i].name2+"|"+t[i].dept_time+"|"+t[i].
dept_time2+"|";f=f1+f2+t[i].total1+"|"+t[i].total2+"|";fp<<f<<endl;k++;} if(t[i].ph_num!=""&&t[i].sn!=a){

string
f1=t[i].sn+"|"+t[i].b1+"|"+t[i].AD+"|"+t[i].dmy1+"|"+t[i].dmy2+"|"+t[i].deplace1+"|"+t[i].dp1+"|"+t[i].depla
ce2+"|"+t[i].dp2+"|"+t[i].adult_num+"|"+t[i].child_num+"|"+t[i].infant_num+"|";

string
f2=t[i].ph_num+"|"+t[i].number+"|"+t[i].number2+"|"+t[i].name+"|"+t[i].name2+"|"+t[i].dept_time+"|"+t[i].
dept_time2+"|";f=f1+f2+t[i].total1+"|"+t[i].total2+"|";fp<<f<<endl;}} design3();space();cout<<"

```

```

TICKET                CANCELLED                SUCCESSFULLY\n";design3();fp.close();} else
if(flag==0){design3();space();cout<<"                NOT FOUND"<<endl;design3();}}

void transportation::mod_trans(int i,string tn){int ch,j=0,count=0,srch_flag;design3();if(i>0&&i!=9){
while(1){space();cout<<"ENTER THE FIELD TO MODIFY\n";space();cout<<"(1) "<<tn<<"
DEPARTURE\n";space();cout<<"(2) "<<tn<<" DESTINATION\n";space();cout<<"(3) "<<tn<<" NAME\n";
space();cout<<"(4) "<<tn<<" TYPE\n";space();cout<<"(5) "<<tn<<" RUN DAYS\n";space();cout<<"(6)
"<<tn<<" ARRIVAL TIME\n";space();cout<<"(7) "<<tn<<" PRICE\n";space();cout<<"(8) EXIT\n";

design3();space();cout<<"Enter the choice ";cin>>ch;switch(ch){case 1:space();cout<<"Enter "<<tn<<" new
DEPARTURE                ";cin>>from;design3();space();cout<<"DETAILS                MODIFIED
SUCCESSFULLY\n";design3();break;case 2:space();cout<<"Enter "<<tn<<" new DESTINATION
";cin>>to;design3();space();cout<<"DETAILS MODIFIED SUCCESSFULLY\n";design3();break;

case 3:space();cout<<"Enter "<<tn<<" new NAME ";cin>>name;design3();space();cout<<"DETAILS
MODIFIED SUCCESSFULLY\n";design3();break; case 4:space();cout<<"Enter "<<tn<<" new TYPE
";cin>>type;design3();space();cout<<"DETAILS MODIFIED SUCCESSFULLY\n";design3();break;

case 5:space();cout<<"Enter "<<tn<<" new RUN DAYS ";cin>>run_days;
design3();space();cout<<"DETAILS MODIFIED SUCCESSFULLY\n";design3();break;

case 6:space();cout<<"Enter "<<tn<<" new ARRIVAL TIME ";cin>>arrival_time;

design3();space();cout<<"DETAILS MODIFIED SUCCESSFULLY\n";design3();break;

case 7:space();cout<<"Enter "<<tn<<" new PRICE ";cin>>cost_per_tic;
design3();space();cout<<"DETAILS MODIFIED SUCCESSFULLY\n";design3();break;

case 8:return;default: space(); cout<<"Ofcourse I love you! please enter the correct choice :)\n";space();
star();cout<<endl;}}} else if(i==9){string s=tn+".txt";int n=s.length();

char oldname[n+1];strcpy(oldname,s.c_str());while(1){space();cout<<"(1) SERIAL NO\n";
space();cout<<"(2) TRANSPORT NAME\n";space();cout<<"(3) EXIT\n";design3();space();
cout<<"Enter the choice ";cin>>ch;if(ch==1){
space();cout<<"ENTER THE NEW SERIAL NUMBER ";cin>>sn;string a=sn+".txt";int b=a.length();
char newname[b+1];strcpy(newname,a.c_str());if(rename(oldname,newname)!=0){
design3();space();cout<<"file not renamed\n";design3();return;} else {
design3();space();cout<<"serial num changed successfully\n";return;}} else if(ch==2){
space();cout<<"ENTER THE NEW TRANSPORT NAME ";cin>>trans_names;
design3();space();cout<<"MODIFIED SUCCESSFULLY\n";design3();break;} else if(ch==3){return;} else {
space();cout<<"Ofcourse I love you! please enter the correct choice :)\n";space();star();cout<<endl;}}}}

void del_trans(){design3();string fn=view_trans('*')+".txt";int b=fn.length(),i=0,count,flag,flag1;
char newname[b+1];strcpy(newname,fn.c_str());fp.open("transport_names.txt",ios::in);if(fp){while(fp){
t[i].unpack1_names();i++;} fp.close();} count=i;for(i=0;i<count;i++){if(t[i].sn+".txt"==fn){ flag=1;flag1=i;}}
if(flag==1){t[flag1].trans_names=""; } fp.open("transport_names.txt",ios::out);for(i=0;i<count-1;i++){
t[i].pack1_names();} fp.close();if(remove(newname)!=0){design3();space();perror("file                deletion
failed");design3();} else {design3();space();cout<<"file deleted successfully\n";design3();}}

```

```

int check(string sn_1){int i=0,flag=0,count;fp.open(sn_1+".txt",ios::in);if(fp){flag=1;} fp.close();return flag;}

void passenger::add_det(string sn,string trans_name,int c){s.enter_new_trans_props(sn,trans_name,c);}

void passenger::mod_det(string sn,string trans_name){int i=0,count,srch_flag=-1;string rt_num,dp,dt;
design3();if(sn!=""){space();cout<<"ENTER THE ROUTE NUMBER ";cin>>rt_num;

space();cout<<"ENTER THE DEPARTURE PLACE ";cin>>dp;space();cout<<"ENTER THE
DESTINATION PLACE ";cin>>dt;fp.open(sn+".txt",ios::in);if(fp){while(fp){t[i].unpack1_props();i++;}
} fp.close();count=i;for(i=0;i<count;i++){if(t[i].number==rt_num&& t[i].from==dp&& t[i].to==dt){srch_flag
=i;}} if(srch_flag==1){space();cout<<"NOT FOUND\n";return;} else {t[srch_flag].mod_trans(i,trans_name);
fp.open(sn+".txt",ios::out);for(i=0;i<count-1;i++){t[i].pack1_props();} fp.close();}} else if(sn==""){

fp.open("transport_names.txt",ios::in);if(fp){while(fp){t[i].unpack1_names();i++;}} fp.close();count=i;
for(i=0;i<count;i++){if(t[i].sn==trans_name){srch_flag=i;}} t[srch_flag].mod_trans(9,trans_name);
fp.open("transport_names.txt",ios::out);for(i=0;i<count-1;i++){t[i].pack1_names();} fp.close();}}

void passenger::del_det(string sn,string trans_name){string rtn,dp,dt;int flag=0,flag1;int i=0,count;space();
cout<<"ENTER THE "<<trans_name<<" NUMBER TO BE DELETED ";cin>>rtn;space();
cout<<"ENTER THE "<<trans_name<<" DEPARTURE PLACE ";cin>>dp;space();
cout<<"ENTER THE "<<trans_name<<" DESTINATION PLACE ";cin>>dt;

fp.open(sn+".txt",ios::in);while(fp){t[i].unpack1_props();i++;} fp.close();count=i;for(i=0;i<count;i++){
if(t[i].number==rtn&& t[i].from==dp&& t[i].to==dt){flag1=i;flag=1;}} if(flag==1){t[flag1].number="",t[flag
1].from="",t[flag1].to="";design3();space();cout<<rtn<<" DELETED SUCCESSFULLY\n";design3();}
else if(flag==0){design3();space();cout<<rtn<<" NOT FOUND\n";design3();} fp.open(sn+".txt",ios::out);
for(i=0;i<count-1;i++){t[i].pack1_props();} fp.close();}

void passenger::trip_type(int ans){ string dpttime1,dpttime2,d1,d2,d3,d4;int op1,op2;if(ans==1){

a=view_trans('1');if(a!="0"){while(1){cout<<"Enter the departure place ";cin>>deplace1;
op=check2(a,deplace1,"","");d1=deplace1;if(op==1){break;}} while(1){cout<<"Enter the destination place
";cin>>deplace2;op=check2(a,deplace1,deplace2,"");d2=deplace2;if(op==1){int i=0,count,flag=0;

fp.open(a+".txt",ios::in);while(fp){t[i].unpack1_props();i++;} fp.close();count=i;

space();cout<<" TRANSP NAME"<<" TYPE"<<" RUN DAYS"<<" DEPARTURE TIME"<<"
ARRIVAL TIME"<<" PRICE"<<endl;for(i=0;i<count-1;i++){if(t[i].from==deplace1&& t[i].to==deplace2)
{space();cout<<" "<<t[i].name<<" "<<t[i].type<<" "<<t[i].run_days<<" "<<t[i].dept_time<<"
"<<t[i].arrival_time<<" "<<t[i].cost_per_tic<<endl;}} break;}} while(1){cout<<"Enter the departure time
";cin>>dept_time;op=check2(a,deplace1,deplace2,dept_time);dpttime1=dept_time;if(op>=0){
cout<<"Enter the departure date(dd/mm/yyyy) ";cin>>dmyl;break;}}

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cout<<"\n\nCONFIRM BOOKING? [1(yes)/0(no)] ";cin>>op;if(op){cout<<"ENTER YOUR PHONE
NUMBER ";cin>>ph_num;cout<<"AADHAAR NUMBER ";cin>>AD;cout<<"NO OF ADULTS
";cin>>adult_num;cout<<"NO OF CHILDRENS ";cin>>child_num;

cout<<"NO OF INFANTS ";cin>>infant_num;int a1=0,b=0,c=0;fp.open("passenger.txt",ios::in);if(fp){

while(fp){

t[b].unpack2_pass();b++;} } fp.close();c=b;for(b=0;b<c;b++){if(t[b].ph_num==ph_num&& t[b].sn==a){++a1;
}} int i=0,count=0;fp.open(a+".txt",ios::in);

while(fp){

t[i].unpack1_props();i++;} fp.close();op1=check2(a,d1,d2,dptime1);string
b1=to_string(a1+1);fp.open("passenger.txt",ios::out|ios::app);if(fp){
    total1=to_string((stof(adult_num)+stof(child_num)+stof(infant_num))*(stof(t[op1].cost_per_tic)));

string
f1=a+"|"+b1+"|"+AD+"|"+dmy1+"|"+NULL+"|"+deplace1+"|"+NULL+"|"+deplace2+"|"+NULL+"|"+
adult_num+"|"+child_num+"|"+infant_num+"|";

string
f2=ph_num+"|"+t[op1].number+"|"+NULL+"|"+t[op1].name+"|"+NULL+"|"+t[op1].dept_time+"|"+N
ULL+"|";

string f=f1+f2+total1+"|"+0+"|";fp<<f<<endl;    design3();space();cout<<"          TICKET BOOKED
SUCCESSFULLY\n";design3();} fp.close();} else {return;} } else if(ans==2){a=view_trans('1');while(1){

cout<<"Enter the departure place ";cin>>deplace1;op=check2(a,deplace1,"","");buff=deplace1;d1=deplace1;

if(op==1){break;}}

while(1){

cout<<"Enter          the          destination          place
";cin>>deplace2;op=check2(a,deplace1,deplace2,"");d2=deplace2;if(op==1){int i=0,count,flag=0;

    fp.open(a+".txt",ios::in);while(fp){t[i].unpack1_props();i++;

} fp.close(); count=i;space();cout<<"          TRANSP NAME"<<"          TYPE"<<"          RUN DAYS"<<"
DEPARTURE TIME"<<"          ARRIVAL TIME"<<"          PRICE"<<endl; for(i=0;i<count-
1;i++){if(t[i].from==deplace1&&t[i].to==deplace2){

    space();cout<<"          "<<t[i].name<<"          "+t[i].type<<"          "+t[i].run_days<<"          "+t[i].dept_time<<"
"+t[i].arrival_time<<"          "+t[i].cost_per_tic<<endl;}}break;}}

while(1){cout<<"Enter          the          departure          time
";cin>>dept_time;op=check2(a,deplace1,deplace2,dept_time);dptime1=dept_time;if(op>=0){

cout<<"Enter          the          departure          date(dd/mm/yyyy)
";cin>>dmy1;break;}} cout<<"\n\n";if(a!="0"){updated_table(a);while(1){cout<<"Enter the departure place
";cin>>dp1;op=check2(a,dp1,"","");d3=dp1;if(op==1){if(dp1==buff){cout<<"departure          are
equal\n";continue;} break;}} while(1){

cout<<"Enter the destination place ";cin>>dp2;op=check2(a,dp1,dp2,"");d4=dp2;if(op==1){

int i=0,count,flag=0;

```

```

fp.open(a+".txt",ios::in);

while(fp)
{
t[i].unpack1_props();i++;
}

fp.close();

count=i;space();cout<<"    TRANSP NAME"<<"    TYPE"<<"    RUN DAYS"<<"    DEPARTURE
TIME"<<"    ARRIVAL TIME"<<"    PRICE"<<endl;

for(i=0;i<count-1;i++)
{
if(t[i].from==dp1&& t[i].to==dp2)
{
space();cout<<"    "<<t[i].name<<"    "+t[i].type<<"    "+t[i].run_days<<"    "+t[i].dept_time<<"
"+t[i].arrival_time<<"    "+t[i].cost_per_tic<<endl;}}break;}}while(1){cout<<"Enter the departure time
";cin>>dept_time;

op=check2(a,dp1,dp2,dept_time);dpttime2=dept_time;

if(op>=0)
{
cout<<"Enter the departure date(dd/mm/yyyy) ";cin>>dmy2;break;
}
}

cout<<"\n\nCONFIRM BOOKING? [1(yes)/0(no)] ";cin>>op;

if(op)
{
cout<<"ENTER    YOUR    PHONE    NUMBER    ";cin>>ph_num;cout<<"AADHAAR    NUMBER
";cin>>AD;cout<<"NO OF ADULTS ";cin>>adult_num;cout<<"NO OF CHILDRENS ";cin>>child_num;
cout<<"NO OF INFANTS ";cin>>infant_num;int a1=0,b=0,c=0;

fp.open("passenger.txt",ios::in);

if(fp)
{
while(fp)
{
t[b].unpack2_pass();b++;
}
}
}

```

```

} fp.close();c=b;for(b=0;b<c;b++){if(t[b].ph_num==ph_num&&t[b].sn==a){a1++;}} int
i=0,count=0;fp.open(a+".txt",ios::in);while(fp){t[i].unpack1_props();i++;} fp.close();count=i;op1=check2(a,
d1,d2,dptime1);op2=check2(a,d3,d4,dptime2);string
b1=to_string(a1+1);fp.open("passenger.txt",ios::out|ios::app);if(fp){number2=t[op2].number,name2=t[op2].
name,type2=t[op2].type,dept_time2=t[op2].dept_time;total1=to_string((stof(adult_num)+stof(child_num)+s
tof(infant_num))*(stof(t[op1].cost_per_tic)));total2=to_string((stof(adult_num)+stof(child_num)+stof(infant
_num))*(stof(t[op2].cost_per_tic)));

string
f1=a+"|"+b1+"|"+AD+"|"+dmy1+"|"+dmy2+"|"+deplace1+"|"+dp1+"|"+deplace2+"|"+dp2+"|"+adult_num+"
|"+child_num+"|"+infant_num+"|";

string
f2=ph_num+"|"+t[op1].number+"|"+number2+"|"+t[op1].name+"|"+name2+"|"+t[op1].dept_time+"|"+dept_t
ime2+"|";string f=f1+f2+total1+"|"+total2+"|";fp<<f<<endl;design3();space();cout<<"          TICKET
BOOKED SUCCESSFULLY\n";design3();} fp.close();} else{return;}

}

}

}

int check2(string a,string deplace1,string deplace2,string dept_time){
int i=0,count,flag=0; fp.open(a+".txt",ios::in);

while(fp){

t[i].unpack1_props();i++; } fp.close();count=i;for(i=0;i<count-1;i++){

if(deplace2==""&&dept_time==""){

if(t[i].from==deplace1){flag=1;}

} if(deplace1!=""&&deplace2!=""&&dept_time==""){

if(t[i].from==deplace1&&t[i].to==deplace2){

flag=1}

}if(deplace2!=""&&dept_time!=""&&deplace1!="")

{

if(t[i].dept_time==dept_time&&t[i].from==deplace1&&t[i].to==deplace2)

{flag=i;return flag;break;

}

}}

if(flag==1){

perror("found");return flag;

} else{

cout<<"Not found\n";flag=-1;

} return flag

}

```



## CHAPTER 6: TESTING

### 6.1: TEST CASE DESCRIPTION

This chapter gives the outline of all testing methods that are carried out to get a bug free system. Quality can be achieved by testing the product using different techniques at different phases of the project development. The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components sub-assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement. Testing is an integral part of software development. Testing process certifies whether the product that is developed compiles with the standards that it was designed to. Testing process involves building of test cases against which the product has to be tested.

The main objectives of testing process are as follows.

- ❖ Testing is a process of executing a program with the intent of finding an error.
- ❖ A good test case is one that has high probability of finding undiscovered error.
- ❖ A successful test is one that uncovers the undiscovered error.

### 6.2: TEST CASES

Test Case Id	Description	Input Values	Expected Output	Actual Output	Remarks
1	Starting program execution	NIL	transport_name.txt File created	transport_name.txt File created	PASS
2	Add transportation	New Serial number:R001 New transportation name:RAILWAYS	R001.txt file created successfully	R001.txt file created successfully	PASS
3	View transportation list-->Add details	Enter RAILWAYS Number : 5875  Enter RAILWAYS Departure :BANGALORE	Details added successfully	Details added successfully	PASS

		Enter RAILWAYS Destination : MANGALORE  Enter RAILWAYS Name : RANICHENNEXP  Enter RAILWAYS Type : EXP  Enter RAILWAYS Run days : M,T,W,TH,F,SA,SU  Enter RAILWAYS Dept_time : 14:00  Enter RAILWAYS Arrival_time : 21:00  Enter RAILWAYS Price : 520			
4	Add details	Enter RAILWAYS Number : 5875  Enter RAILWAYS Departure :BANGALORE     Enter RAILWAYS Destination : MANGALORE  Enter RAILWAYS Name : RANICHENNEXP  Enter RAILWAYS Type : EXP  Enter RAILWAYS Run days : M,T,W,TH,F,SA,SU  Enter RAILWAYS Dept_time : 14:00  Enter RAILWAYS Arrival_time : 21:00  Enter RAILWAYS Price : 520	Details Exist!	Details Exist!	PASS
5	Modify details	ENTER THE ROUTE NUMBER :5875  ENTER THE	Details Modified Successfully	Details Modified Successfully	

		DEPARTURE PLACE :BANGALORE  ENTER THE DESTINATION PLACE: MANGALORE			PASS
7	Delete Details	ENTER THE RAILWAYS NUMBER TO BE DELETED: 55236  ENTER THE RAILWAYS DEPARTURE PLACE: BANGALORE  ENTER THE RAILWAYS DESTINATION PLACE : MANDYA	55236 DELETED SUCCESSFULLY	55236 DELETED SUCCESSFULLY	PASS
8	Back to admin page	NIL	Passenger.txt file created	Passenger.txt file created	PASS
9	Book ticket	Enter the departure place: BANGALORE  Enter the destination place: MANGALORE  Enter the departure time: 9:00  Enter the departure time: 14:00  Enter the departure date(dd/mm/yyyy): 05/08/2021  CONFIRM BOOKING? [1(yes)/0(no)] :1  ENTER YOUR PHONE NUMBER :9620252562  AADHAAR NUMBER: 587521802365  NO OF ADULTS: 1  NO OF CHILDRENS: 0  NO OF INFANTS: 0	found: No error         Not found	found: No error         Not found   TICKET BOOKED SUCCESSFULLY	PASS
10	Ticket information	Enter phone number:47965	NOT FOUND	NOT FOUND	PASS

11	Cancel ticket	Enter your phone number: 9620252562 Enter the serial number to cancel: 1	TICKET CANCELLED SUCCESSFULLY	TICKET CANCELLED SUCCESSFULLY	PASS
12	Modify Transport list	Enter the serial number: R001 ENTER THE NEW SERIAL NUMBER: ROO1	serial number changed successfully	serial number changed successfully	PASS
13	Delete Transportation	Enter the serial number :ROO1	file deleted successfully	file deleted successfully	PASS
14	Wrong option from user/admin	Enter the choice:1111	Ofcourse I love you! please enter the correct choice :)	Ofcourse I love you! please enter the correct choice :)	PASS

## CONCLUSION

The project entitled “**TRANSPORTATION RESERVATION SYSTEM**” was completed on time with total satisfaction after testing with possible sample data. The performance was found to be efficient and error free. This is a user-friendly packaged application which is very easy to access and understand. Anyone with Knowledge of Computers will find it very easy,unambiguous to use this software and perform various operations on it.

In this project, first an attempt has been made to find the need of the system. To fulfil the needs, a detailed study had been conducted to find the various requirements of the system. This particular system has been designed in an attractive manner, so that even a user with minimum time can be able to operate the system easily.

This software combines the best of both the world, programming language (C++), and File structure providing easy accessibility and security. It was developed to benefit the organizations and the customers. Finally the system was tested with real data and everything worked successfully. Thus the system has fulfilled all the objectives identified and is able to replace the existing system.

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