

Flight Ticket Booking

A Project Report Submitted by

Yathin Duruvu : RA2111026010110

Ravi Vamsi Krishna : RA2111026010114

Cheedella S V Abhinava Sai : RA2111026010127

Kurella Chaitanya : RA2111026010132

Under the Guidance of

Dr.M. SHOBANA

(Professor, Department of Networking and Communication)

In partial Fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE ENGINEERING

With Specialization in Artificial Intelligence and Machine Learning

of

FACULTY OF ENGINEERING AND TECHNOLOGY



S.R.M.Nagar,Kattankulathur,Kancheepuram District

SRM UNIVERSITY
(under Section 3 of UGC Act,1956)

BONAFIDE CERTIFICATE

Certified that this project report titled Flight Ticket Booking is the bonafide work of YathinDuruvu(RA2111026010110), Ravi Vamsi Krishna (RA2111026010114), Cheedella S V Abhinava Sai (RA2111026010127)Kurella Chaitanya(RA2111026010132),who carried out the project work under Our supervision.Certified further,that to the best of our Knowledge the work reported herein does not form any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

SIGNATURE

Dr.M.SHOBANA

GUIDE

Assistant Professor

Dept.of Networking and Communication

SIGNATURE

HEAD OF DEPARTMENT

Signature of Internal Examiner

Signature of External Examiner

ACKNOWLEDGEMENTS:

We,would like to express our deepest gratitude to our guide, Dr.M.Shobana for her valuable guidance,consistent encouragement, Personal caring,timely helping and providing us with an excellent atmosphere for doing research.All through the work, in spite of her busy schedule,she has extended cheerful and cordial support to us for completing this research work.

TABLE OF CONTENTS

- Objectives
- Introduction
- Algorithm
- Flowchart
- Sample Coding
- Snapshots of the result and discussion
- Conclusion

OBJECTIVES:

A small airline has just purchased a computer for its new automated reservation system. The owner has asked to program the new system in C.

It is required to write a program to assign seats on each flight of the airlines only place (capacity: 15 seats). The program should never assign a seat which is already assigned. If there's no seat available, then print the message "the flight is full".

After the flight is full and someone wants to cancel the booking, it is displaying the passport number you want to cancel so after the passenger cancels it, the system directly free that place if someone wants to book that seat.

Moreover, the system should print a boarding pass indicating the persons' name, passport number and seat number as each seat is assigned, and set the corresponding elements of the array to 1 to indicate that the seat is no longer available.

INTRODUCTION:

The title of our project is flight ticket booking. The reason for choosing this project is nowadays airways making a key role for people to travel across the world or within the country itself.

But many of the people don't even know how to book a flight ticket. We made this project to make people learn more about flight ticket booking.

And the reason we used C language - C has been used successfully for each kind of programming problem thinkable from operating systems to spreadsheets to expert systems - and efficient compilers are accessible for machines ranging in power from the Apple Macintosh to the Cray Supercomputers.

Algorithm:

- Step 1 :- First declare a structure of any name (vicar_airline in this)
- Step 2 :- Declare the required type of data types with their names in the structure
passport number and seat number in int
name,email in char
- Step 3 :- And also declare a struct pointer named "following" of data type vicar_airline in the structure itself
- Step 4 :- Declare struct pointers pointers "begin" , "stream" out of the structure for universal declaration
- Step 5 :- Also declare pointer named "dummy" of data type vicar_airline out of structure
- Step 6 :- Now write the prototype of the functions –
reservation(int x), cancel(), display(), savefile(), details().
- Step 7 :- Declare a variable named choice of int data type.
- Step 8 :- Initialize the struct pointers "begin" and "stream" to null
- Step 9 :- Initialize int num to 1.
- Step 10 :- Use do while loop and first print the four options –
1. Reservation
2. Cancellation
3. Display records
4. Exit
- Step 11 :- Use switch case and accept the choice.
If the choice is 1 then call reservation function of of num and increment the num
If the choice is 2 then call the cancel function
If the choice is 3 then call the display function
If the choice is 4 then call the savefile function
If the choice is not between 1 to 4 then print it as the invalid choice
- Step 12 :- In the details function accept all the details passenger
Passport number into the stream -> passport
Name into the stream -> name

Email id into the stream -> email

Step 13 :- First assign the begin value to the stream

If begin value is 0 then continue with the memory allocation of begin and stream. and then call the details function so that to accept the details of passenger and then check the next node to be empty to book the next ticket.

Else if $x > 15$ then print seats are full

Else then for the next user allocate the memory in the next node and assign the value of stream -> following to stream and then call the details function to accept the details next user and again check the next node to be empty for the next user and the loop continues

Step 14 :- In the cancel function first declare a variable of type int named passport and accept the passport number and then compare the passport number with all bookings.

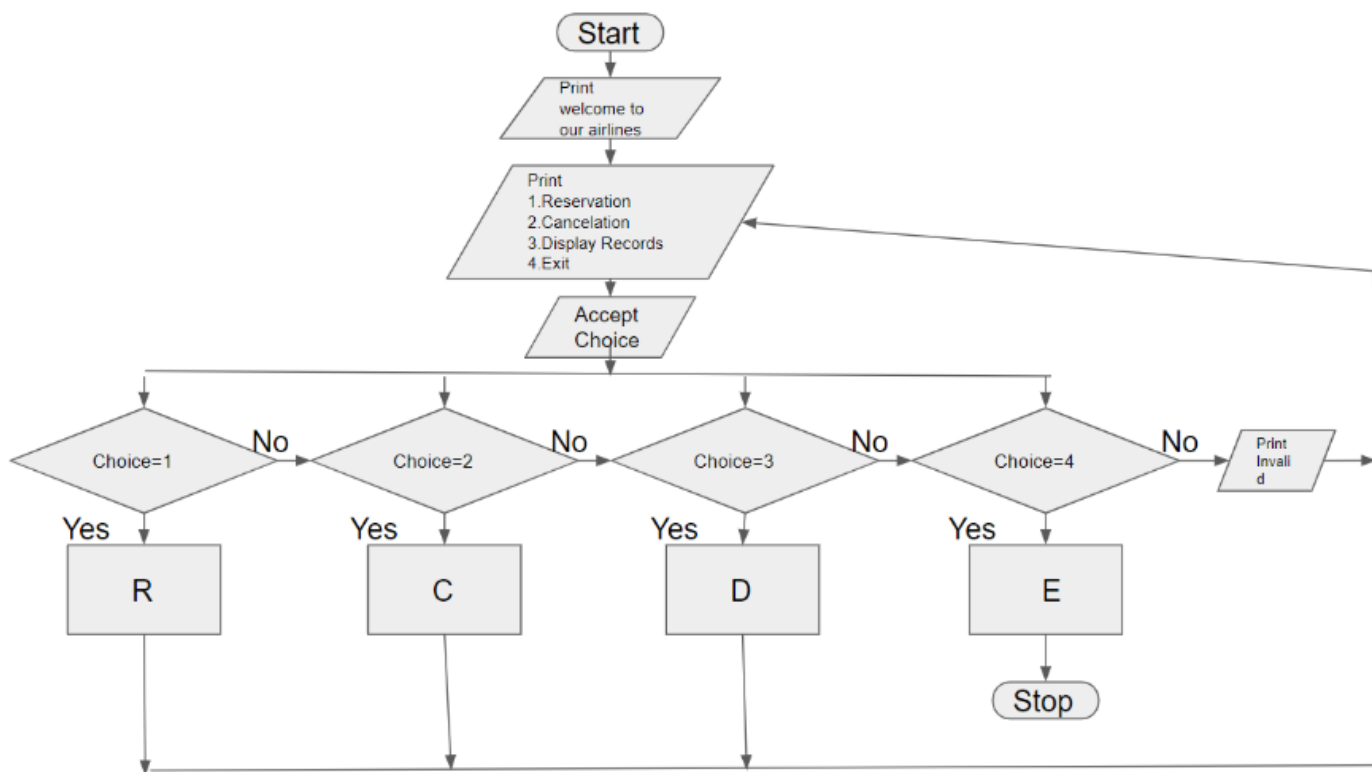
If the passport number is matched then remove the record by using the free function.

If the passport number is not matched then print invalid number

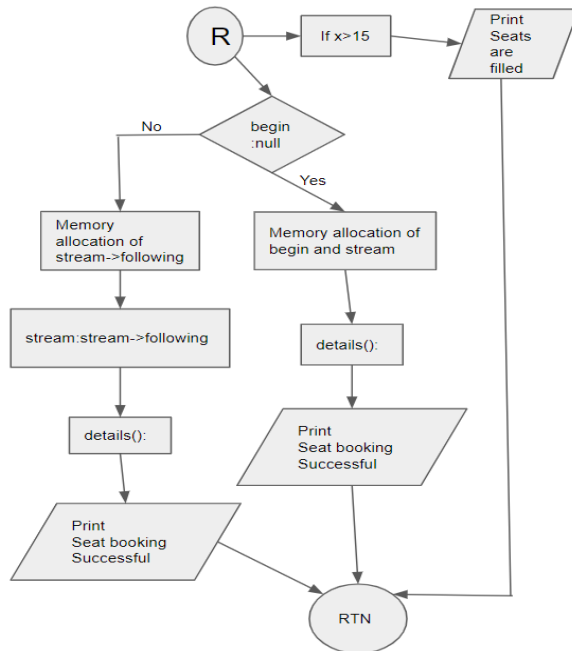
Step 15 :- In the display function assign begin value to stream and use while loop to print all the details of bookings with name, email, passport number and seat number.

Step 16 :- In savefile function open the file named Vicar records and save all the records in to the file using fprintf and while function.

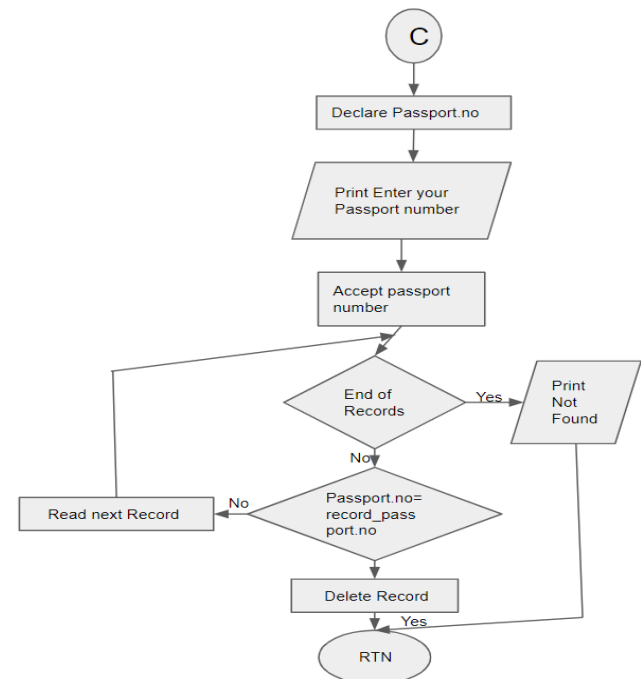
Flow Chart:



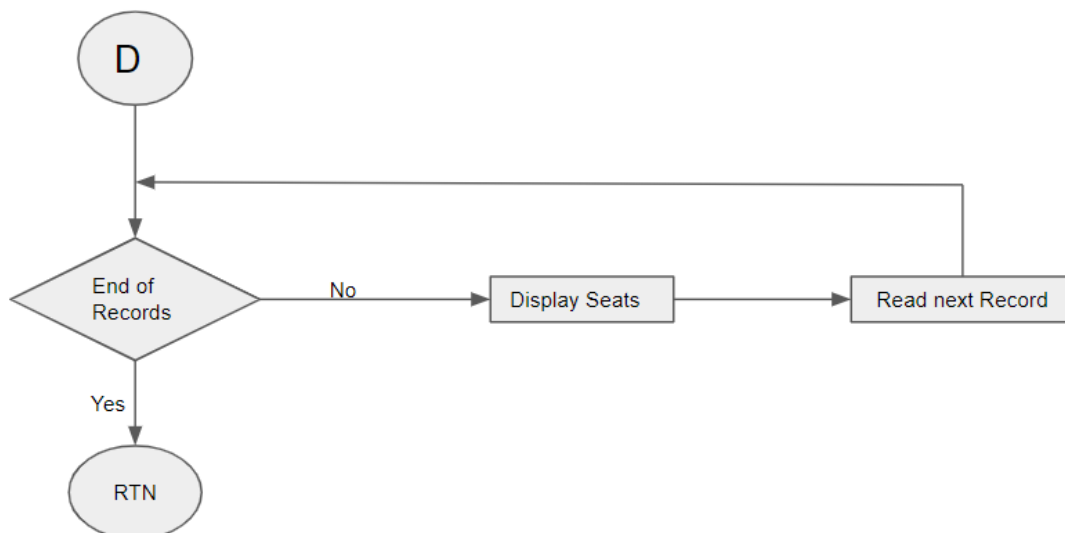
Reservation:



Cancellation:



Display:



Code:

```
#include<stdio.h>
#include<stdlib.h>
#include<conio.h>
#include<string.h>
struct vicar_airline
{
char passport[6];
char name[15];
int seat_num;
char email[15];
struct vicar_airline *following;
}
*begin, *stream;
struct vicar_airline *dummy;
void main()
{
void reserve(int x), cancel(), display(), savefile();
int choice;
begin = stream = NULL;
int num = 1;
do
{
printf("\nWelcome To Vicar Airlines Online Booking Hub\n");
printf("1. Reservation\n");
printf("2. Cancel\n");
printf("3. Display Records\n");
printf("4. Exit\n");
printf("Enter Your Choice\n");
scanf("%d", &choice);

switch (choice)
{
case 1:
reserve(num);
num++;
break;
case 2:
cancel();
break;
case 3:
display();
break;
case 4:
{
savefile();
break;
}
default:
```

```

printf("ENTER VALID CHOICE(1-4)");
printf("Press Any Key To Go Back To Main Menu");
}
getch();
} while (choice != 4);
}
void details()
{
printf("Enter Your Passport Number: ");
scanf("%s", stream->passport);
printf("Enter Your Name: ");
scanf("%s", stream->name);
printf("Enter Your Email Address: ");
scanf("%s", stream->email);
}

void details();
void reserve(int x)
{
stream = begin;
if (begin == NULL)
{
// first user
begin = stream = (struct vicar_airline*)malloc(sizeof(struct vicar_airline));
details();
stream->following = NULL;
printf("Seat Booking Successful!\n");
printf("Your Seat Number Is: Seat A-%d\n", x);
stream->seat_num = x;
return;
}
else if (x > 15)
{
printf("\nSeats Full");
return;
}
else
{
// next user
while (stream->following)
stream = stream->following;
stream->following = (struct vicar_airline *)malloc(sizeof(struct vicar_airline));
stream = stream->following;
details();
stream->following = NULL;
printf("Seat Booking Succesful!\n");
printf("Your Seat Number Is: Seat A-%d\n", x);
stream->seat_num = x;
return;
}
}
void savefile()
{
FILE *fpointer = fopen("Vicar Records", "w");
if (!fpointer)
{

```

```

printf("\n Error In Opening File!");
return;
}
stream = begin;
while (stream)
{
fprintf(fpinter, "%-6s", stream->passport);
fprintf(fpinter, "%-15s", stream->name);
fprintf(fpinter, "%-15s", stream->email);
fprintf(fpinter, "\n");
stream = stream->following;
}
printf("Details Have Been Saved To A File (Vicar Records)");
fclose(fpinter);
}
void display()
{
stream = begin;
while (stream)
{
printf("\nPassport Number : %-6s", stream->passport);
printf("\nName : %-15s", stream->name);
printf("\nEmail Address: %-15s", stream->email);
printf("\nSeat number: A-%d", stream->seat_num);
stream = stream->following;
}
}

void cancel()
{
stream = begin;
char passport[6];
printf("Enter Passport Number to Delete Record?:");
scanf("%s", passport);
if (strcmp(begin->passport, passport) == 0)
{
dummy = begin;
begin = begin->following;
free(dummy);
printf("Booking Has Been Deleted\n");
return;
}
while (stream->following)
{
if (strcmp(stream->following->passport, passport) == 0)
{
dummy = stream->following;
stream->following = stream->following->following;
free(dummy);
printf("Has Been Deleted\n");
getch();
return;
}
stream = stream->following;
}
}printf ( " Passport Number is wrong Please check your Passport number \n " );

```

}

Snapshots of the result and discussion

```
Welcome To Vicar Airlines Online Booking Hub
```

```
1. Reservation
```

```
2. Cancel
```

```
3. Display Records
```

```
4. Exit
```

```
Enter Your Choice
```

```
Enter Your Choice
```

```
3
```

```
Passport Number : LXO
```

```
Name : LANCE
```

```
Email Address: STROLL@GMAIL.COM
```

```
Seat number: A-1
```

```
Passport Number : ROB
```

```
Name : JAMES
```

```
Email Address: MILNER@GMAIL.COM
```

```
Seat number: A-2
```

```
Passport Number : DMA
```

```
Name : KURT
```

```
Email Address: OBENHOFF@GMAIL.COM
```

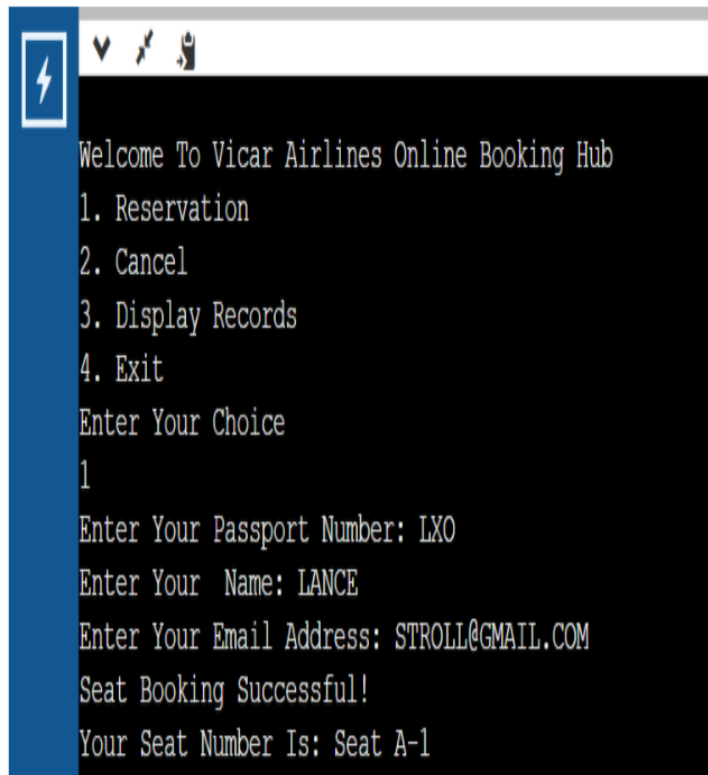
```
Seat number: A-3
```

```
Passport Number : LCX
```

```
Name : KNIGHT
```

```
Email Address: SUGE@GMAIL.COM
```

```
Seat number: A-4
```













```
Welcome To Vicar Airlines Online Booking Hub
1. Reservation
2. Cancel
3. Display Records
4. Exit
Enter Your Choice
1
Enter Your Passport Number: LXO
Enter Your Name: LANCE
Enter Your Email Address: STROLL@GMAIL.COM
Seat Booking Successful!
Your Seat Number Is: Seat A-1
```

```
Welcome To Vicar Airlines Online Booking Hub
1. Reservation
2. Cancel
3. Display Records
4. Exit
Enter Your Choice
2
Enter Passport Number to Delete Record?:LCX
Has Been Deleted
```

```
Enter Your Choice
3

Passport Number : LXO
Name : LANCE
Email Address: STROLL@GMAIL.COM
Seat number: A-1
Passport Number : ROB
Name : JAMES
Email Address: MILNER@GMAIL.COM
Seat number: A-2
Passport Number : DMA
Name : KURT
Email Address: OBENHOFF@GMAIL.COM
Seat number: A-3
Passport Number : LCX
Name : KNIGHT
Email Address: SUGE@GMAIL.COM
Seat number: A-4
```



main.c

Vicar Records

1	LXO	LANCE	STROLL@GMAIL.COM
2	ROB	JAMES	MILNER@GMAIL.COM
3	DMA	KURT	OBENHOFF@GMAIL.COM
4			

Conclusion:

The Airline reservation system is designed for users to reserve a seat, cancel, display a seat and exit the system. A formula is included in the function to calculate the seats that are reserved. Pseudocode is written for some important codes. A few flow charts are also created for explaining the process of the Airline reservation system. From this assignment, We have learnt to implement a few C concepts in the future projects such as functions, switch statement and do...while statement, arrays, pointers and structures in the program. We have also learnt to create flow charts for explaining the program using <https://app.diagrams.net/>