OPEN ENDED PROJECT ON OOPS(C++)

Trip Advisor & Planner

Information Science & Engineering

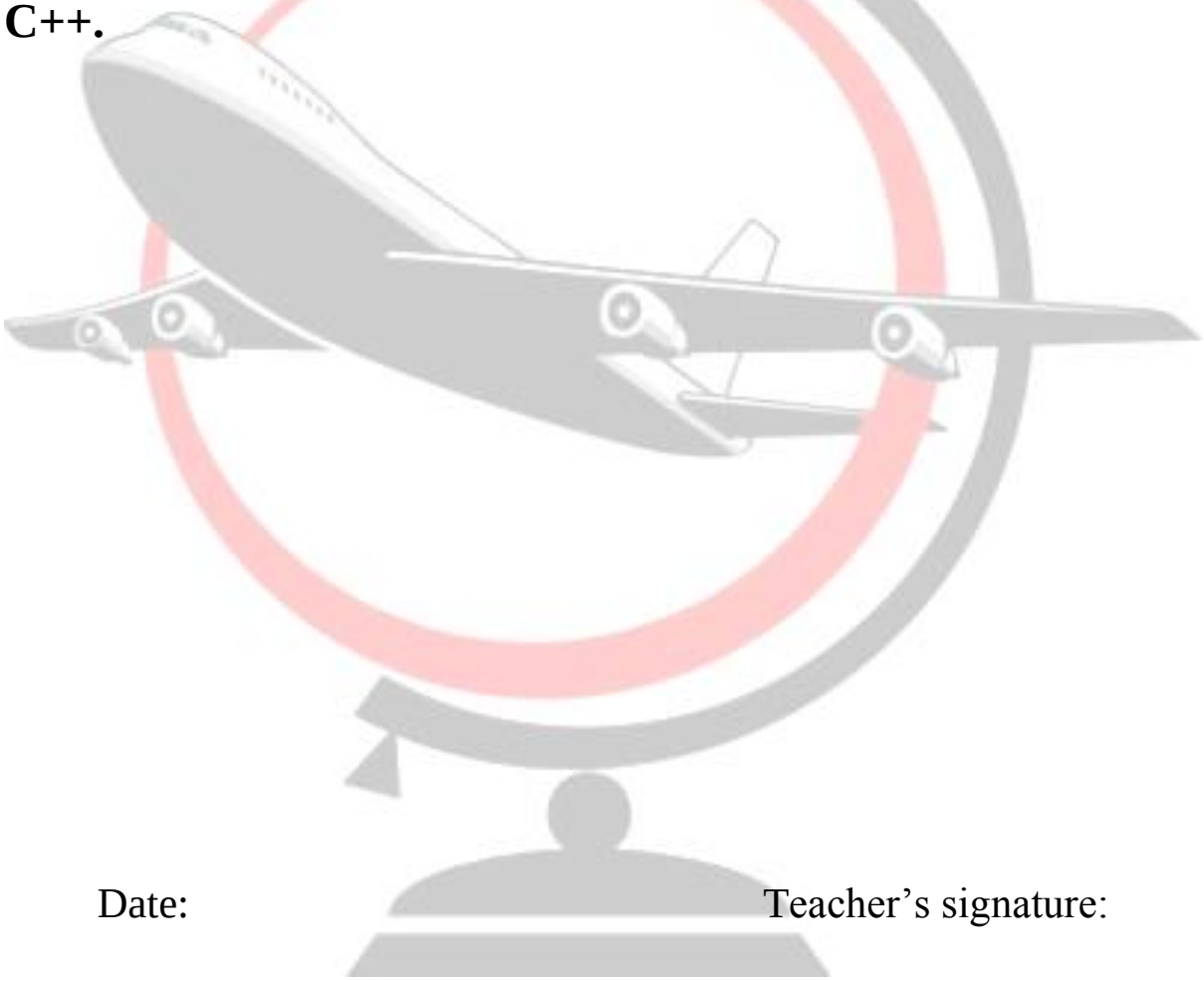
PAWAN KUMAR GANJHU

PALLAVI PRATIK

SHUBHAM MISHRA

CERTIFICATION

This is to certify that **PAWAN KUMAR GANJHU**, **PALLAVI PRATIK and SHUBHAM MISHRA,** students of Information Science and Engineering of **SIDDANGANGA INSTITUTE OF TECHNOLOGY, semester IV,** have satisfactorily completed the required project work **on OBJECT ORIENTED PROGRAMMING, C++.**



Date: Teacher's signature:

INDEX

S. NO.	TOPIC			SHEET NO.
1	Acknowledgement			4
2	Objective			5-10
	2.1	OOP'S		
		2.1.1	Data abstraction	
		2.1.2	Data encapulation	
		2.1.3	Modularity	
		2.1.4	Inheritance	
		2.1.5	Polymorphism	
	2.2	Data file handling		
	2.3	DBMS		
	2.4	Relational model		
	2.5	Hierarchial		
	2.6	Network model		
	2.7	Characteristics of DBMS		
3	Different types of files			11
	3.1	Based on access		
	3.2	Based on storage		
4	Requirement to run the software			12
	4.1	Hardware requirement		

	4.2	Software requirement	
5	Problem description		13
	5.1	Requirement analysis	
	5.2	Required output	
6	System specification		14-16
	6.1	System design	
	6.2	Flow chart	
	6.3	Data design	
7	Data dictionary		17-18
8	File design structure		17-18
9	Header files		19
10	Flow diagram for different approaches used		20
11	Advantages of the program		21
12	Disadvantages of the program		21
13	Future scope of the program		22
14	Output		23-33
15	Conclusion		34
16	Bibliography		35

ACKNOWLEDGEMENT

We Selected this project as a part of our studies, titled **"TRIP ADVISOR AND PLANNER."** As gratitude, we convey our sincere thanks to our Object Oriented Programming professor **SHUBHA C.** who was the constant guide during the period of study and without whose help it would not have been possible for us to complete this project.

Again we take this opportunity to express our profound gratitude and deep regards to our professors for their exemplary guidance, monitoring and constant encouragement throughout the course of this thesis. The blessing, help and guidance given by them time to time shall carry us a long way in the journey of life on which we are about to embark.

Lastly, I thank almighty, my teachers, parents, and friends for their constant encouragement without which this assignment would not be possible.

PAWAN KUMAR GANJHU – 1SI14IS029

PALLAVI PRATIK – 1SI14IS028

SHUBHAM MISHRA – 1SI14IS046

DEPARTMENT OF I.S.E.

SEMESTER 4th

OBJECTIVE

To develop a C++ project to manage a **TRIP ADVISOR & PLANNER** service using object oriented programming and data file handling.

Now a day every traveling agency manager has need to maintaining customer details. For this purpose, need the software which could easily and conveniently maintain the customer details.

The record of customer can be stored in the single file. This software can be used in several traveling agencies for keeping the records of the customer and also used to add record of school trip, government officer Holiday, family trip and large industries traveling record.

This project **"traveling agency"** includes some facilities of travel such as registration, search, display, modification, delete etc.

This software searches the client data which is store in the record. The software used for arranging travel services, provide new and improved services, and identify travel related cost savings

The C++ programming language was developed at AT&T Bell laboratories in the early igSo's by **Bijarne Stroustrup**. He found out "C" lacking for simulating and decided to extend the language by adding features from his favourite language. SimtaSj was one of the earliest object-oriented languages. Biarne Stroustrup called it "C with classes" originally. The name C++ was coined by Rick Mascitti where"++"is the C increment operator. Ever since its birth, C++ evolved to cope with problems encountered by users, and through discussions at AT&T.

The major reasons for its success is the support for object oriented programming, which is most near to real world situations.

However, the maturation of the C++ language is attested by 2 recent events:-

• The formation of an ANSI (American National Standard Institute) C++ committee, and

• The publication of the Annotated C++ Reference Manual by Ellis and Stroustrup. One can easily judge the importance of C++ as given the following lines:-

"**Object-oriented technology is regarded as the ultimate paradigm for the modeling of the information in the data of logic. The C++ is now shown to fulfill this goal**".

This is a project based on train reservation. The program

helps us to **enter, display or alter the details of different trains**.

Moreover & most importantly the program helps us **to reserve or cancel a train ticket.**

The program also helps us to know **the present status** of a reserved ticket, i.e. whether the ticket is **confirmed or not.**

It includes various function programs to do the above mentioned tasks.

⁂ BASIC CONCEPTS OF OOP

The object oriented programming has been developed with a view to overcome the drawbacks of conventional programming approaches. The OOP approach is based on certain concepts that help it attain its goals of overcoming the drawbacks or shortcomings of conventional programming approaches. These general concepts of OOP are given below:-

→ DATA ABSTRACTION:-

Abstraction is the concept of simplifying a real world concept into its essential elements.

“Abstraction refers to the act of representing essential features without including the backgroung details or explanation.”

→ENCAPULATION:-

Encapulation is the most fundamental concept of OOP. It is the way of combining both data and the functions that operate on that data under a single unit.

"The wrapping up of data and operations / functions into a single unit is known as encapulation."

→MODULARITY:-

The act of partitioning a program into individual components is called modularity. The justification for partitioning is that, it reduces its complexity to some degree and it creates a number of well-defined, documented boundries within the program.

"Modularity is the property of a system that has been decomposed into a set of cohesive and loosely coupled modules."

→INHERITANCE:-

"Inheritance is the capacity of one class of things to derive capabilities or properties from another class."

→POLYMORPHISM:-

Polymorphism is key to the power of object oriented programming. It is so important that languages that don't

support polymorphism cannot advertise themselves as OO languages.

“Polymorphism is the ability for a message or data to be processed in more than one form.”

⁘DATA FILE HANDLING

Data file handling has been effectively usedin the program.

This program uses the concept of **object-oriented programming** and **data file handling.**

The database is a collection of interrelated data to serve multiple applications. That is database programs create files of information. So we see that files are worked with most, inside the program.

⁘DBMS

The software required for the management of data is called as DBMS. It has 3 models

1. Relation model
2. Hierarchical model
3. Network model

→RELATIONAL MODEL

It's based on the concept on relation. Relation is the table that consists of rows and columns. The rows of the table are called tuple and the columns of the table are called attribute. Numbers of rows in the table is called as cardinality. Number of columns in the table is called as degree.

→HIERARCHICAL MODEL

In this type of model, we have multiple records for each record. A particular recordhas one parent
record. No chid record can exist without parent record. In this, the records are organized in tree (like structure).

→NETWORK MODEL:-

In this, the data is representedby collection of records and relationship is represented by (ink or association.

CHARACTERISTICS OF DBMS: -

i. It reduces the redundancy
ii. Reduction of data in inconsistency
iii. Data sharing
iv. Data standardization

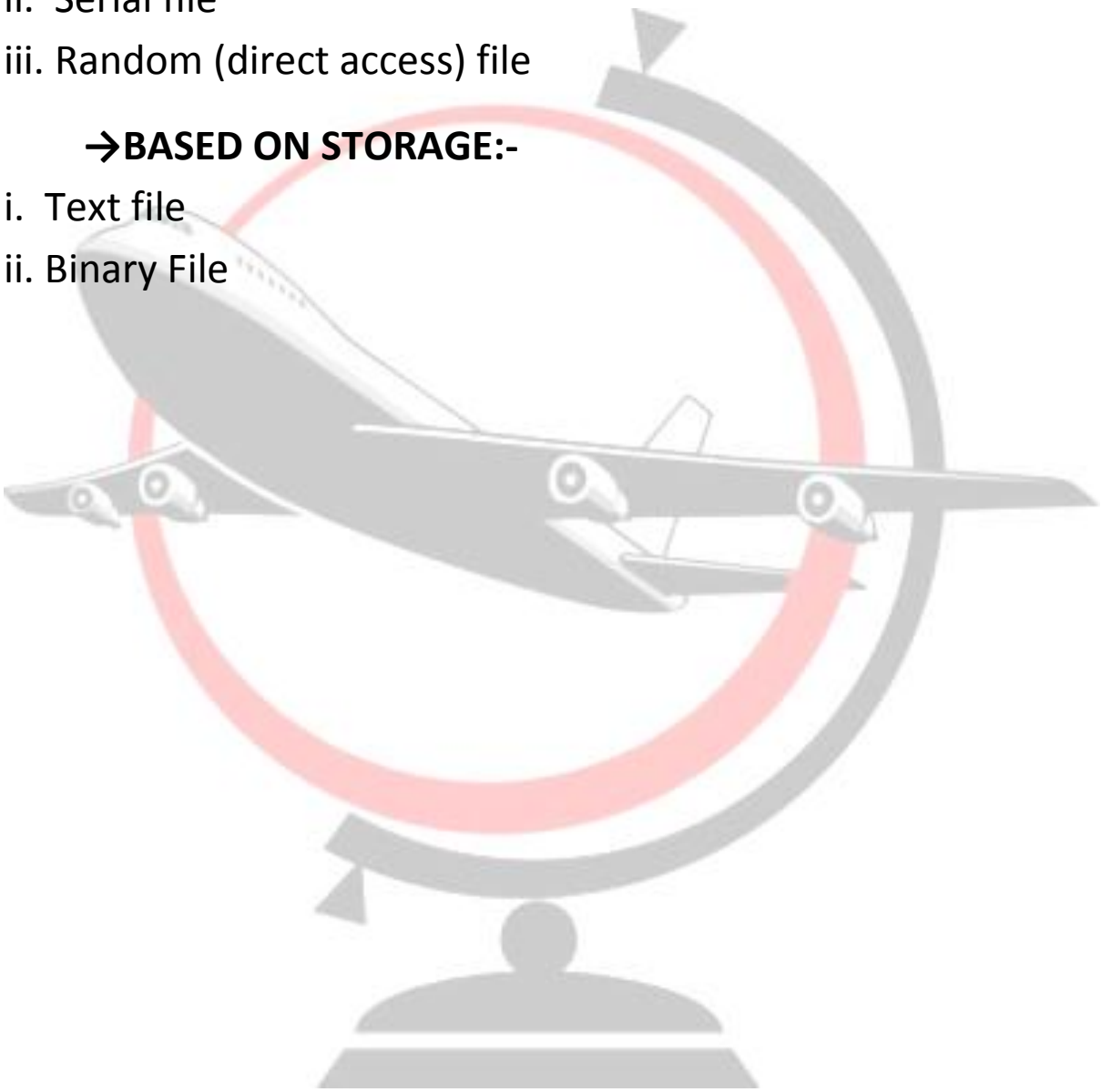
DIFFERENT TYPES OF FILE

→BASED ON ACCESS:-

i. Sequential file
ii. Serial file
iii. Random (direct access) file

→BASED ON STORAGE:-

i. Text file
ii. Binary File



REQUIREMENT TO RUN THE SOFTWARE

HARDWARE AND SOFTWARE REQUIRED

All this suggest that the choice **of a computer 486** or equivalent with about **250 MB Hard Disk** and about **8 to 16 MB RAM**, a line **printer** or a dot matrix printer and preferable a laser printer is optimum. The availability of sophisticated programming tool is imperative and thus a **C++** is chosen to program the system.

Having done this the next step is to carefully analyze the data, identity processing element and design appropriate data base file.

PROBLEM DESCRIPTION

REQUIREMENT ANALYSIS

We have studied the existing system in details. The finding of our study yields various pieces of information which are described in the following manner. For the **TRAVELING AGENCY OR TRIP ADVISOR AND PLANER** and with other related modules of **RESERVATION OR BOOKINGS**, we enter all the following details……

1. Book hotels, vehivles
2. Display details of bookings
3. Alter booking records
4. Avert booked records
5. Display of places and names of sight seeing
6. Search for an entered record
7. Details of the customer

SYSTEM SPECIFICATION

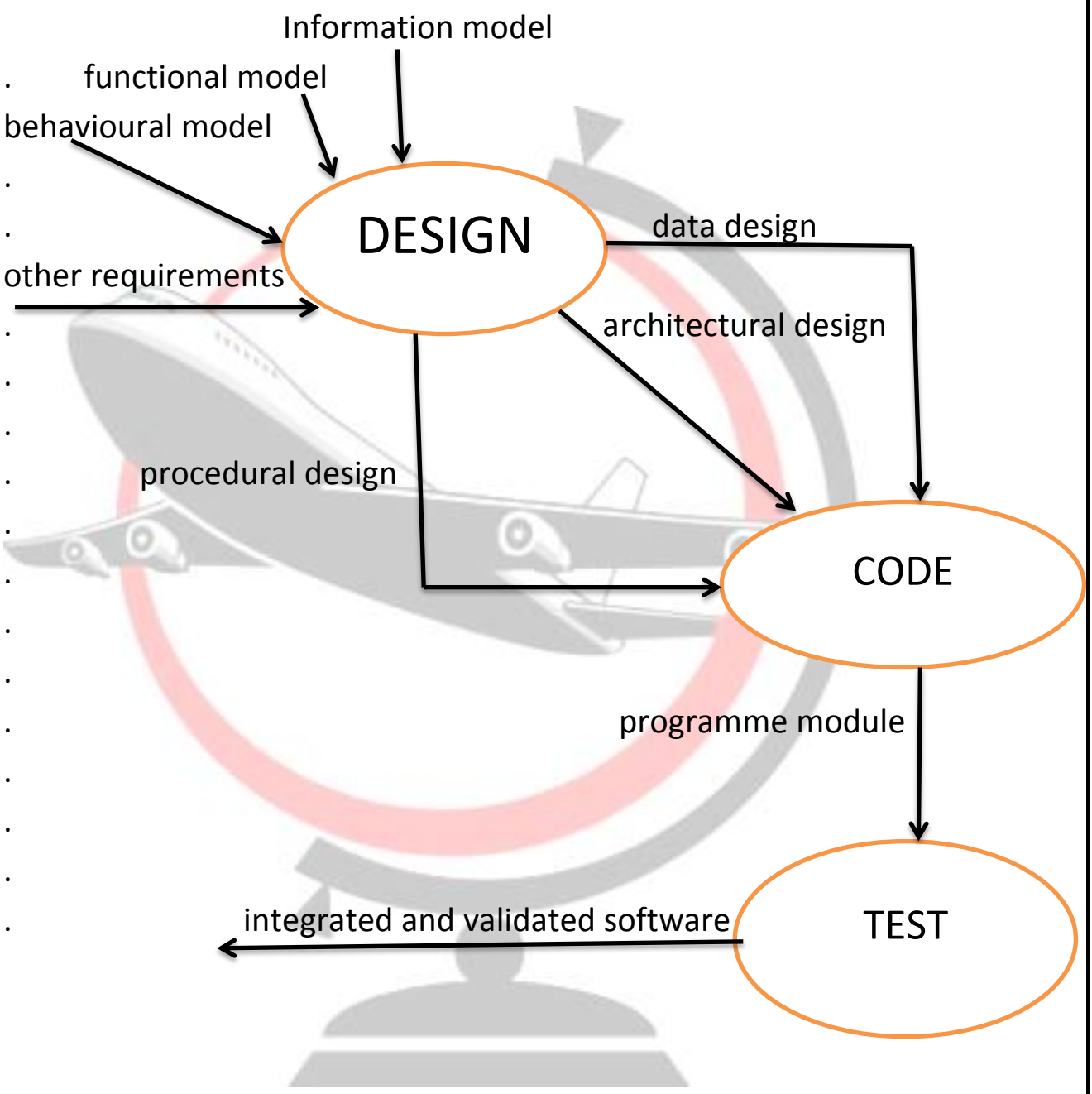
SYSTEM DESIGN

The importance of software design can be stated with a single word quality. Design is the place where quality is fostered in software development. Design provides us with respresentations of software engineering and maintenance steps that follow.

System design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm that is used. Once software requirements have been analyzed and specified, the software design is first of the three, technical activities- 'design', 'code', and 'test', that are required to program the software.

The flow of information during this technical phase of the software engineering process is illustrated in the figure given below:

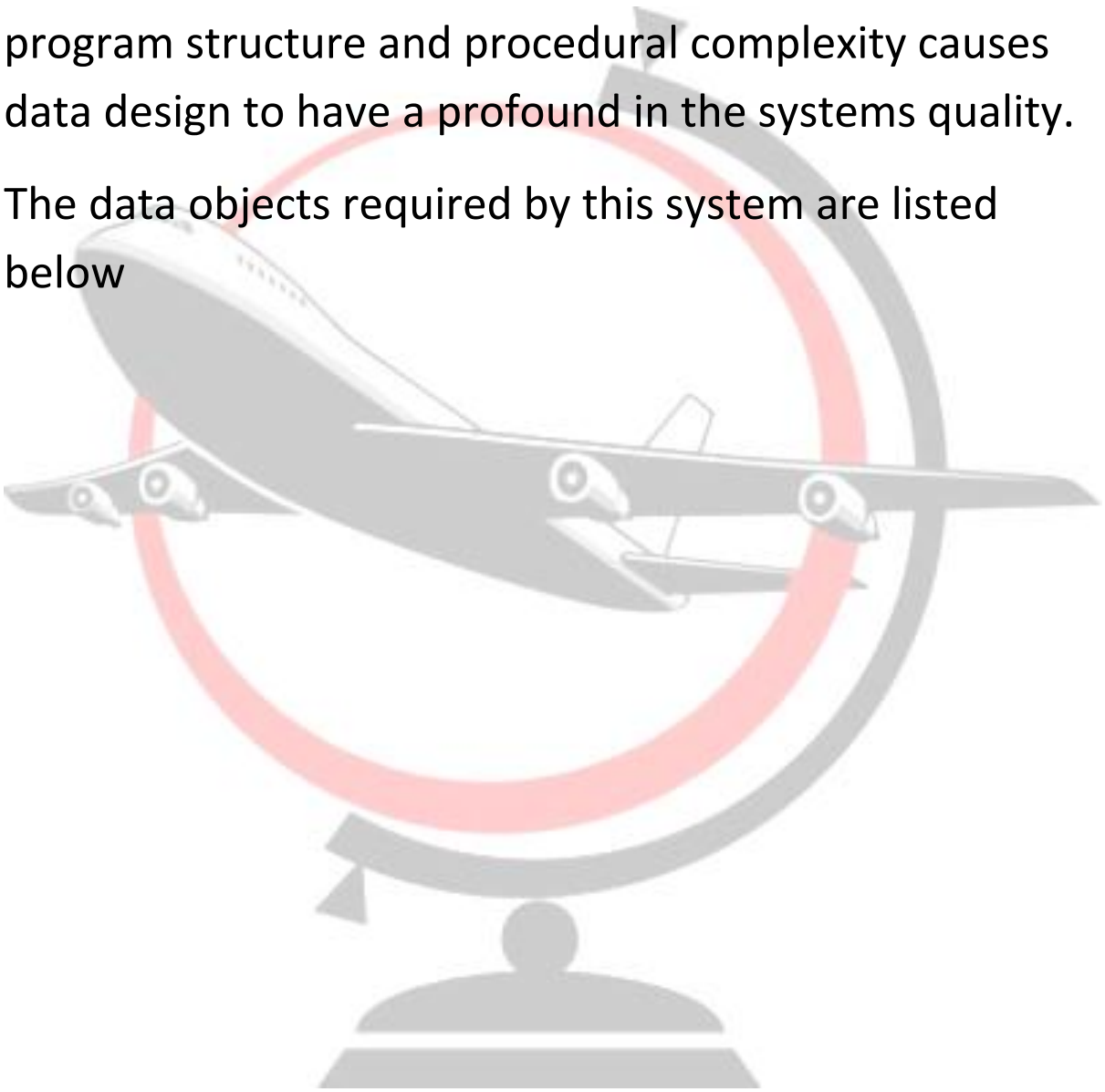
FLOW CHART


Information model
functional model
behavioural model
DESIGN
data design
other requirements
architectural design
procedural design
CODE
programme module
TEST
integrated and validated software

DATA DESIGN

Data design is the first of the three design activities that are conducted during system development. The impact if data structure on program structure and procedural complexity causes data design to have a profound in the systems quality.

The data objects required by this system are listed below



DATA DICTIONARY & FILE DESIGN STRUCTURE

S.NO.	DATA TYPES	VARIABLE NAME	DESCRIPTION
int main()			
1	char	ch	To i/p choice
Class transport			
1	char []	address	Address of the customer
2	Char[]	destination	Places to go
3	Int	No_of_passengers	No of passengers
4	Float	Price	Advanced payment
5	Char	Vehicle	Name of vehicle
6	char	Name	Name of the customer
Class hotel			
1	Char[]	Hot_name	Name of the hotel
2	Char[]	Address	Address of customer
3	Char[]	Destination	Place to go
4	Int	No_of_days_stay	Days to stay in hotel
5	Float	Price	Advanced payment
6	Char[]	Name	Name of the customer
Void create_transport()			
1	char	Ch	i/p choice

Void display_transport()			
1	Int		Record number
Void search_transport()			
1	Int	flag	Status of searching
2	Char[]	name	Name to be searched
Void modify_transport()			
1	Int	flag	Status of record present
2	Char[]	name	Name of customer
Void create_hotel()			
1	char	ch	i/p choice
Void display_hotel()			
1	Int	i	Record number
Void search_hotel()			
1	Int	Flag	Status of flag
2	Char[]	Name	Name to be serached
Void modify_hotel()			
1	Int	flag	Status of presence
2	Char[]	nam	Name to be modified

HEADER FILES

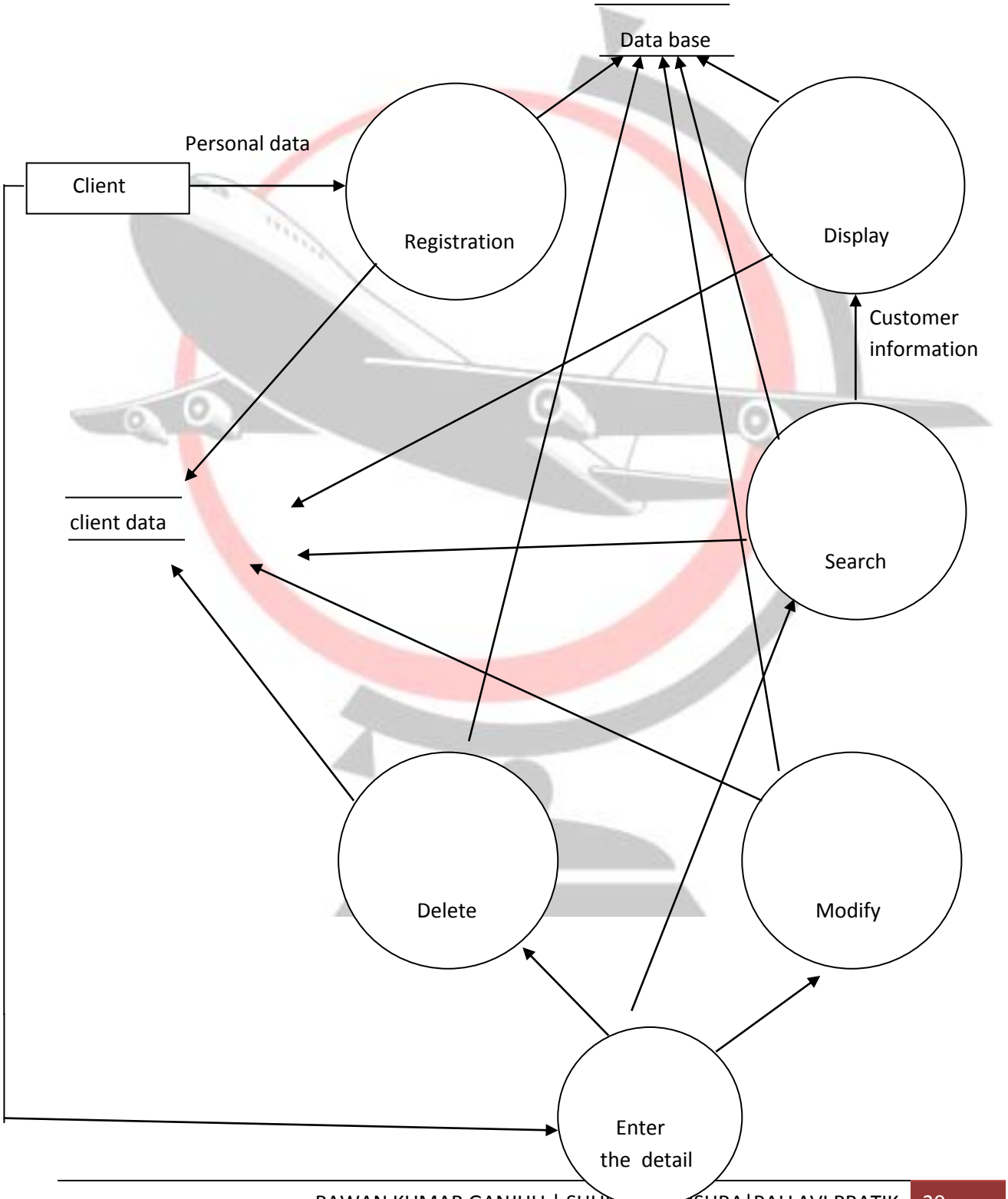
1. **FSTREAM.H** – for file handling, cin and cout Declares the C++ stream classes that support

file input and output. Replaces the older, now outdated STDIOSTR.H.

2. **CONIO.H –** for clrscr () and getch () functions
3. **STDIO.H** – for standard I/O operations
4. **STRING.H** – for string handling
5. **STDLIB.H –** for handling abs, exit functions
6. **IOMANIP.H** – Declares the C++ streams I/O manipulators and contains macros for creating paramaterized manipulators.
7. **IOSTREAM.H –** for handling cin and cout

FLOW DIAGRAM

DATA FLOW DIGRAM



ADVANTAGES OF THE PROGRAM

1) Customer does not have to wait in long queues.
2) Customer does not need to worry about buying tickets and booking hotels.
3) This software reduces paper work.
4) It is easy to handle customer's record.
5) This software saves the time.
6) Information of the customer stores permanently.

DISADVANTAGES OF THE PROGRAM

1) This system is suitable for only few places.

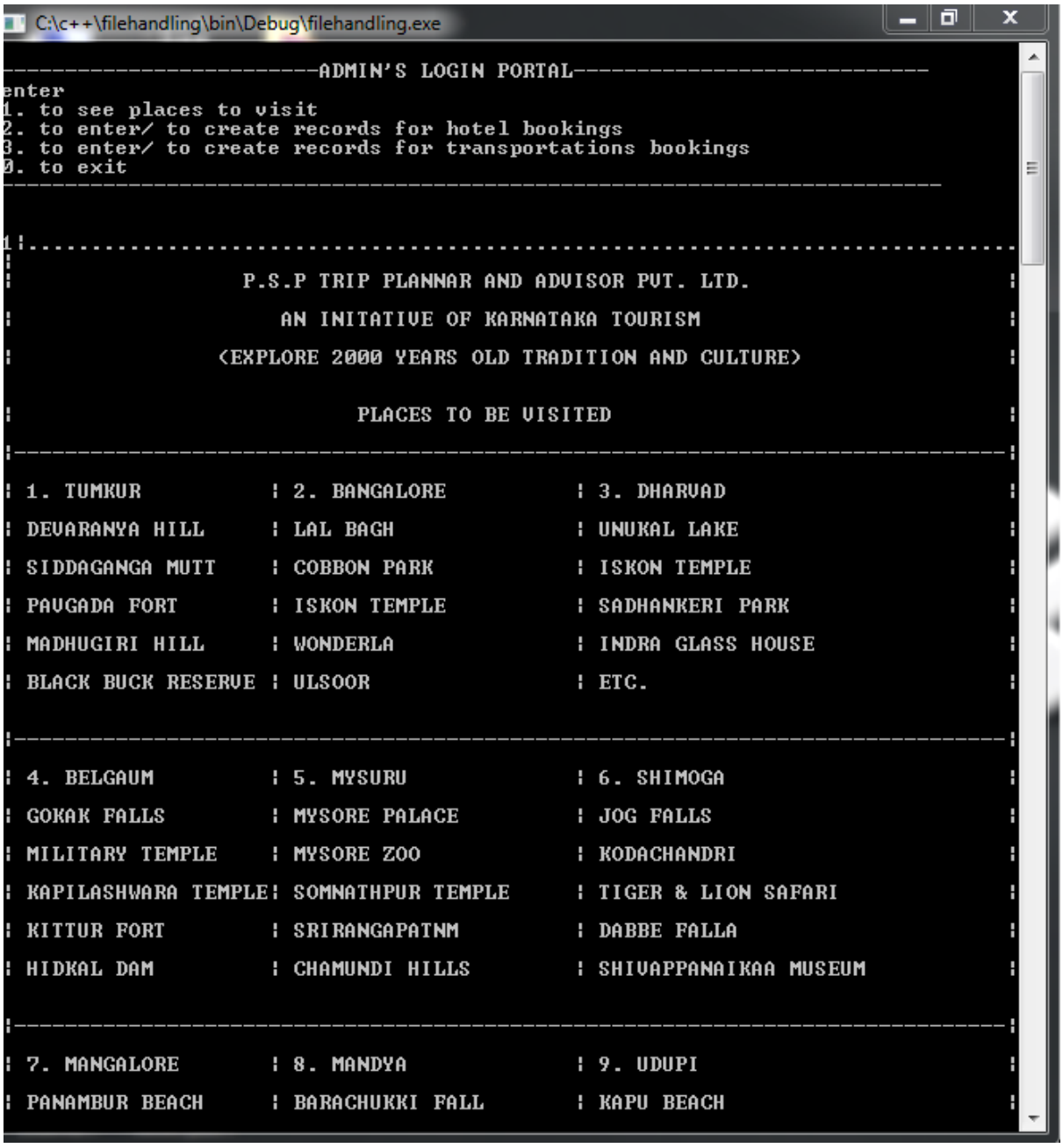
2) This system is suitable for only four vehicles types.

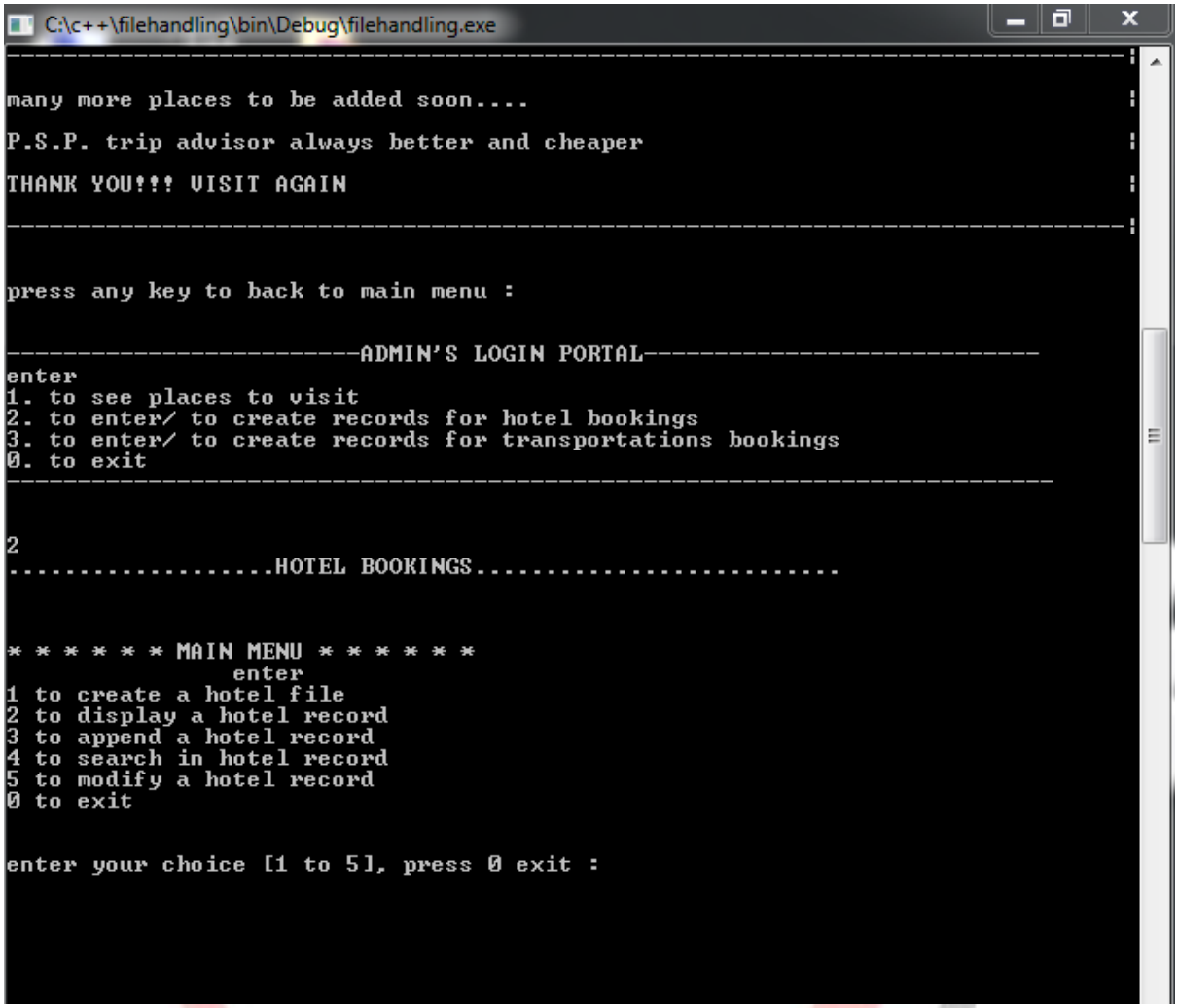
3) Online facility is not available.

FUTURE SCOPE

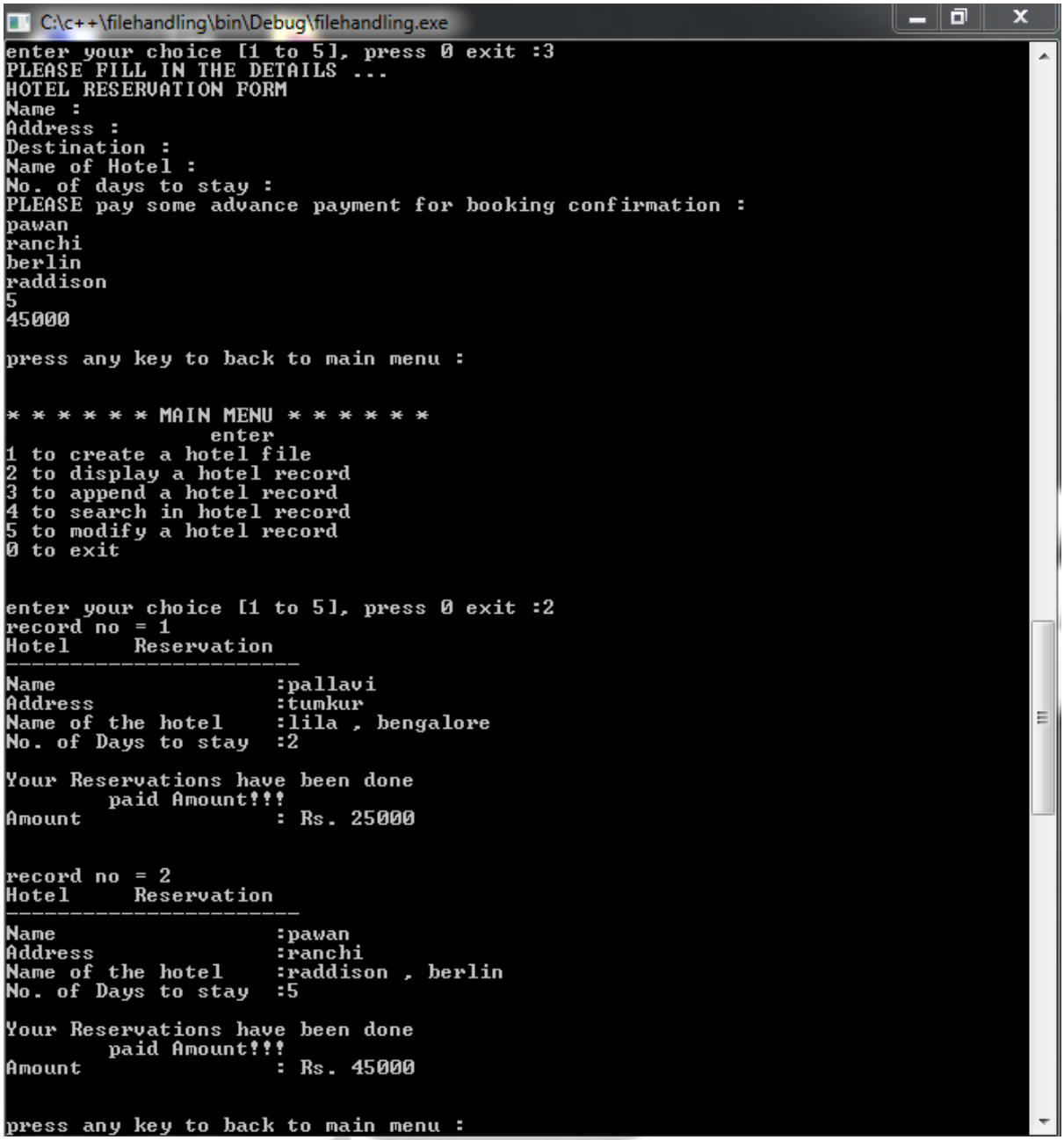
- Modify this system to perform additional operations such as modification the Registration date of travels etc.
- This system will be extended in future to handle number of places and also provide facility of more Vehicles.
- In future the system can be done online.
- Mobile application is likely to be launched for the same.

OUTPUT

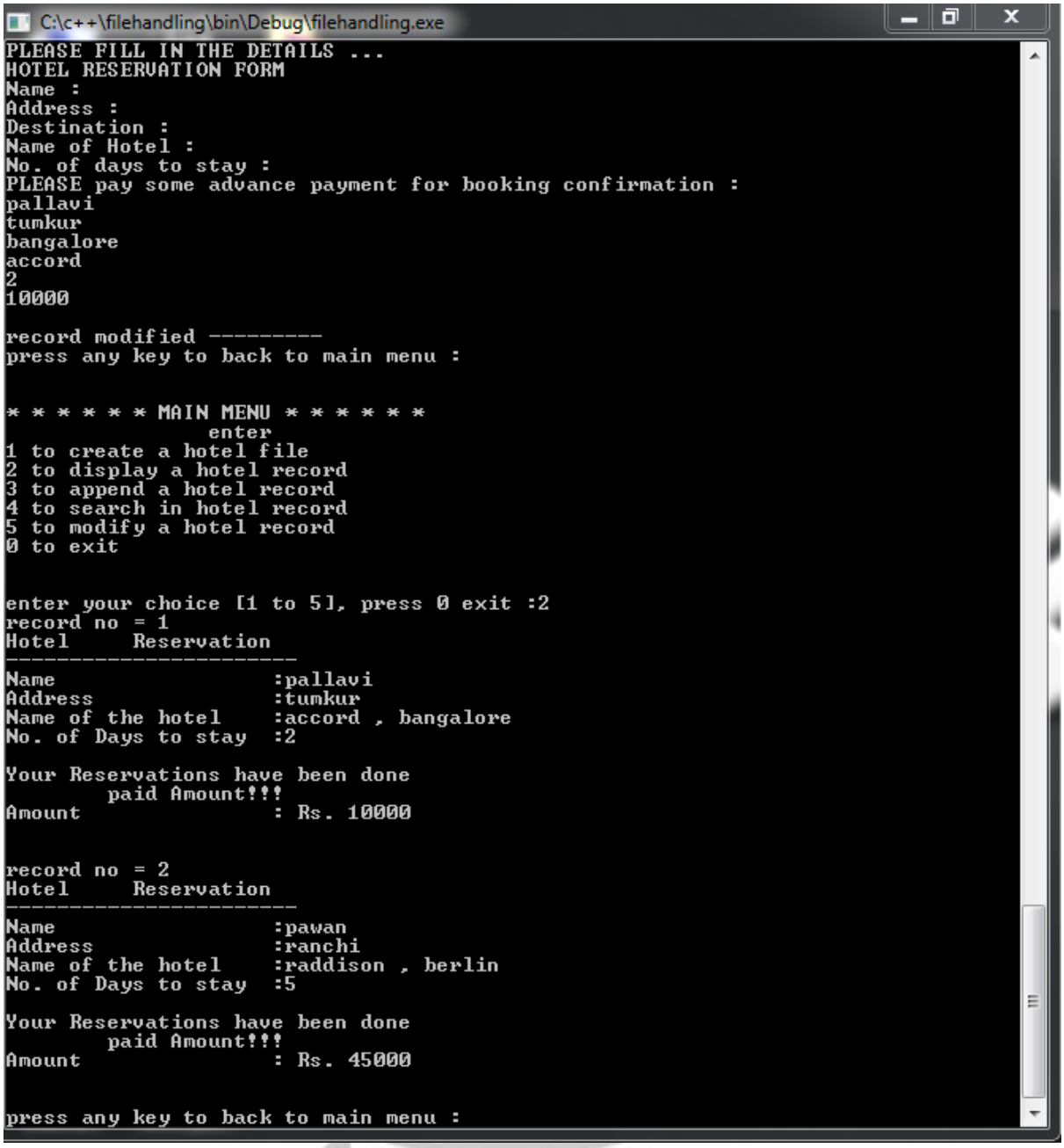

C:\c++\filehandling\bin\Debug\filehandling.exe
----------ADMIN'S LOGIN PORTAL----------
enter
1. to see places to visit
2. to enter/ to create records for hotel bookings
3. to enter/ to create records for transportations bookings
0. to exit
1
P.S.P TRIP PLANNAR AND ADVISOR PVT. LTD.
AN INITATIVE OF KARNATAKA TOURISM
(EXPLORE 2000 YEARS OLD TRADITION AND CULTURE)
PLACES TO BE VISITED
1. TUMKUR | 2. BANGALORE | 3. DHARVAD
DEVARANYA HILL | LAL BAGH | UNUKAL LAKE
SIDDAGANGA MUTT | COBBON PARK | ISKON TEMPLE
PAVGADA FORT | ISKON TEMPLE | SADHANKERI PARK
MADHUGIRI HILL | WONDERLA | INDRA GLASS HOUSE
BLACK BUCK RESERVE | ULSOOR | ETC.
4. BELGAUM | 5. MYSURU | 6. SHIMOGA
GOKAK FALLS | MYSORE PALACE | JOG FALLS
MILITARY TEMPLE | MYSORE ZOO | KODACHANDRI
KAPILASHWARA TEMPLE | SOMNATHPUR TEMPLE | TIGER & LION SAFARI
KITTUR FORT | SRIRANGAPATNM | DABBE FALLA
HIDKAL DAM | CHAMUNDI HILLS | SHIVAPPANAIKAA MUSEUM
7. MANGALORE | 8. MANDYA | 9. UDUPI
PANAMBUR BEACH | BARACHUKKI FALL | KAPU BEACH

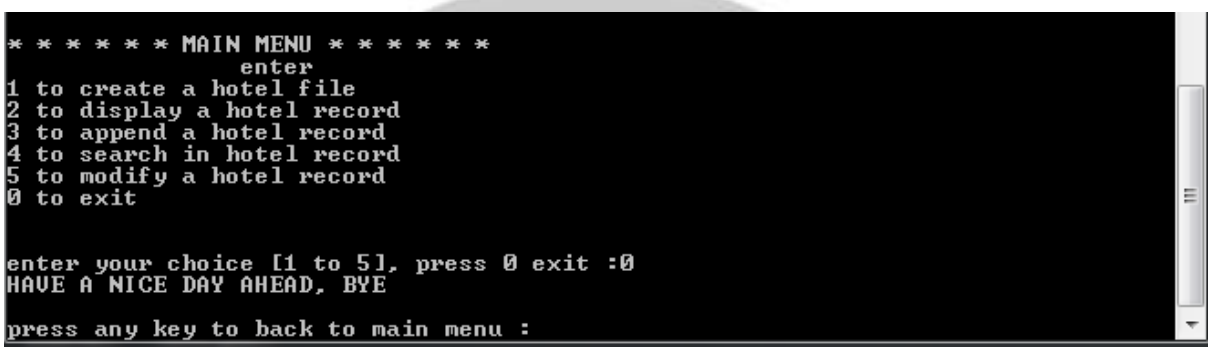

C:\c++\filehandling\bin\Debug\filehandling.exe
many more places to be added soon....
P.S.P. trip advisor always better and cheaper
THANK YOU!!! VISIT AGAIN
press any key to back to main menu :
----------ADMIN'S LOGIN PORTAL----------
enter
1. to see places to visit
2. to enter/ to create records for hotel bookings
3. to enter/ to create records for transportations bookings
0. to exit
2
.....HOTEL BOOKINGS.....
* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :

C:\c++\filehandling\bin\Debug\filehandling.exe
* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :1
PLEASE FILL IN THE DETAILS ...
HOTEL RESERVATION FORM
Name :
Address :
Destination :
Name of Hotel :
No. of days to stay :
PLEASE pay some advance payment for booking confirmation :
pallavi
tumkur
bengalore
lila
2
25000
do you wish to add more (y/n) : n
press any key to back to main menu :
* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :2
record no = 1
Hotel Reservation
Name :pallavi
Address :tumkur
Name of the hotel :lila , bengalore
No. of Days to stay :2
Your Reservations have been done
paid Amount!!!
Amount : Rs. 25000
press any key to back to main menu :


C:\c++\filehandling\bin\Debug\filehandling.exe
enter your choice [1 to 5], press 0 exit :3
PLEASE FILL IN THE DETAILS ...
HOTEL RESERVATION FORM
Name :
Address :
Destination :
Name of Hotel :
No. of days to stay :
PLEASE pay some advance payment for booking confirmation :
pawan
ranchi
berlin
raddison
5
45000
press any key to back to main menu :
* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :2
record no = 1
Hotel Reservation
Name :pallavi
Address :tumkur
Name of the hotel :lila , bengalore
No. of Days to stay :2
Your Reservations have been done
paid Amount!!!
Amount : Rs. 25000
record no = 2
Hotel Reservation
Name :pawan
Address :ranchi
Name of the hotel :raddison , berlin
No. of Days to stay :5
Your Reservations have been done
paid Amount!!!
Amount : Rs. 45000
press any key to back to main menu :

```
* * * * * * MAIN MENU * * * * * *
                enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit


enter your choice [1 to 5], press 0 exit :4
enter name of the customer to be searched : pawan

Hotel     Reservation
------------------------
Name                  :pawan
Address               :ranchi
Name of the hotel     :raddison , berlin
No. of Days to stay   :5

Your Reservations have been done
        paid Amount!!!
Amount                : Rs. 45000


press any key to back to main menu :
```


C:\c++\filehandling\bin\Debug\filehandling.exe
PLEASE FILL IN THE DETAILS ...
HOTEL RESERVATION FORM
Name :
Address :
Destination :
Name of Hotel :
No. of days to stay :
PLEASE pay some advance payment for booking confirmation :
pallavi
tumkur
bangalore
accord
2
10000
record modified ---------
press any key to back to main menu :
* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :2
record no = 1
Hotel Reservation
Name :pallavi
Address :tumkur
Name of the hotel :accord , bangalore
No. of Days to stay :2
Your Reservations have been done
paid Amount!!!
Amount : Rs. 10000
record no = 2
Hotel Reservation
Name :pawan
Address :ranchi
Name of the hotel :raddison , berlin
No. of Days to stay :5
Your Reservations have been done
paid Amount!!!
Amount : Rs. 45000
press any key to back to main menu :


* * * * * * MAIN MENU * * * * * *
enter
1 to create a hotel file
2 to display a hotel record
3 to append a hotel record
4 to search in hotel record
5 to modify a hotel record
0 to exit
enter your choice [1 to 5], press 0 exit :0
HAVE A NICE DAY AHEAD, BYE
press any key to back to main menu :

```
enter your choice [1 to 5], press 0 exit :0
HAVE A NICE DAY AHEAD, BYE

press any key to back to main menu :
-------------------------ADMIN'S LOGIN PORTAL-----------------------------
enter
1. to see places to visit
2. to enter/ to create records for hotel bookings
3. to enter/ to create records for transportations bookings
0. to exit
------------------------------------------------------------------------


3
.......................TRANSPORTATIONS BOOKING.....................


* * * * * * MAIN MENU * * * * * *
                enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit


enter your choice [1 to 5], press 0 exit :2
record no = 1
transport     Reservation
-----------------------
Name                  : ganjhu
Address               : hehal
Name of the vehicle   : MINI_BUS , piska
No. of passengers     : 10

Your Reservations have been done (cost per km to be charged)
        paid Amount!!!
Amount                : Rs. 300


record no = 2
transport     Reservation
-----------------------
Name                  : amit
Address               : kanke
Name of the vehicle   : XYLO , argora
No. of passengers     : 5

Your Reservations have been done (cost per km to be charged)
        paid Amount!!!
Amount                : Rs. 600


press any key to back to main menu :
```

C:\c++\filehandling\bin\Debug\filehandling.exe
No. of passengers :
PLEASE pay some advance payment for booking confirmation :
ganjhu
tumkur
mangala
10
1000
press any key to back to main menu :
* * * * * * MAIN MENU * * * * * *
enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit
enter your choice [1 to 5], press 0 exit :2
record no = 1
transport Reservation
Name : ganjhu
Address : hehal
Name of the vehicle : MINI_BUS , piska
No. of passengers : 10
Your Reservations have been done (cost per km to be charged)
paid Amount!!!
Amount : Rs. 300
record no = 2
transport Reservation
Name : amit
Address : kanke
Name of the vehicle : XYLO , argora
No. of passengers : 5
Your Reservations have been done (cost per km to be charged)
paid Amount!!!
Amount : Rs. 600
record no = 3
transport Reservation
Name : ganjhu
Address : tumkur
Name of the vehicle : MINI_BUS , mangala
No. of passengers : 10
Your Reservations have been done (cost per km to be charged)

C:\c++\filehandling\bin\Debug\filehandling.exe
No. of passengers :
PLEASE pay some advance payment for booking confirmation :
ganjhu
tumkur
mangala
10
1000
press any key to back to main menu :
* * * * * * MAIN MENU * * * * * *
enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit
enter your choice [1 to 5], press 0 exit :2
record no = 1
transport Reservation
Name : ganjhu
Address : hehal
Name of the vehicle : MINI_BUS , piska
No. of passengers : 10
Your Reservations have been done (cost per km to be charged)
paid Amount!!!
Amount : Rs. 300
record no = 2
transport Reservation
Name : amit
Address : kanke
Name of the vehicle : XYLO , argora
No. of passengers : 5
Your Reservations have been done (cost per km to be charged)
paid Amount!!!
Amount : Rs. 600
record no = 3
transport Reservation
Name : ganjhu
Address : tumkur
Name of the vehicle : MINI_BUS , mangala
No. of passengers : 10
Your Reservations have been done (cost per km to be charged)

```
press any key to back to main menu :


* * * * * * MAIN MENU * * * * * *
                enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit


enter your choice [1 to 5], press 0 exit :4
enter name of the customer to be searched : amit

transport     Reservation
-----------------------
Name                  : amit
Address               : kanke
Name of the vehicle   : XYLO , argora
No. of passengers     : 5

Your Reservations have been done (cost per km to be charged)
        paid Amount!!!
Amount                : Rs. 600


press any key to back to main menu :
```

```
* * * * * * MAIN MENU * * * * * *
                enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit


enter your choice [1 to 5], press 0 exit :4
enter name of the customer to be searched : anwar
record does not exist

press any key to back to main menu :
```

* * * * * * MAIN MENU * * * * * *
enter
1 to create a transport file
2 to display a transport record
3 to append a transport record
4 to search in transport record
5 to modify a transport record
0 to exit
enter your choice [1 to 5], press 0 exit :0
HAVE A NICE DAY AHEAD, BYE
press any key to back to main menu :
----------ADMIN'S LOGIN PORTAL----------
enter
1. to see places to visit
2. to enter/ to create records for hotel bookings
3. to enter/ to create records for transportations bookings
0. to exit
0
HAVE A NICE DAY AHEAD, BYE
Process returned 0 (0x0) execution time : 623.732 s
Press any key to continue.

CONCLUSIONS

This software is efficient in maintaining customer's details and can easily perform operations on customer's records. This software also reduces the work load of the travel agency manager.

In future, this system can launch web site for easy online registration. In this system there is limitation for places and vehicles. In future, it can be extended to add more place and vehicles.

BIBLIOGRAPHY

S. NO.	WEBSITES/BOOKS
1	Let Us C++ by Yashavant Kanetkar
2	Object Oriented Programming with C++ - E Balagurusamy
3	Google search engine
4	Computer science with c++ Sumita Arora dhanpat publication
5	Computer science with c++ Sarashwati publications
6	Together with c++ Reeta Sahoo- rachna sagar publisher