

REPORT ON:

Airline Reservation System

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**Abstract**

This document is aimed to cover all the description of the “airline reservation”. The software will provide a way for airline reservation from any web based device. The developers are hopeful that this software can play a good role in the field of airline reservation.

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**Introduction**

Airline Reservation System contains the details about flight schedules and its fare tariffs, passenger reservations and ticket records. An airline’s inventory contains all flights with their available seats. The inventory of an airline service is generally divided into two category of classes (AC and NON AC) and AC having seats up to 1-15 bookings, NON AC seat having 16-40 along with prices and booking conditions. Inventory data is imported and maintained through a Schedule Distribution System over standardized interfaces. One of the core functions of the inventory management of airline reservations is the inventory control. Inventory control steers how many seats are available for the different booking classes, by opening and closing individual booking classes for sale. In combination with the fares and booking conditions stored in the Fare Quote System the price for each sold seat is determined.

Requirements

* Reservation Description
* Flight Details
* Admin
* Customer
* Login
* Make Reservation
* Seat Plan
* Cancel Reservation
* EXIT

**Over All Description**

Airline reservation system to provide a seat to a specific passenger by plane on a specific flight from one specified airport to another. The plane is scheduled to leave at a certain time and touch down at the destination at a certain time. Whether the airline reservation may later be changed varies from ticket to ticket .Here will have a chart this chart will have all flight detail. Airline reservation system also have an admin. He control all system. He can see scheduling flight, view passenger list, cancel ticket etc. Customer can see view flight timing and availability and they can book ticket and cancel ticket. Here will be login system. Every customer make reservation and seat plan and cancel reservation.

**Design**

**Use case diagram for administrator**

Login

Scheduling flights

View passenger list

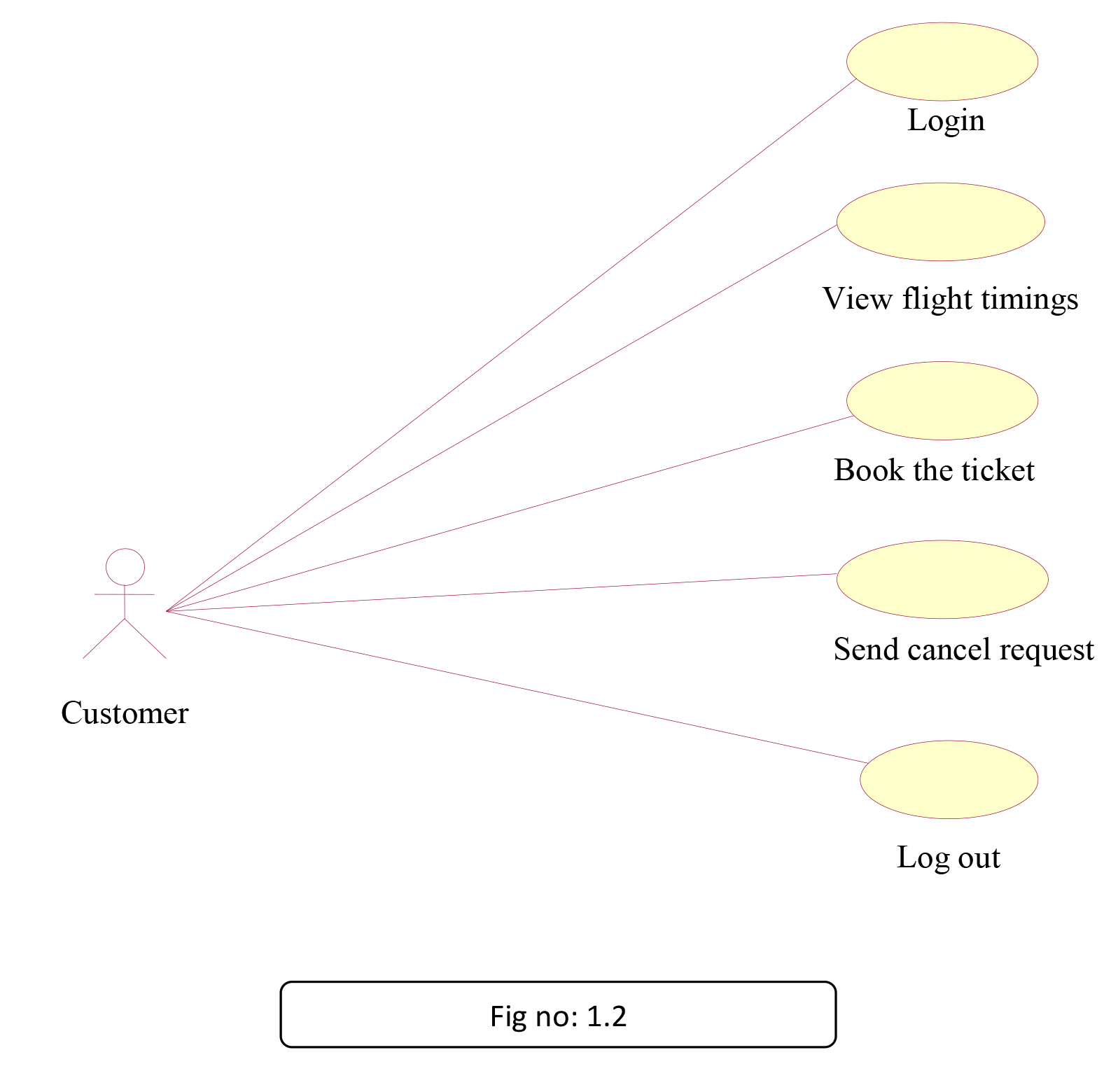
Cancel the ticket

Log out

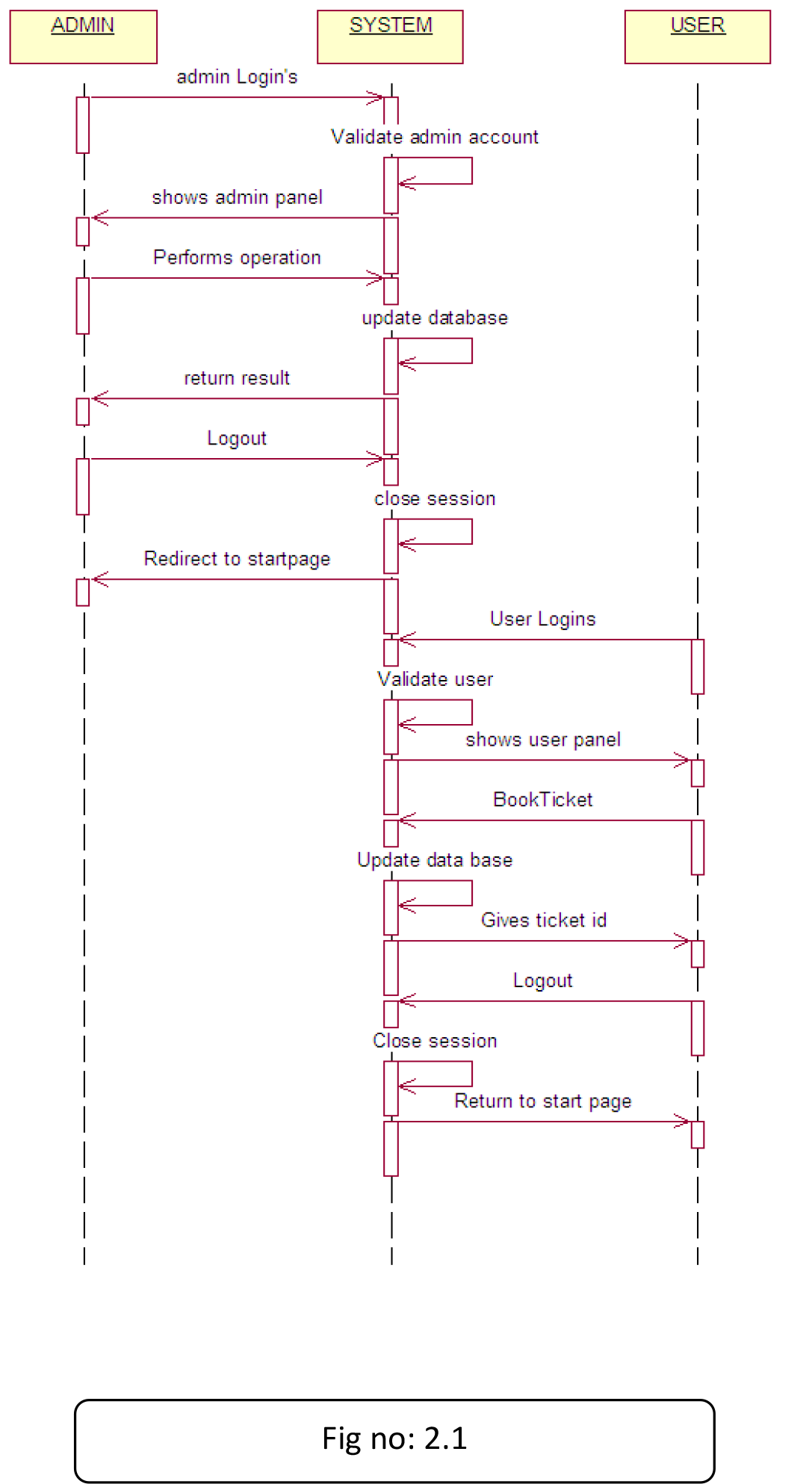
ADMIN

Fig no: 1.1

**Use case diagram for customer.**



**Sequence diagram:**

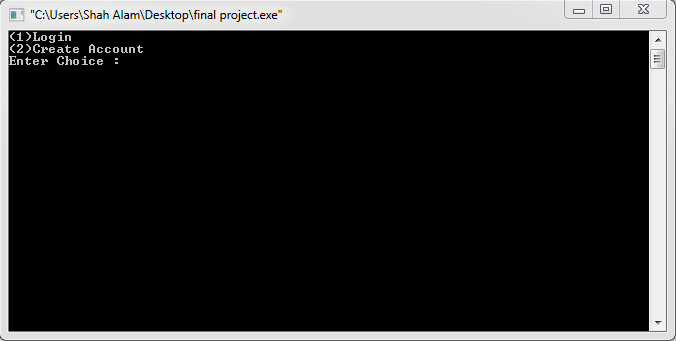


**Description**

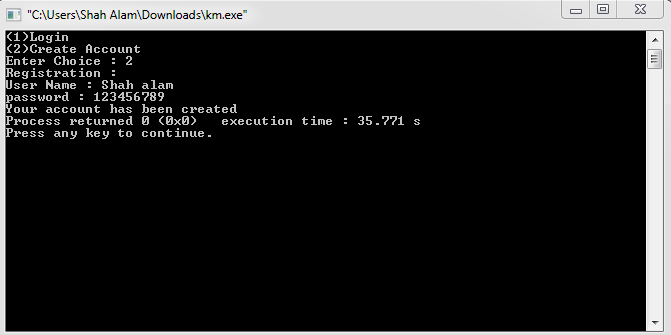
Here also have an admin and he control all reservation system. Admin can login and see the scheduling flight and also see passenger list. If needed he can cancel the ticket. Customer can login and see view flight availability, book the ticket and customer can send cancel request for cancel the booking ticket.

**Implementation**

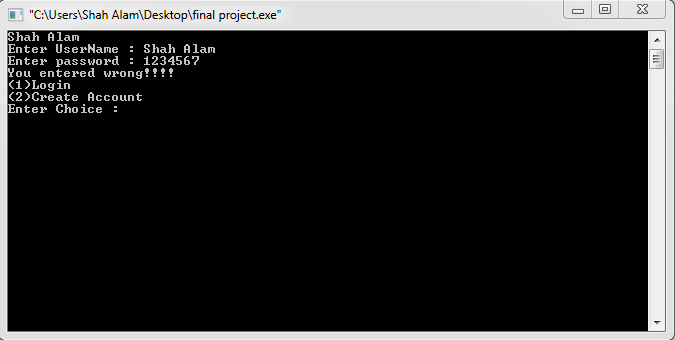
For this application we given some screen short to know actual situation let we show the screen short and also try to relationship between those. This implementation sequence will containing total over view



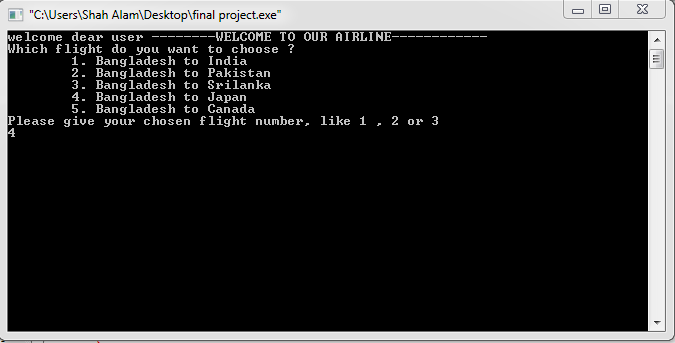
1st  this our main page here the two option login system and create an account system



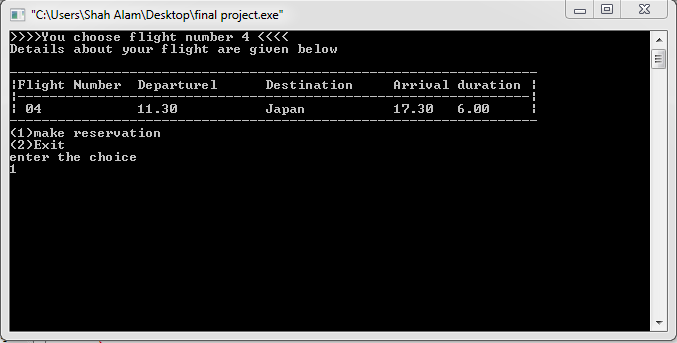
This system at first choose the option 2 and create an account. Here the user will give user name and password then the registration successful. Then user can login this exact user name and password



If the user enter the incorrect name and password then user will be fail the login system. Then user choose the option 1 and enter the correct name and password then enter option

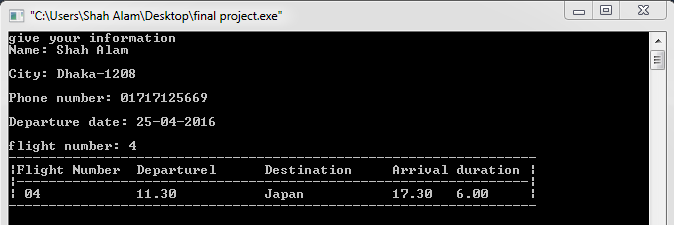


In this page user choose the country and enter the flight number option



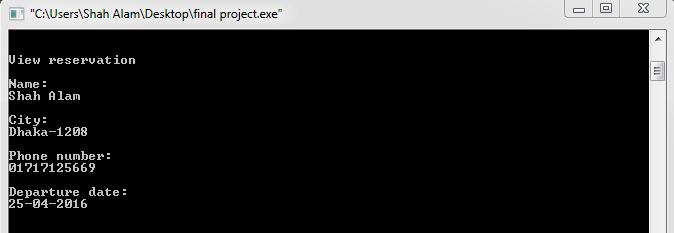
Here in this page user can see about flight detail.If the user choose the flight detail and make reservation

enter (1). Otherwise enter the option( 2)

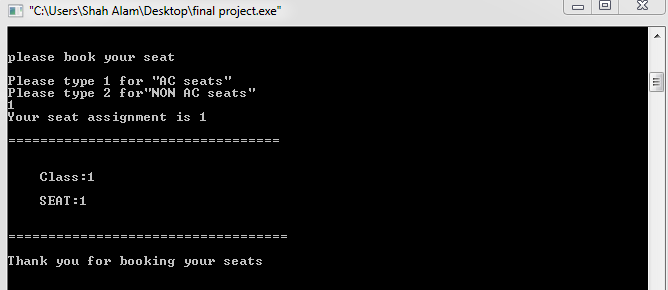


Here the user will give her information (name,city,phone number,deperture date, flight number etc)

Here the information page ,when given the flight number then automatically show about flight detail.

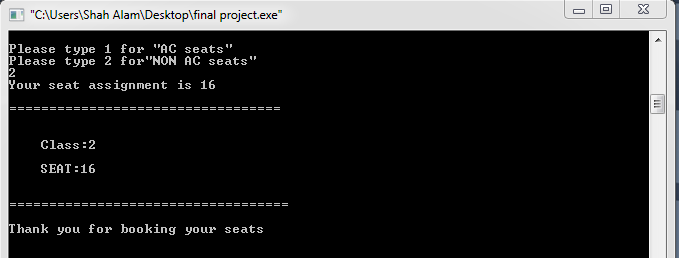


If user wants to see his given information he can see the view reservation.And he will see his given information



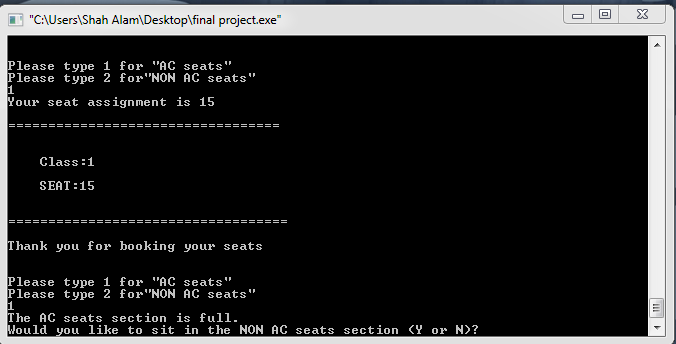
Here the user book his seat.If the user wants to ac seat user type 1 for ac seat.

Here the total ac seat is ( 1-15 ) .



If the user wants to non ac seat user type 2 for non ac seat.

Here the total non ac seat is ( 16-40) .



Here the total seat is 40 .If the all ac seat are booked then ac seat assignt is fail.If the user wants to non ac seat then prees “Y” or not “N”

Application:

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#define MAX\_NUM\_SEATS (40)

#define AC (15)

#define NON\_AC (MAX\_NUM\_SEATS - AC)

void wellcome();

void login();

void airline();

void BdtoIndia();

void BdtoPakistan();

void BdtoSrilanka();

void BdtoJapan();

void BdtoCanada();

void information();

void seat\_create();

int main(){

wellcome();

return(0);

}

void wellcome(){

struct user{

char name[40];

char password[40];

};

FILE \*fp;

int i=0;

int ret\_userName;

int ret\_password;

char userName[40];

char password[40];

struct user user\_Set[10];

int choice;

printf("(1)Login\n(2)Create Account\nEnter Choice : ");

scanf("%d",&choice);

system ("CLS");

if(choice==2){

printf("Registration :\nUser Name : ");

fgets(user\_Set[0].name,40,stdin);

fgets(user\_Set[0].name,40,stdin);

printf("password : ");

fgets(user\_Set[0].password,40,stdin);

fp=fopen("user.txt","wb");

fwrite(user\_Set,1,sizeof(user\_Set),fp);

printf("Your account has been created\n");

fclose(fp);

system("CLS");

main();

}else if(choice==1){

fp=fopen("user.txt","rb");

fread(user\_Set,sizeof(struct user),10,fp);

printf("%s",user\_Set[0].name);

fclose(fp);

printf("Enter UserName : ");

fgets(userName,40,stdin);

fgets(userName,40,stdin);

printf("Enter password : ");

fgets(password,40,stdin);

for(i=0;i<10;i++){

ret\_userName=strcmp(userName,user\_Set[i].name);

ret\_password=strcmp(password,user\_Set[i].password);

if(ret\_password==0 && ret\_password==ret\_userName){

login();

break;

}else if(i==9){

printf("You entered wrong!!!!\n");

main();

}

}

}

}

void login(){

system("CLS");

printf("welcome dear user ");

airline();

}

void airline(){

printf("--------WELCOME TO OUR AIRLINE------------\n");

printf("Which flight do you want to choose ?\n"

"\t1. Bangladesh to India\n"

"\t2. Bangladesh to Pakistan\n"

"\t3. Bangladesh to Srilanka\n"

"\t4. Bangladesh to Japan\n"

"\t5. Bangladesh to Canada\n");

{

printf("Please give your chosen flight number, like 1 , 2 or 3\n");

int flightNumber;

scanf("%d",&flightNumber);

system("CLS");

switch(flightNumber){

case 1:

printf("\n\n>>>>You choose flight number %d <<<<\n\n",flightNumber);

printf("Details about your flight are given below\n\n");

BdtoIndia();

break;

case 2:

printf(">>>>You choose flight number %d <<<<\n",flightNumber);

printf("Details about your flight are given below\n\n");

BdtoPakistan();

break;

case 3:

printf(">>>>You choose flight number %d<<<< \n",flightNumber);

printf("Details about your flight are given below\n\n");

BdtoSrilanka();

break;

case 4:

printf(">>>>You choose flight number %d <<<<\n",flightNumber);

printf("Details about your flight are given below\n\n");

BdtoJapan();

break;

case 5:

printf(">>>>You choose flight number %d<<<< \n",flightNumber);

printf("Details about your flight are given below\n\n");

BdtoCanada();

break;

}

{

int choice;

printf("(1)make reservation\n(2)Exit\nenter the choice\n");

scanf("%d",&choice);

system("CLS");

switch (choice)

{

case 1:

information();

case 2:

exit(0);

}

}

}

}

void information(){

printf("give your information\n");

char p[20],l[20],b[20],c[20],d[20];

gets(p);

printf("Name: ");

gets(l);

printf(" \n");

printf("City: ");

gets(b);

printf(" \n");

printf("Phone number: ");

gets(c);

printf(" \n");

printf("Departure date: ");

gets(d);

printf(" \n");

int a;

printf("flight number: ");

scanf("%d",&a);

if(a==5){

printf("--------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\t duration |\n");

printf("|-------------------------------------------------------------------|\n");

printf("| 05\t\t2.00\t\tCanada\t\t17.47 \t 15:47 |\n");

printf("--------------------------------------------------------------------|\n");

}

if(a==2)

{

printf("------------------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\t duration |\n");

printf("|-----------------------------------------------------------------------------|\n");

printf("|02\t\t12.00\t\tPakistan\t\t13.00 \ 1:00 |\n");

printf("------------------------------------------------------------------------------\n");

}

if(a==1)

{

printf("--------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\ duration |\n");

printf("|-------------------------------------------------------------------|\n");

printf("| 01\t\t10.00\t\tIndia\t\t11.00\t1.00 |\n");

printf("--------------------------------------------------------------------\n");

}

if(a==3)

{

printf("------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\ duration |\n");

printf("|-----------------------------------------------------------------|\n");

printf("| 03\t\t14.00\t\tSrilanka\t15.00 \t1.00 |\n");

printf("------------------------------------------------------------------\n");

}

if(a==4)

{

printf("------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\tduration |\n");

printf("|----------------------------------------------------------------|\n");

printf("| 04\t\t11.30\t\tJapan\t\t17.30 \t6.00 |\n");

printf("------------------------------------------------------------------\n");

}

{

printf(" \n");

printf(" \n");

printf("View reservation\n");

printf(" \n");

printf("Name: \n%s\n",l);

printf(" \n");

printf("City: \n%s\n",b);

printf(" \n");

printf("Phone number: \n%s\n",c);

printf(" \n");

printf("Departure date:\n%s\n",d);

printf(" \n");

}

//system("CLS");

seat\_create();

}

void seat\_create()

{

printf(" \n");

printf("please book your seat\n");

int plane[MAX\_NUM\_SEATS] = {0}, i=0;

int nNumSeatsInFirst = 0;

int nNumSeatsInEconomy = 0;

int nSeatAssignmentFirstClass = 1; // start at 1;

int nSeatAssignmentEconomy = AC + 1; // start at 6

int k;

int nClass;

int nCurrentSeatAssignment;// firstClass=1,NON AC seats=6,choice;

char response[2];

int bPrintTicket;

while( i < MAX\_NUM\_SEATS )

{

printf("\n%s\n%s\n", "Please type 1 for \"AC seats\"","Please type 2 for\"NON AC seats\"");

scanf("%d", &k);

if( !( ( 1 == k ) || ( 2 == k ) ) )

{

//printf("Do You want more seat\n");

continue;

}

// start out assuming we will print ticket!

bPrintTicket = 1;

nClass = k;

// store the class before doing all the logical checks

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* NON AC seats SECTION \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

if( 2 == k )

{

// check for NON AC seats full

if( nNumSeatsInEconomy >= NON\_AC )

{

// NON AC seats full

// check for AC seats (plane ) full

if( nNumSeatsInFirst <= AC )

{

printf("The NON AC seats section is full.\n");

printf("would you like to sit in AC seats ");

printf("section( Y or N)?");

scanf("%s", response);

if ( toupper(response[0])=='Y')

{

// print ticket!

bPrintTicket = 1;

printf( "Your seat assignment is %d\n", nSeatAssignmentFirstClass );

nCurrentSeatAssignment = nSeatAssignmentFirstClass;

plane[nSeatAssignmentFirstClass - 1] = 1;

nSeatAssignmentFirstClass++;

nNumSeatsInFirst++;

nClass = 1;

i++;

}

}

exit(4);

}

else

{

// NON AC seats is not full

printf("Your seat assignment is %d\n", nSeatAssignmentEconomy );

plane[(nSeatAssignmentEconomy - 1)] = 1;

nCurrentSeatAssignment = nSeatAssignmentEconomy;

nSeatAssignmentEconomy++;

nNumSeatsInEconomy++;

i++;

}

} // if( choice == 2 )

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* AC seats SECTION \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

if( 1 == k )

{

// check for fisrt class full

if( nNumSeatsInFirst >= AC )

{

// AC seats full

// check for NON AC seats class (plane) full

if( nNumSeatsInEconomy <= NON\_AC )

{

printf("The AC seats section is full.\n");

printf("Would you like to sit in the NON AC seats ");

printf("section (Y or N)?");

scanf("%s", response);

if(toupper(response[0])=='Y')

{

printf("Your seat assignment is %d\n",nSeatAssignmentEconomy);

plane[nSeatAssignmentEconomy - 1] = 1;

nCurrentSeatAssignment = nSeatAssignmentEconomy;

nSeatAssignmentEconomy++;

nNumSeatsInEconomy++;

i++;

nClass = 2;

}

}

}

else

{

// first is not full

printf("Your seat assignment is %d\n", nSeatAssignmentFirstClass );

plane[(nSeatAssignmentFirstClass - 1)] = 1;

nCurrentSeatAssignment = nSeatAssignmentFirstClass;

nSeatAssignmentFirstClass++;

nNumSeatsInFirst++;

i++;

}

}

if( 1 == bPrintTicket )

{

printf("\n==================================\n");

printf(" \n");

printf(" \n");

printf(" Class:%d \n",nClass);

printf(" \n");

printf(" SEAT:%d \n",nCurrentSeatAssignment);

printf(" \n");

printf(" \n");

printf("===================================\n");

printf(" \n");

printf("Thank you for booking your seats\n");

printf(" \n");

}

}

printf("\nAll the seats for this flight are sold\n");

}

void BdtoIndia(){

printf("--------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\ duration |\n");

printf("|-------------------------------------------------------------------|\n");

printf("| 01\t\t10.00\t\tIndia\t\t11.00\t1.00 |\n");

printf("--------------------------------------------------------------------\n");

}

void BdtoPakistan(){

printf("------------------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\t duration |\n");

printf("|-----------------------------------------------------------------------------|\n");

printf("|02\t\t12.00\t\tPakistan\t\t13.00 \ 1:00 |\n");

printf("------------------------------------------------------------------------------\n");

}

void BdtoSrilanka(){

printf("------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\ duration |\n");

printf("|-----------------------------------------------------------------|\n");

printf("| 03\t\t14.00\t\tSrilanka\t15.00 \t1.00 |\n");

printf("------------------------------------------------------------------\n");

}

void BdtoJapan(){

printf("------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\tduration |\n");

printf("|----------------------------------------------------------------|\n");

printf("| 04\t\t11.30\t\tJapan\t\t17.30 \t6.00 |\n");

printf("------------------------------------------------------------------\n");

}

void BdtoCanada(){

printf("--------------------------------------------------------------------\n");

printf("|Flight Number\tDeparturel\tDestination\tArrival\t duration |\n");

printf("|-------------------------------------------------------------------|\n");

printf("| 05\t\t2.00\t\tCanada\t\t17.47 \t 15:47 |\n");

printf("--------------------------------------------------------------------|\n");

}

TESTING

Testing 1:

Firstly our application has login system if a user can’t login without create account and registration. So firstly user will be registration to successfully then login. When a user will be login user also give exact user name and password. If a user give incorrect user name and password then user could not login. So user also give exact user name and password for login system.

Testing 2:

User successfully login system then see to the flight like (Bangladesh to India, Bangladesh to japan etc.). We couldn’t add save in the file in flight detail. Here the user choose where he want to go and press option otherwise if a user don’t choose it he can exit.

Testing 3:

After the user choose to option and press then user see to flight detail like (flight number, departure, destination, arrival time and duration). If the user want to it then he press option “1” make reservation otherwise he press option 2 for exist

Testing 4:

After press “1” a peg will come take user input and this page user give his information like (name, phone number, city, departure date, flight number etc.). Here some wrong like (option name take all character and phone number, city etc. take all character) so there are no validation.

Testing 5:

After user give all information he also give the flight number option give flight number. As a result again show the about flight detail. At the same time this application show the view reservation like (name, city etc.) that means user given the correct information at all.

Testing 6:

In this page user will be booking seat. This application has two categories seat is 40 (Ac and NON AC seat) the AC seat is 1-15 and NON AC seat is 16-40. If the all AC seat are booked then the system will information the all AC seat are booked do you like NON AC seat (“York “N”) if the user press “Y” then NON AC seat is assignment. If the all (AC and NON AC) seat are booked this application will see the information all seat are booked (Thank you).

**Strong and Weak point of this Program**

**Strong Point:**

In our software, it has huge strong points. In our software, the Verification page is one of the strongest phases of this software. A user cannot able to go the main menu without entered the exact user name and password. The main menu is another strong point. In main menu if the user enters “1” then user can be login and enter “2” user can create account. In our software at first user create an account successfully then user can login. After login page user can be see flight detail. This is our strong point. After see the flight detail, user enter “1” for make reservation, or user enter “2” for exit. When user will be make reservation, when he will give the flight number then again show the flight detail. User can assigned the seat (ac or none).

**Weak point:**

In our software login system can’t detect week and strong password. In our software when create a new account then exited old account so it’s one user software. We couldn’t add logout system. Flight detail we couldn’t save the file. When users make reservation system, when user will give input our system take all character input so there are no validation so this is our week point. In this system passport number was much needed but we couldn’t add this system

Evolution of our learning experience:

We learned many things, when we are making our application project report .we learned so much important things that include our application as like.

* Declare variable and assign values.
* Input number /character from keyboard.
* Using function to return values.
* Using Head file.
* What is unistd.h.
* Using function arguments.
* Using if ,if else for loop. While do while loop, switch case etc.
* Using strung, structure, multidimensional array.
* Continue and go to statement.
* Logical operators.
* Using pointers.
* Using functions.
* File input & output.

Before making this report, we don’t know how to make a report? We always think how can make a batter report? Before making this project we also don’t know about many important things. But now this time we know better about this application.

**Conclusion**

Throughout the semester I have tried to follow all the steps of proper software engineering to make the project success. The project document is an evidence of what has been done in the undertaken project from the software requirement specification to Software testing and quality assurance. I have tried to follow and practice those processes as much as possible. I hope this will help me in my future software development. This document also will be helpful for further extension and management of the project.

Reference:

* Software tools and techniques by Mr. Kaushiksarker.
* Programming in ANSI by E. Balagurusamy.
* Computer Programming Md.kamrujjaman nitone.
* <https://www.cprogramming.com>

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