

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Programming for Problem Solving

Minor Project

AIRLINE RESESRVATION SYSTEM

GROUP-

HARSHINI

PAPAI

MAHANTHI

PRASANTH SAI

INTRODUCTION

- Airline reservation system is a simple project holding flight details, passenger reservation and ticket records.
- Its saves the time as it allows online procedure, as users no longer to wait in a queue to book the flights.
- It maintains flight details, reservations, cancellation process, about needed flight numbers as well as the details about the seat, concessions for minors, senior citizens and physically handicapped.
- The purpose of this project is to help manage and organise the list of all flights.
- This airline reservation system has been way of minimizing the critical work which is almost routine and consumes the precious time.

FLOWCHART:



The Code:

```
#include<stdio.h>
#include<stdlib.h>
typedef struct flight
{
int f_no,price;
char dest[100];
}f;
typedef struct book
{
char name[100],address[1000],ph;
int age,price,mobile_no;
}b;
void add_flight()
{
f *add;
int i,n;
FILE *fp;
fp=fopen("Add.txt","w");
printf("          How many Flights you want to add:");
scanf("%d",&n);
add=(f *)calloc(n,sizeof(f));
for(i=0;i<n;i++)
{
printf("          Enter the details of flight %d\n",i+1);
printf("          Enter the Flight number:");
scanf("%d",&add[i].f_no);
printf("          Enter the Destination of the Flight:");
scanf(" %[^\\n]",add[i].dest);
```

```

printf("          Enter the Price:");
scanf("%d",&add[i].price);
fwrite(&add[i],sizeof(f),1,fp);
}
printf("\n");
fclose(fp);
}

void delete_flight()
{
FILE *fp,*fp1;
int f_no,found=1;
f add;
fp=fopen("Add.txt","r");
fp1=fopen("df.txt","w");
printf("          Enter the Flight Number to delete:");
scanf("%d",&f_no);
rewind(fp);
while(fread(&add,sizeof(f),1,fp))
{
if(f_no==add.f_no)
{
found=0;
continue;
}
else
{
//add=(f *)calloc(1,sizeof(f));
fwrite(&add,sizeof(f),1,fp1);
}
}
}

```

```

fclose(fp);
fclose(fp1);
if(found==1)
{
printf("                No flight found with the given flight number.\n");
}
else
{
fp=fopen("df.txt","r");
fp1=fopen("Add.txt","w");
while(fread(&add,sizeof(f),1,fp))
{
fwrite(&add,sizeof(f),1,fp1);
}
printf("                Flight deleted successfully.");
}

printf("\n");
fclose(fp);
fclose(fp1);
}

void book_tickets()
{
f add;
b *book;
int price,f_no,n,i;
FILE *fp1,*fp;
fp =fopen("Add.txt","r");
fp1=fopen("book.txt","a");
printf("                -----\n");

```

```

printf("          F_NO \t DESTINATION \t\t PRICE \n");
printf("          -----\n");
while(fread(&add,sizeof(f),1,fp))
{
printf("          %d \t %s \t\t %d \n",add.f_no,add.dest,add.price);
}
printf("          -----\n ");
printf("          Enter the Flight Number:");
scanf("%d",&f_no);
printf("How many Tickets you want to book:");
scanf("%d",&n);
book=(b *)calloc(n,sizeof(b));
rewind(fp);
while(fread(&add,sizeof(f),1,fp))
{
if(f_no==add.f_no)
{
for(i=0;i<n;i++)
{
char name[100],address[1000],ph;
int age,mobile_no,price;
printf("          Enter \n          Name:");
scanf(" %[^\n]",book[i].name);
printf("          AGE:");
scanf("%d",&book[i].age);
printf("          MOBILE NUMBER:");
scanf("%d",&book[i].mobile_no);
printf("          ADDRESS:");
scanf(" %[^\n]",book[i].address);
printf("          Are you physically handicapped(y/n):");

```

```

scanf(" %c",&book[i].ph);

printf("\n");

price=add.price;

printf("                The price for your ticket is: %d\n",price);

        if(book[i].age<=18)

        {

                book[i].price=price-price*0.1;

                printf("                You are eligible for a concessionn of 10 percent of your
price.\n");

                printf("                The price after the eligible concession is:
%d\n",book[i].price);

        }

        else if(book[i].age>60)

        {

                book[i].price=price-price*0.05;

                printf("                You are eligible for a concessionn of 5 percent of your price.\n");

                printf("                The price after the eligible concession is:
%d\n",book[i].price);

        }

        else if(book[i].ph=='y' || book[i].ph=='Y')

        {

                book[i].price=price-price*0.15;

                printf("                You are eligible for a concessionn of 15 percent of your price.\n");

                printf("                The price after the eligible concession is:
%d\n",book[i].price);

        }

        printf("\n");

        fwrite(&book[i],sizeof(b),1,fp1);

}

break;

}

}

```

```
printf("\n");
fclose(fp);
}
void cancel_tickets()
{
FILE *fp,*fp1;
b book;
f add;
int mobile_no,found=0,i;
fp=fopen("book.txt","r");
fp1=fopen("del.txt","w");
printf("          Enter the mobile number used to book the ticket:");
scanf("%d",&mobile_no);
rewind(fp);
while(fread(&book,sizeof(b),1,fp))
{
if(mobile_no==book.mobile_no)
{
found=1;
continue;
}
else
{
//book=(b *)calloc(1,sizeof(b));
fwrite(&book,sizeof(b),1,fp1);
}
}
fclose(fp);
fclose(fp1);
if(found==1)
```



```

{
fp=fopen("del.txt","r");
fp1=fopen("book.txt","w");
while(fread(&add,sizeof(f),1,fp))
{
fwrite(&add,sizeof(f),1,fp1);
}
printf("          Ticket cancelled successfully.\n");
}
else
printf("          No ticket found with given mobile number.\n");
printf("\n");
fclose(fp);
fclose(fp1);
}
void main()
{
int n,e,u;
printf("**** AIRLINES RESERVATION ***\n");
while(1)
{
printf("          1.EMPLOYEE\n");
printf("          2.USER\n");
printf("          0.EXIT\n");
printf("          Enter your choice:");
scanf("%d",&n);
printf("\n");
if(n==1)
{
printf("          1.ADD FLIGHT\n");

```

```

printf("                2.DELETE FLIGHT\n");
printf("                Enter your choice:");
scanf("%d",&e);
printf("\n");
switch(e)
{
case 1:
add_flight();
break;
case 2:
delete_flight();
break;
default:
printf("                Enter the correct choice\n");
}
}
else if(n==2)
{
printf("                1.BOOK TICKETS\n");
printf("                2.CANCEL TICKETS\n");
printf("                Enter your coice:");
scanf("%d",&u);
printf("\n");
switch(u)
{
case 1:
book_tickets();
break;
case 2:
cancel_tickets();

```

```

break;

default:

printf("                Enter correct choice\n");

}

}

else if(n==0)

exit(0);

else

printf("                Enter correct choice\n");

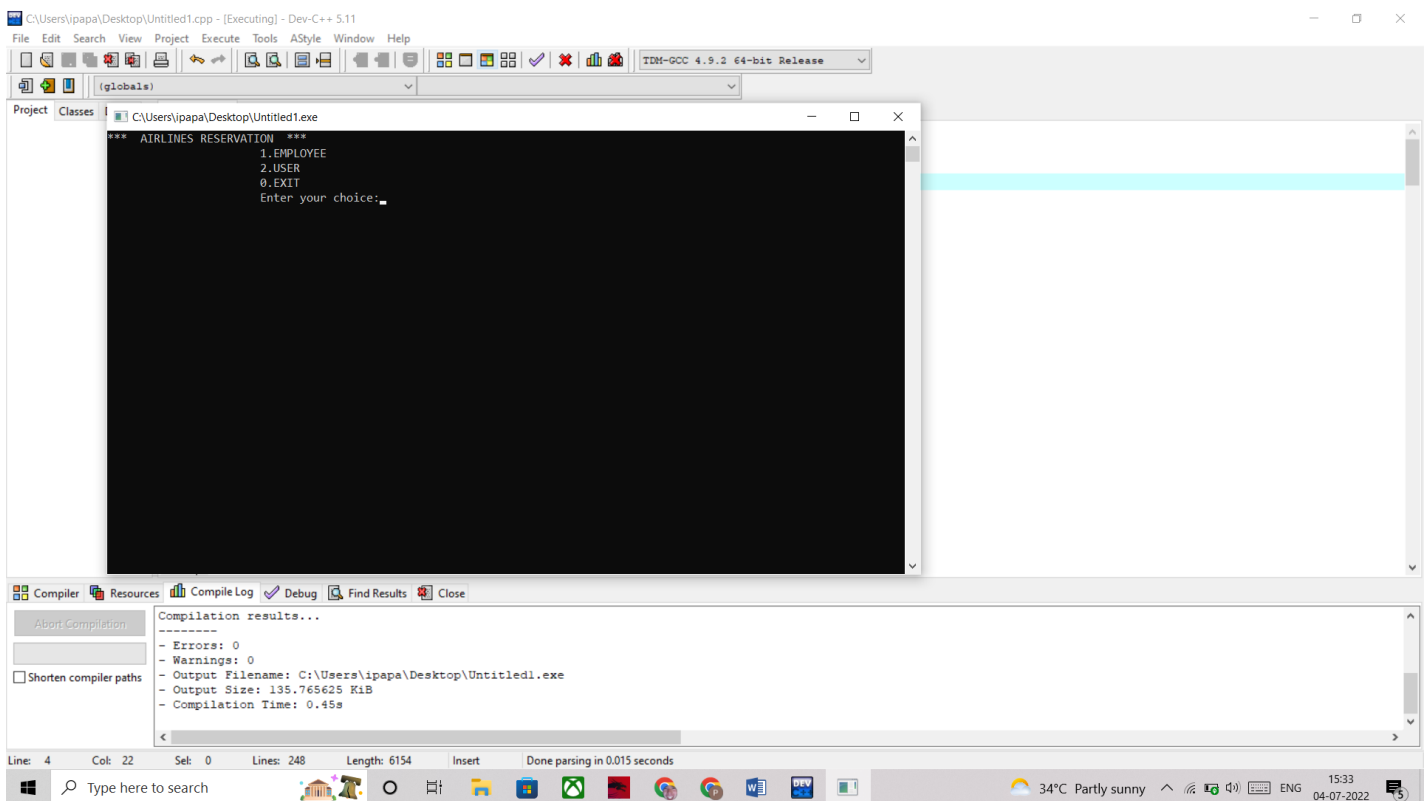
}

}

```

OUTCOME:

Output Screen 1: When the program is executed, the user will be directed to the main menu interface.



Main menu Interface

Output screen after choosing 1.EMPLOYEE → It will ask to input details of the flight to be added.

```
C:\Users\ipapa\Desktop\Untitled1.exe
*** AIRLINES RESERVATION ***
1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:1

1.ADD FLIGHT
2.DELETE FLIGHT
Enter your choice:1

How many Flights you want to add:1
Enter the details of flight 1
Enter the Flight number:123
Enter the Destination of the Flight:DEL
Enter the Price:400

1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:
```

Output screen for choosing 2.USER → It will show the various flights available and then ask us our details to book the flight and provide various types of concessions on the basis of that.

```
C:\Users\ipapa\Desktop\Untitled1.exe
*** AIRLINES RESERVATION ***
1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:1

1.ADD FLIGHT
2.DELETE FLIGHT
Enter your choice:1

How many Flights you want to add:1
Enter the details of flight 1
Enter the Flight number:123
Enter the Destination of the Flight:HYD
Enter the Price:4000

1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:2

1.BOOK TICKETS
2.CANCEL TICKETS
Enter your choice:1

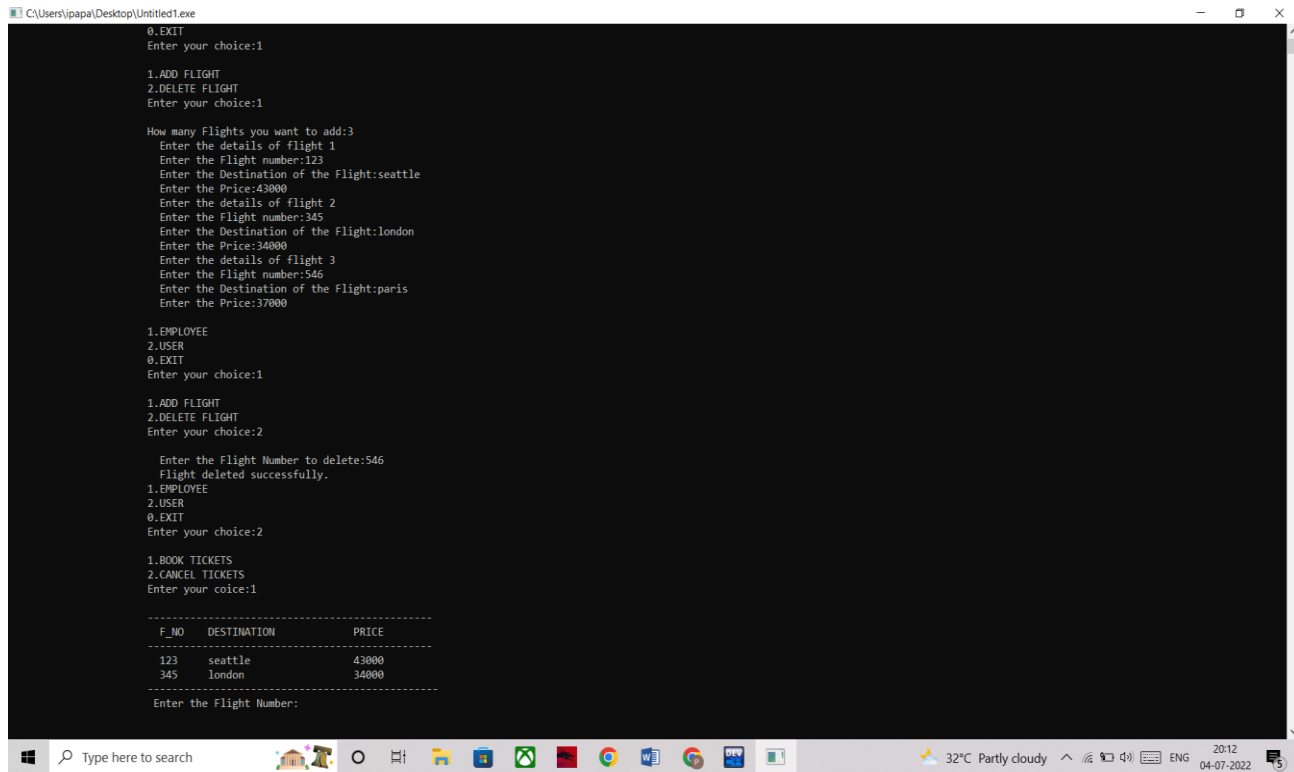
-----
F_NO  DESTINATION  PRICE
-----
123   HYD          4000
-----
Enter the Flight Number:123
How many Tickets you want to book:1
Enter
Name:Papai
AGE:18
MOBILE NUMBER:96543
ADDRESS:SRM
Are you physically handicapped(y/n):y

The price for your ticket is: 4000
You are eligible for a concessioonn of 10 percent of your price.
The price after the eligible concession is: 3600

1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:
```

The interface shows the ticket is booked successfully and that you have received a discount based on your information provided.

Output screen for employee deleting a flight through the program →



```
C:\Users\ipapa\Desktop\Untitled1.exe
0.EXIT
Enter your choice:1

1.ADD FLIGHT
2.DELETE FLIGHT
Enter your choice:1

How many Flights you want to add:3
Enter the details of flight 1
Enter the Flight number:123
Enter the Destination of the Flight:seattle
Enter the Price:43000
Enter the details of flight 2
Enter the Flight number:345
Enter the Destination of the Flight:london
Enter the Price:34000
Enter the details of flight 3
Enter the Flight number:546
Enter the Destination of the Flight:paris
Enter the Price:37000

1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:1

1.ADD FLIGHT
2.DELETE FLIGHT
Enter your choice:2

Enter the Flight Number to delete:546
Flight deleted successfully.
1.EMPLOYEE
2.USER
0.EXIT
Enter your choice:2

1.BOOK TICKETS
2.CANCEL TICKETS
Enter your choice:1

-----
F_NO  DESTINATION  PRICE
-----
123   seattle      43000
345   london       34000
-----

Enter the Flight Number:
```

CONCLUSION:

The airline Reservation System is designed for users to reserve a seat, cancel, display the seat and exit the system. It also has a user interface where the employees of the airline can add the flights on real-time for the benefits of the passengers at once.

From this assignment, I 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.