Pt. Deen Dayal Upadhyay Management College, Meerut

Major Project Report

On

(Airline Reservation System)

BCA

Session 2020 - 23

Submitted To:
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Submitted By : Student

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Roll No. : 200973106046

DECLARATION

We hereby declare that this project has been written by us and as a record of my own research work. It has not been presented in any previous application for a high degree of this or any other University. All citations and sources of information are clearly acknowledged by means of references

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Creative-i Technologies **CREATIVE TECHNOLOGIES**

CERTIFICATE OF MERIT

Summer Training & Internship Program 2022

This is to certify that Mr./Ms. Rachit Tyagi student of BCA 3rd Yr has undergone **5 weeks** of online training in **Core Java Programming** from **9th July, 2022 to 23rd August, 2022** conducted at **Pt. Deen Dayal Upadhyay Management College, Meerut** during *Summer & Project Training Program* conducted by *Creative Technologies Pvt. Ltd.*

For Pt. DDUMC, Meerut

Dr. Robins Rastogi
(HOD | BCA)

ACKNOWLEDGEMENT

This is to express my gratitude to all those who helped and motivated me for this project and completion of this project gives me immense pleasure to acknowledge all those supporters.

1 have taken efforts in this project. However, it would not have been possible without the kind support and helped of many individuals and organizations. I would like to extend my sincere thanks to all of them.

I am highly indebted to Mr. VIMAL PRASAD SIR for their guidance & constant supervision as well as for providing necessary information regarding the project & also for their support in completion of the project.

I would like to express my gratitude towards my PARENTS & members of Pt. DDUMC for their kind support, cooperation & encouragement which help me in completion of this project.

Every project big or small is successful largely due to the efforts of the wonderful people who have always given their valuable advice or lent a helping hand.

I am highly thankful to my colleagues & HOD Mr. Robins Rastogi sir and director sir.
Thanks to all.

PREFACE

During our studies here in the first year and working in computer laboratory, I performed a project on the basis of job training. I felt a golden opportunity for me while work ing on this project on Airline Reservation System.

The project contains a detailed study about how is the inventory managed, how is billing done and what all a business activities are done to
manage the business and making it more fruitful. In this project some screens and reports are also included. It also tells the files used by the company to do
their work and given the whole knowledge and information about the Airline Reservation System.

INTRODUCTION

1.1 INTRODUCTION

Airline reservation system is a platform that is designed to meet the demand of customers and clients that are booking a particular flight online to a certain destination. The main purpose of this software application is to reduce incorrect information given out to airline technicians such as dates of departure or arrival due to language barriers and misunderstanding. This online platform will make it convenient for customers and potential clients to book a flight at any point of time.

The users will also have the right to modify the flight details, make a new reservation, view flight schedule, and also to cancel the flight as per their wishes.

Furthermore, Airline reservation system contains details of the flight such as flight costs, passenger reservations and ticket datasheet records added to its database. Customers do not have to visit at the airline office to make a traveling reservation. This software was designed to eliminate the old manual system and to implement artificial based technology. The system is user friendly software that no formal education or profession is needed to make use it.

Airline reservation system provides alternatives for watching identical and non-identical routes available at a particular timeframe. The system checks for available seats on a particular flight and if are to be find available then only a customer would be able to make a reservation hence or otherwise the person will consider to choose other available flights.

1.2 PROJECT OVERVIEW

The Airline Reservation System project is an implementation of a general Airline Ticketing website like Orbitz, which helps the customers to search the availability and prices of various airline tickets, along with the different packages available with the reservations.

This project also covers various features like online registration of the users, modifying the details of the website by the management staff or administrator of the website, by adding, deleting or modifying the customer details, flights or packages information.

In general, this website would be designed to perform like any other airline ticketing website available online

1.3 OBJECTIVE OF THE PROJECT

To provide some amount of automation in airlines management.

To help airlines system in making their business more efficient.

An added attraction for their potential customers.

It will also show the attitude of the management that they are aware to the newly introduced technology and ready to adopt them.

CHAPTER 3. SYSTEM ANALYSIS

The system analysis phase is regarded to be one of the most important phases in the system development life cycle. It is extremely important that the software developer make thorough study of the existing system. Thorough study of the system is made and need i.e., features that are evaluative to system success and users wants (i.e., features that would be good but not essential) are brought out. The study will enable the developer to know the complexities of the existing system.

Requirement analysis is done in order to understand the problem which the software system is to solve e.g., the problem could be computerizing the existing manual system or developing a completely new automated system or a combination of the two. For large systems having a large number of features and the need to perform many different tasks, understanding the requirement of the system is an important and major task. The significance in requirement analysis is on identifying what is needed from the system and not how the system achieves its goal.

The main purpose behind any business organization is to maximize its profit besides maintaining quality and strategic standards. This can be achieved by improving the efficiency and effectiveness of the system by providing more facilities using automation, by adopting faster data access, proper communication, whereas the main aim behind automation is not only to maximize profit but also to take care of passenger's interest by providing them better and more comfortable facilities.

The most important objective behind automation is to minimize Paper Work. Paper Work/Registers are replaced by a Centralized Data Bank, which is well equipped to store and provide information as and when required. This Data Bank also helps speed up the communication between various departments outside agencies, as there is no need of making request against different departments for a specific data and to wait for it for a long period of time. This also improves the efficiency and it saves time and human resources.

0 Level DFD

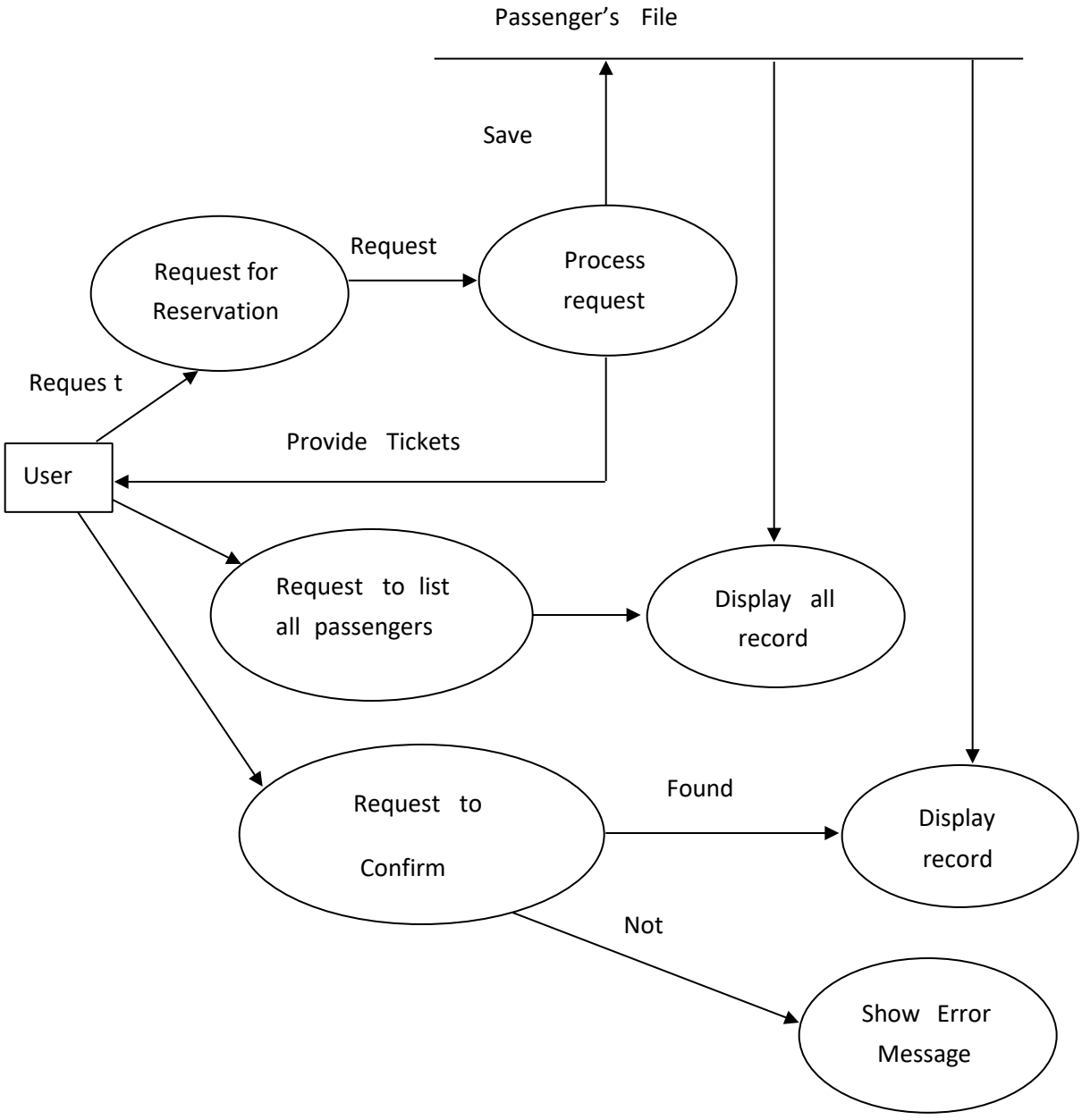


Figure 4.0 level DFD

1st Level DFD

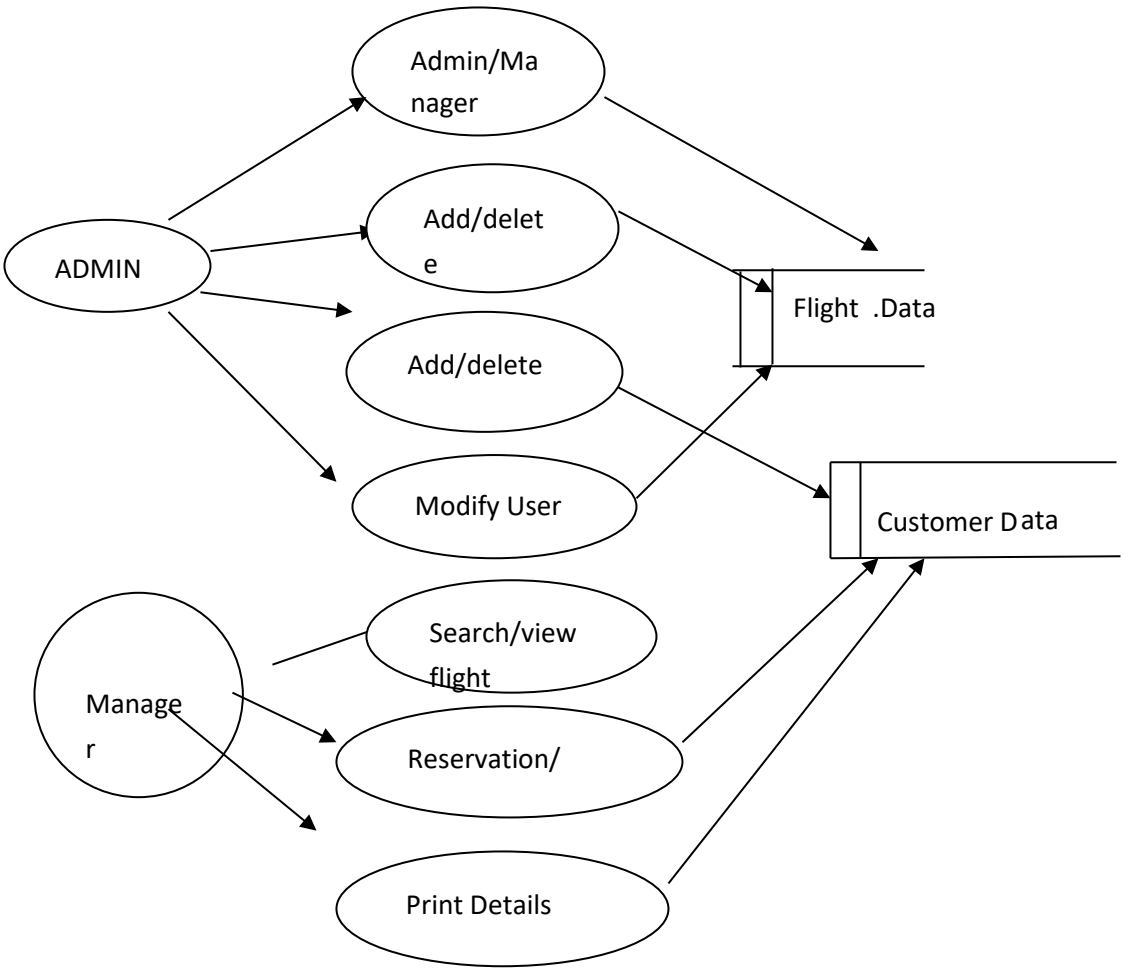


Figure 5. 1st level DFD

LEVEL 2 DFD

1. LOGIN

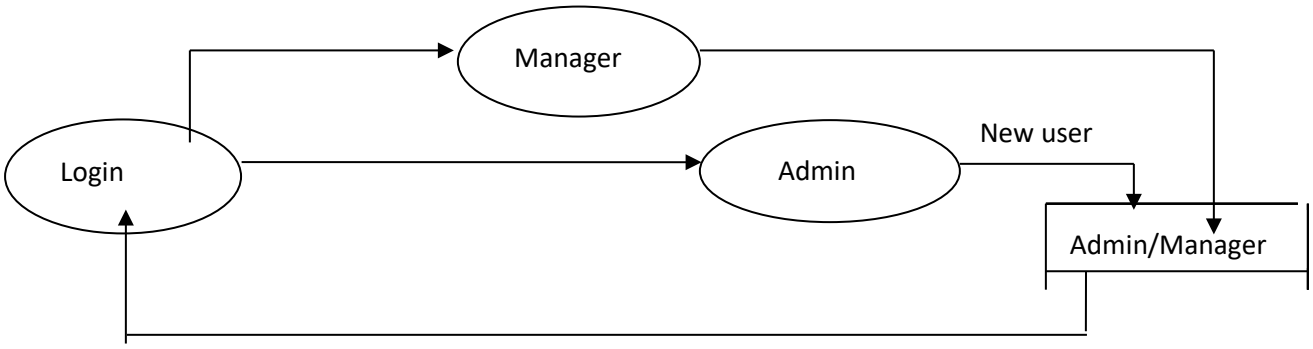
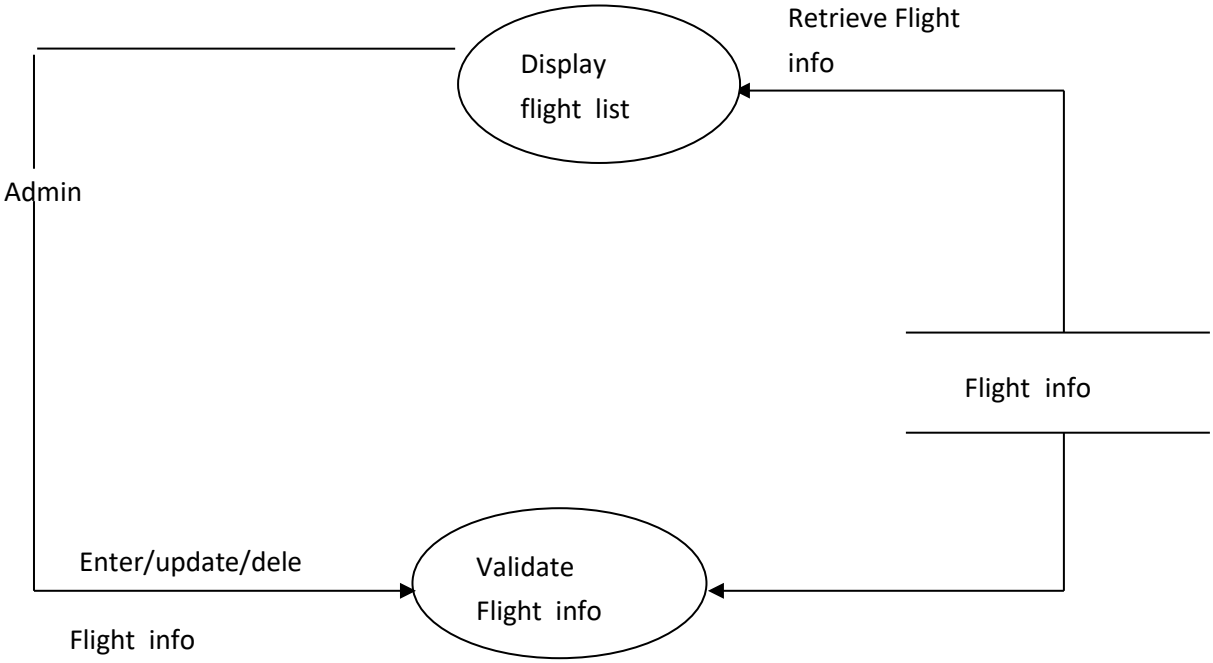


Fig.6

2. TICKETS


Display
flight list
Retrieve Flight
info
Admin
Flight info
Enter/update/dele
Flight info
Validate
Flight info

3. CUSTOMER

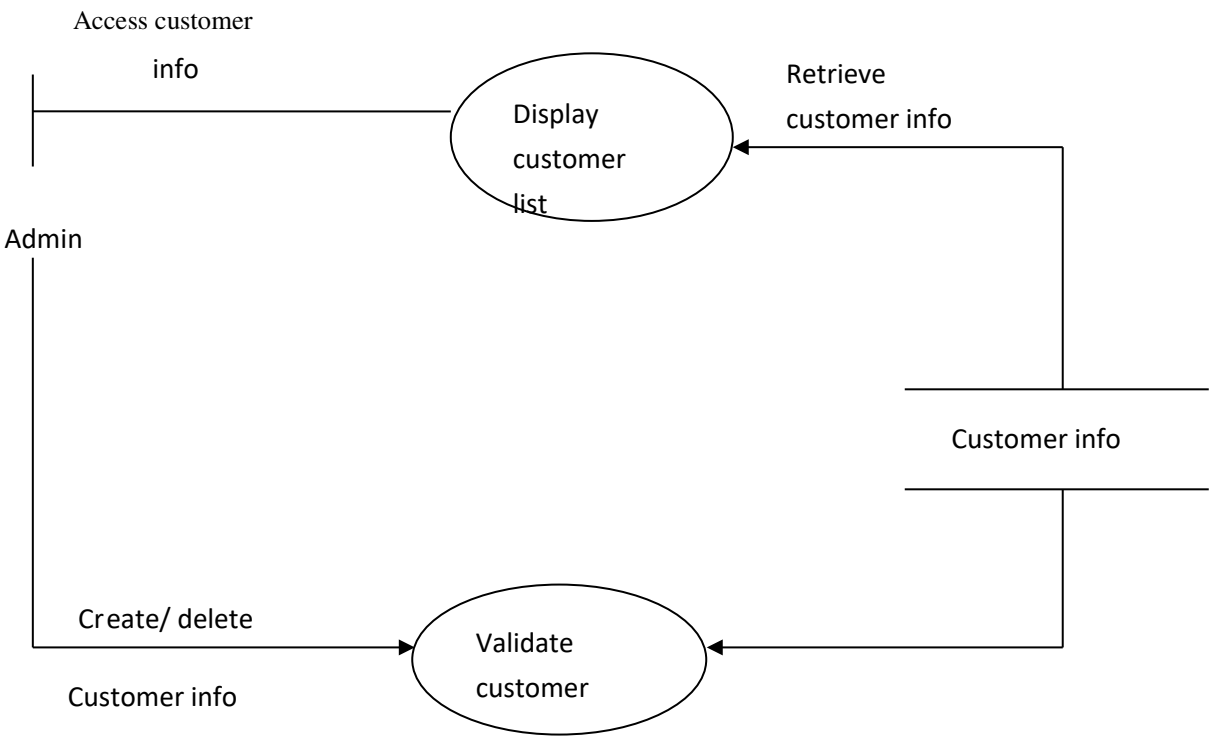


Fig 8

2.3 FEASIBLITY

A feasibility study is carried out to select the best system that meets the performance requirements.
Feasibility is the resolution of whether or not a project is worth doing. The process followed in making this resolution is called a feasibility study. This type of study determines if a project can and should be taken.

Since the feasibility study may lead to the commitment of large resources, it becomes necessary that it should be conducted efficiently and competently and that no any fundamental errors of judgment are made.

Depending on the results of the initial investigation, the survey is expanded to a more detailed and explained feasibility study. Feasibility study is a test of system proposal according to its effective use of resources, workability, effect on the organization and the ability to meet user needs.

The objective of the feasibility study is not to solve the problem but to acquire a sense of its scope. During the study, the problem definition is crystallized and aspects of the problem to be included in the system are determined.
Consequently, costs and benefits are described with greater accuracy at this stage.

It consists of the following:

1. **Statement of the problem:**
   An attentive worded statement of the problem that led to analysis.

2. **Summary of findings and recommendations**:

   A list of the major findings and recommendations of the study are made with a lot of considerations. It is useful for the user who requires quick access to the results of the analysis of the system under study.

   Conclusion are made, followed by a list of the recommendation for them.

3. **Details of findings:**

   An outline of the procedures and methods under-taken by the existing system, followed by coverage of the procedures and objectives of the candidate system. Included are also discussions of file structures, output reports, and costs and benefits of the candidate system.

4. **Recommendations and conclusions:**

   Specific recommendations regarding the candidate system, including personnel assignments, costs, project schedules, and target dates.

There are three key considerations of feasibility study which are

1. Operational feasibility
2. Behavioral feasibility
3. Technical feasibility

2.3.1 Operational Feasibility:

Operational analysis is the most frequently used method for evaluating the effectiveness of a system. More commonly known as cost/ benefit analysis, the procedure is to determine the benefits and savings that are expected from a system and compare them with cost.

Earlier the work was done manually which takes a lot of people/labor as well as a lot of time which is more economical. Now the same work is computerized which is more

efficient and effective, doesn't consume a lot of time, reduces labor/manpower which in turn proves to be less economical and saves time.

2.3.2 Technical Feasibility:

Technical Feasibility bases on the existing computer system (software and hardware) and also it can support any modification that can be made.

In manual processing there are more chance of errors are there, creating lot of complications, less technical or logical. Through proposed system we can set this process in a very systematic pattern, which is more technical, safe and reliable with full proof and more authentic

2.3.3 Behavior Feasibility:

Our proposed system works to minimize the human errors that can happen, take less time to work on everything easy interaction with user and most of all bug free.

Hardware Requirements:

The Collection of internal electronic circuits and external physical devices used in building a computer is called Hardware.
The minimum hardware requirement specification for developing this project is as follows:

Processor	Pentium IV
RAM	512 MB RAM
Hard Disk	10 GB

Software Requirements:

A set of programs associated with the operation of a computer is called software. Software is the part of the computer system which enables the user to interact with several physical hardware devices.
The minimum software requirement specifications for developing this project are as follows:

Designing frontend	JSP and Servlets
Backend	My SQL
Scripting	Java Script
IDE	IDE

CHAPTER 4. SYSTEM DESIGN

4.1 SYSTEM DESIGN

For Airline reservation system project, we have different diagram that justify the project. These include;

i. Entity Relationship Diagram (ERD)

-Is the graphical representation of data object relationship which include entity, relationship and attribute.

ii. Data Flow Diagram (DFD)

Is the graphical presentation which indicates the flow of information and transformation of data from the input to the output, There different levels that information move from input to output.

iii. Use case diagram.

This consists of user and admin's part where as it shows the interaction between them and functions that are to be performed by each part.

iv. Sequence diagram.

Is the diagram that elaborates on the data transfer from the user to the amines through their corresponding actions.

v. Flow chart

These are design rationale that describes the stepwise procedure of application. It represents algorithms in form of boxes and connecting the boxes with arrows.

E -R DIAGRA M

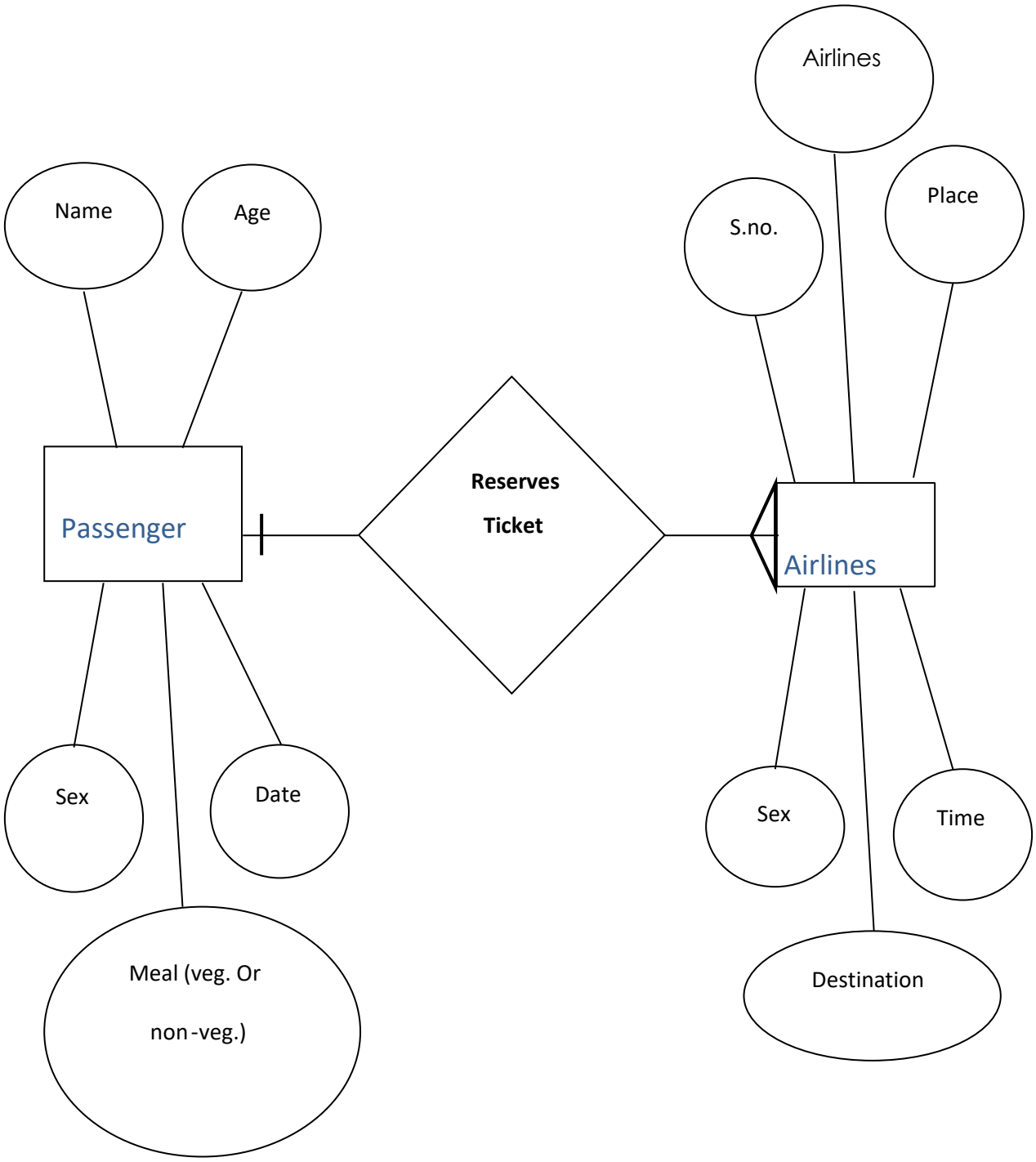


Figure 2. ER Diagram

USE CASE DIAGRAM

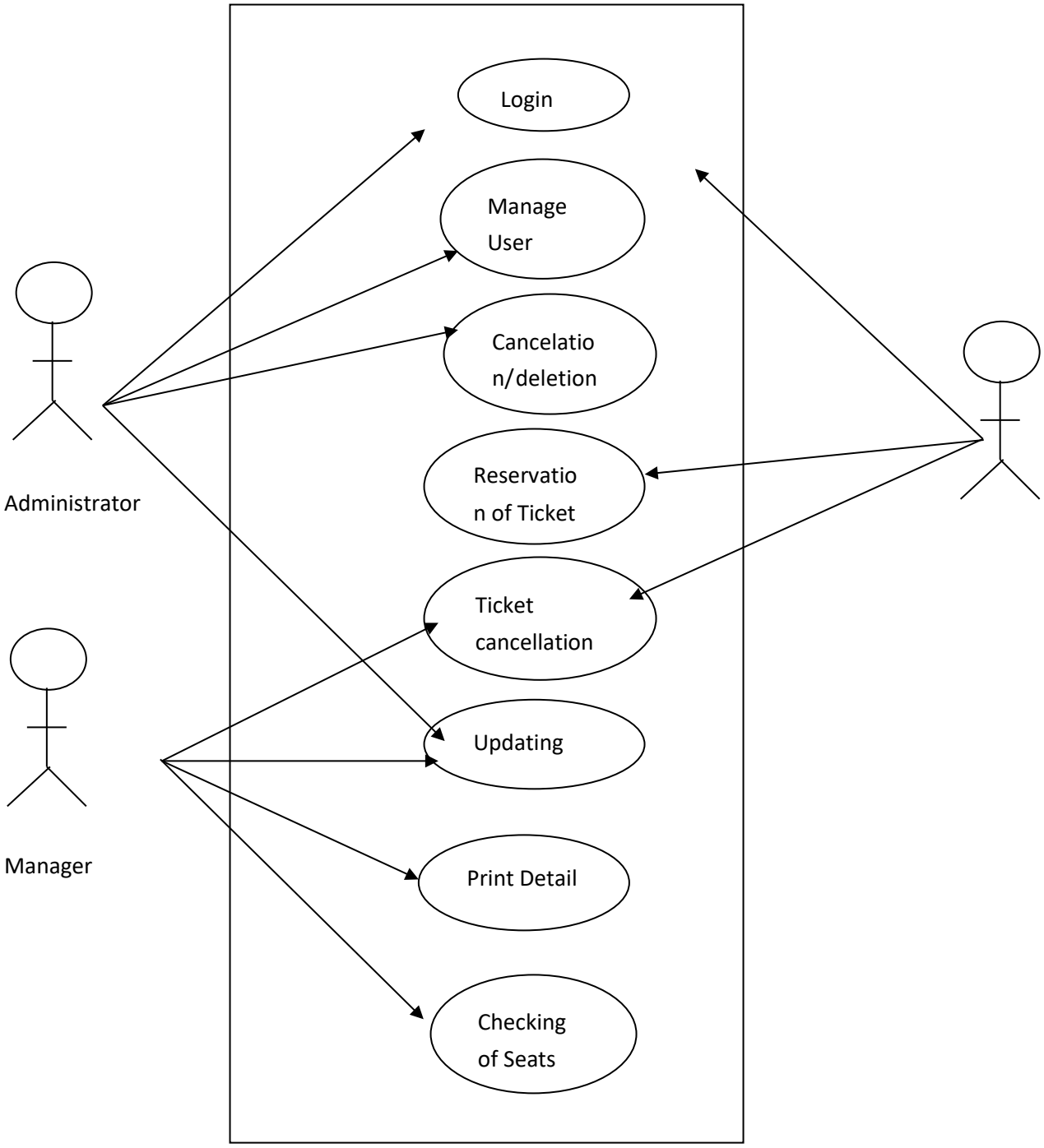


Figure 3. Use Case Diagram

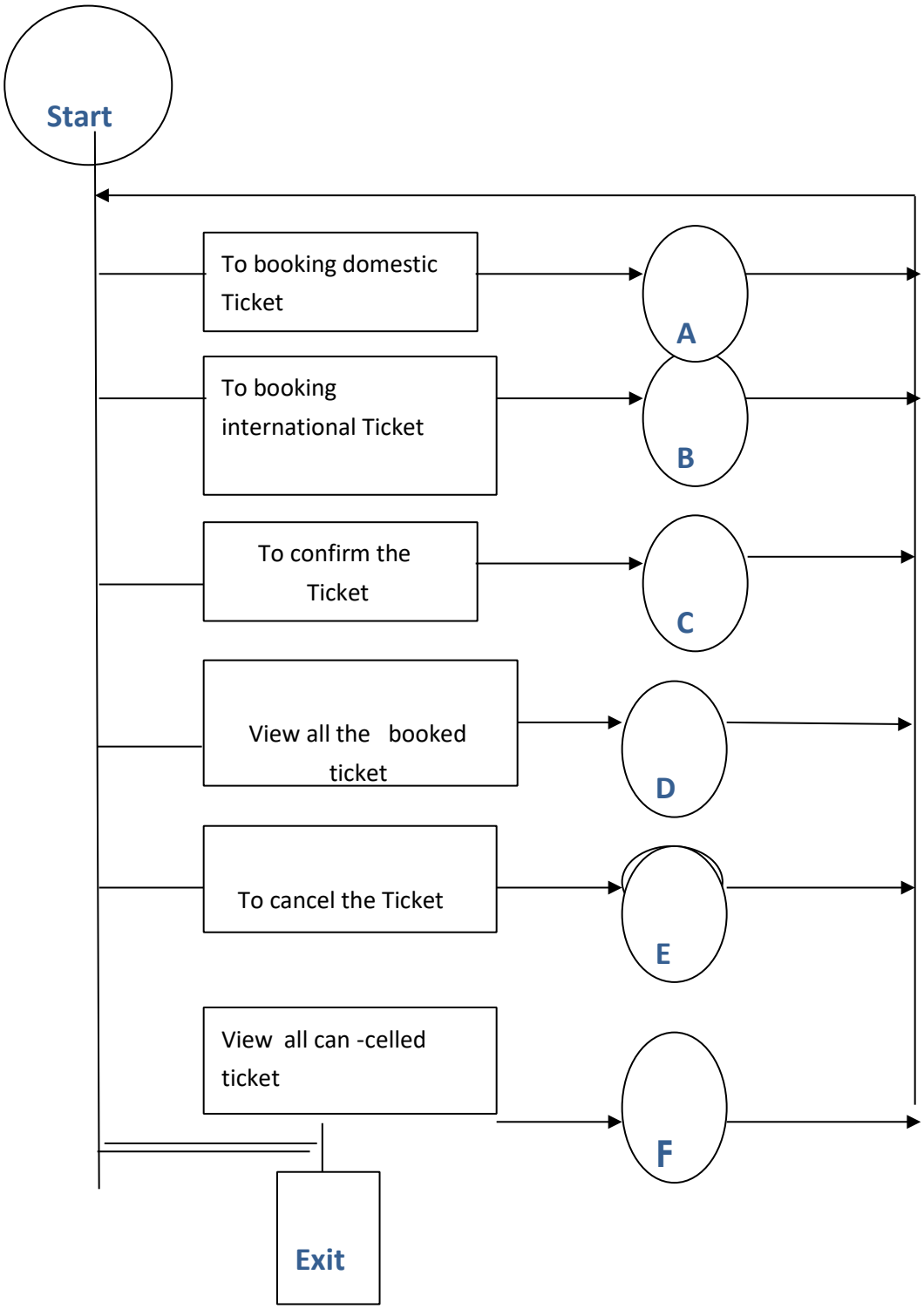

Start
To booking domestic Ticket
A
To booking international Ticket
B
To confirm the Ticket
C
View all the booked ticket
D
To cancel the Ticket
E
View all can -celled ticket
F
Exit

Figure 9

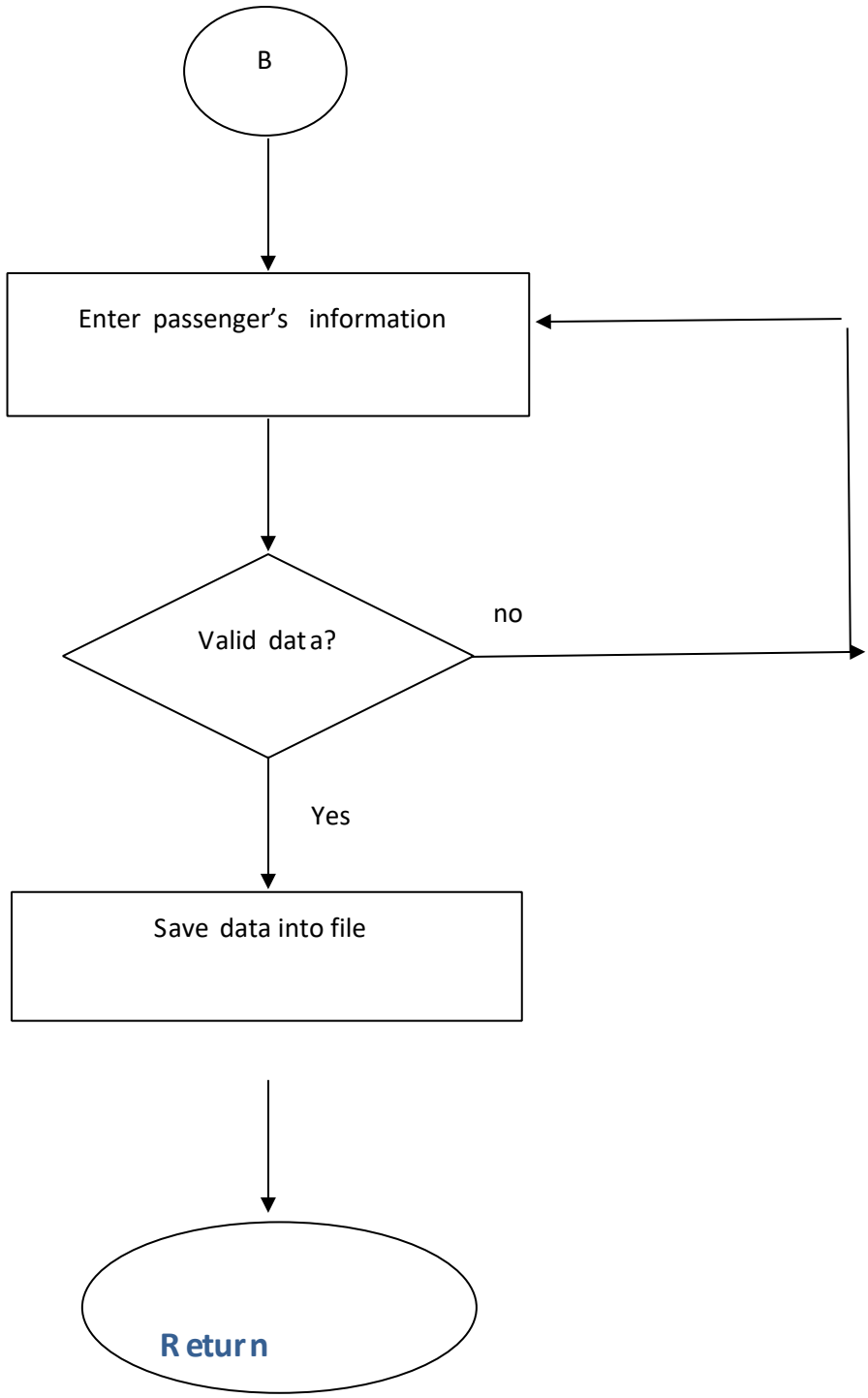

B
Enter passenger's information
Valid data?
no
Yes
Save data into file
Return

Figure 9.1

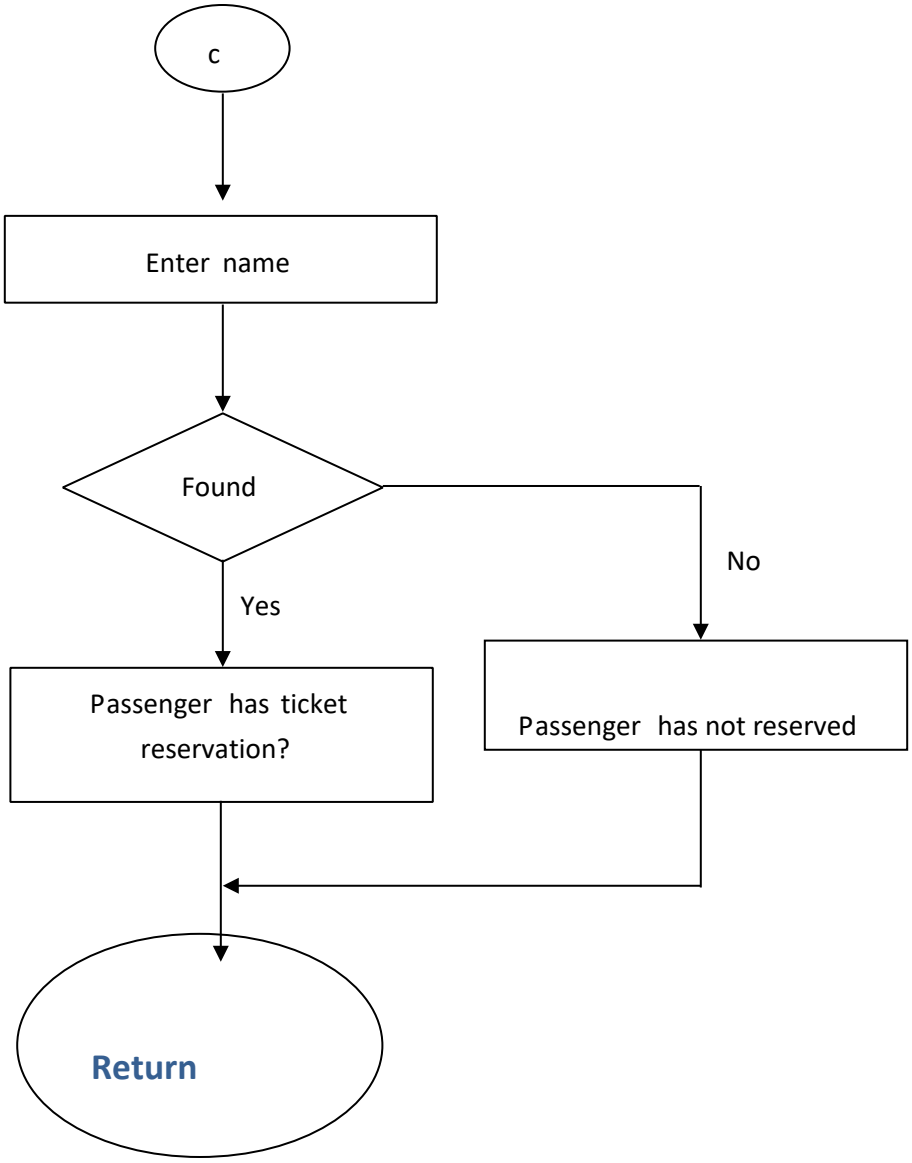

c
Enter name
Found
No
Yes
Passenger has ticket reservation?
Passenger has not reserved
Return

Figure 9.2

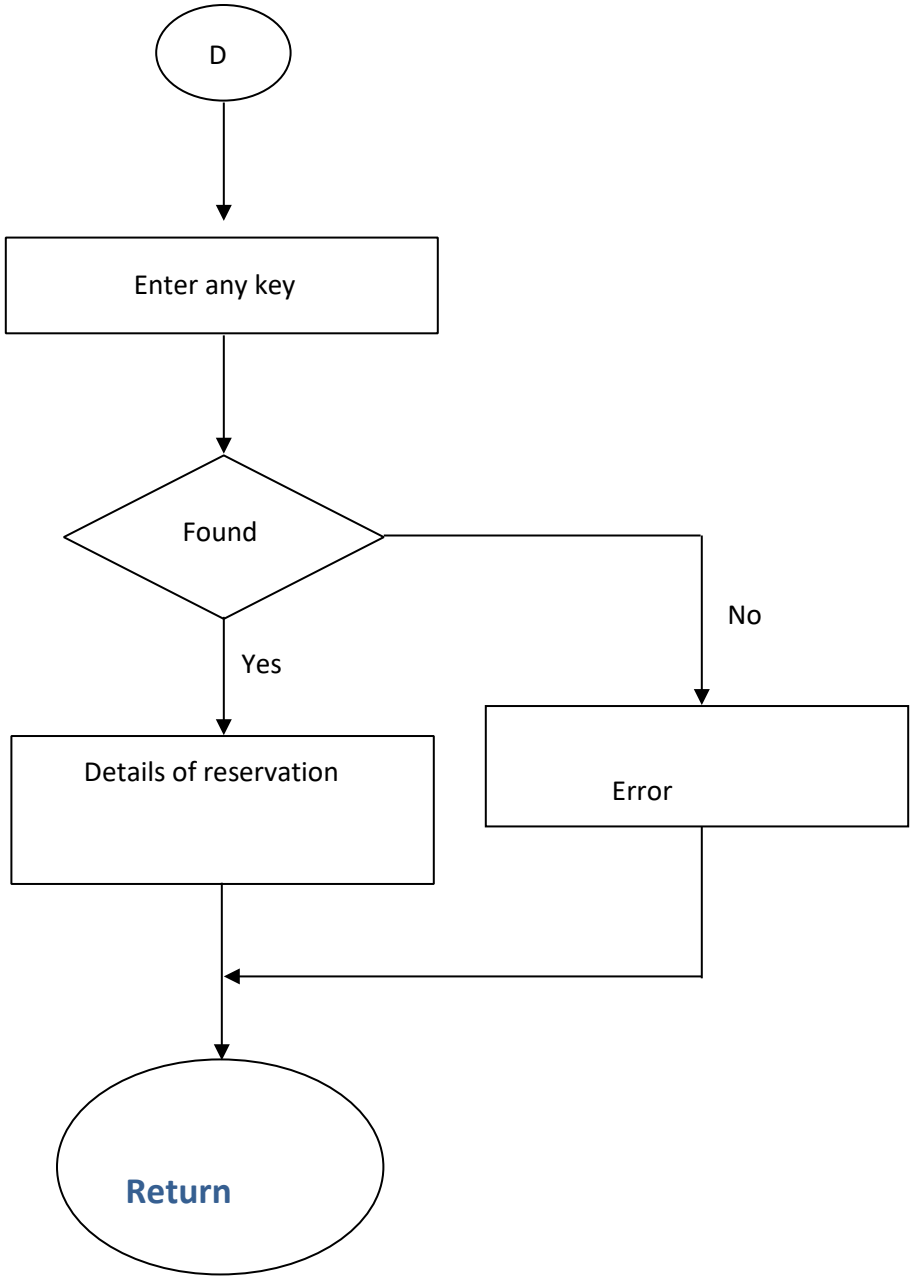

D
Enter any key
Found
No
Yes
Details of reservation
Error
Return

Figure 9.3

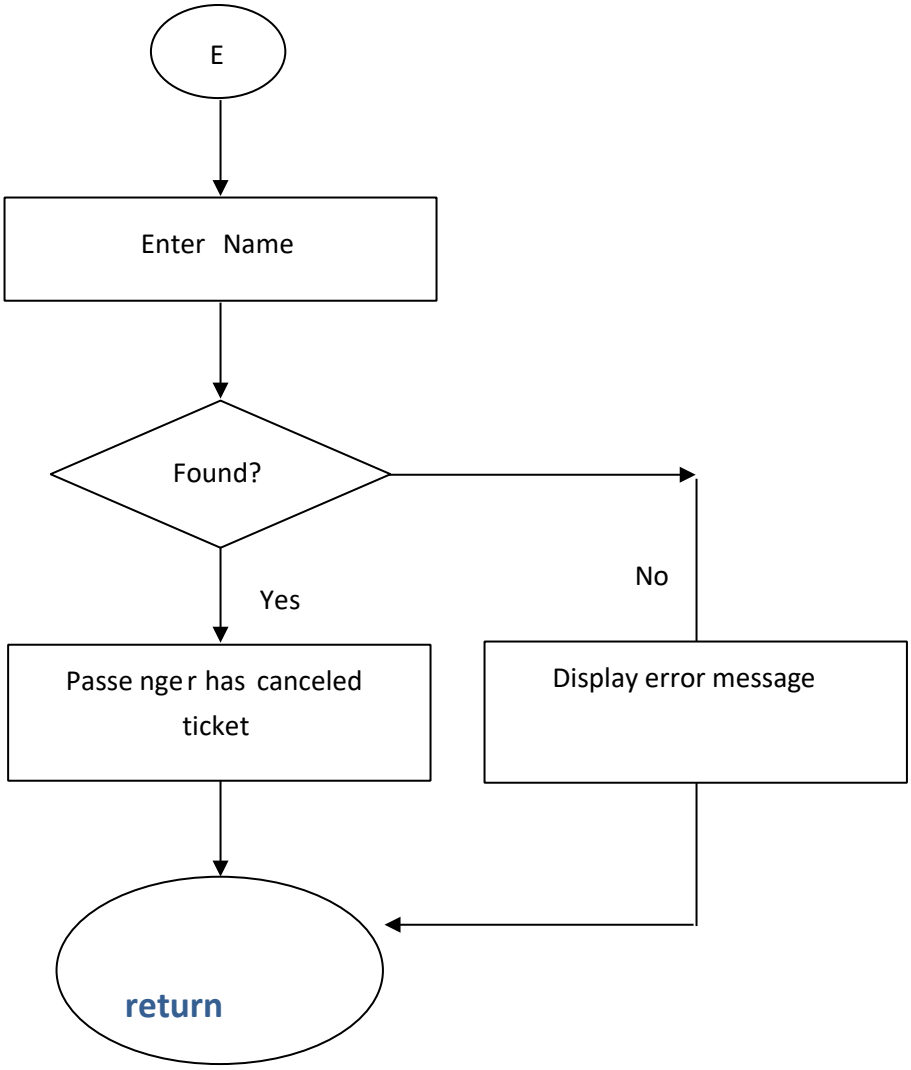

E
Enter Name
Found?
Yes
No
Passe nge r has canceled ticket
Display error message
return

Figure 9.4

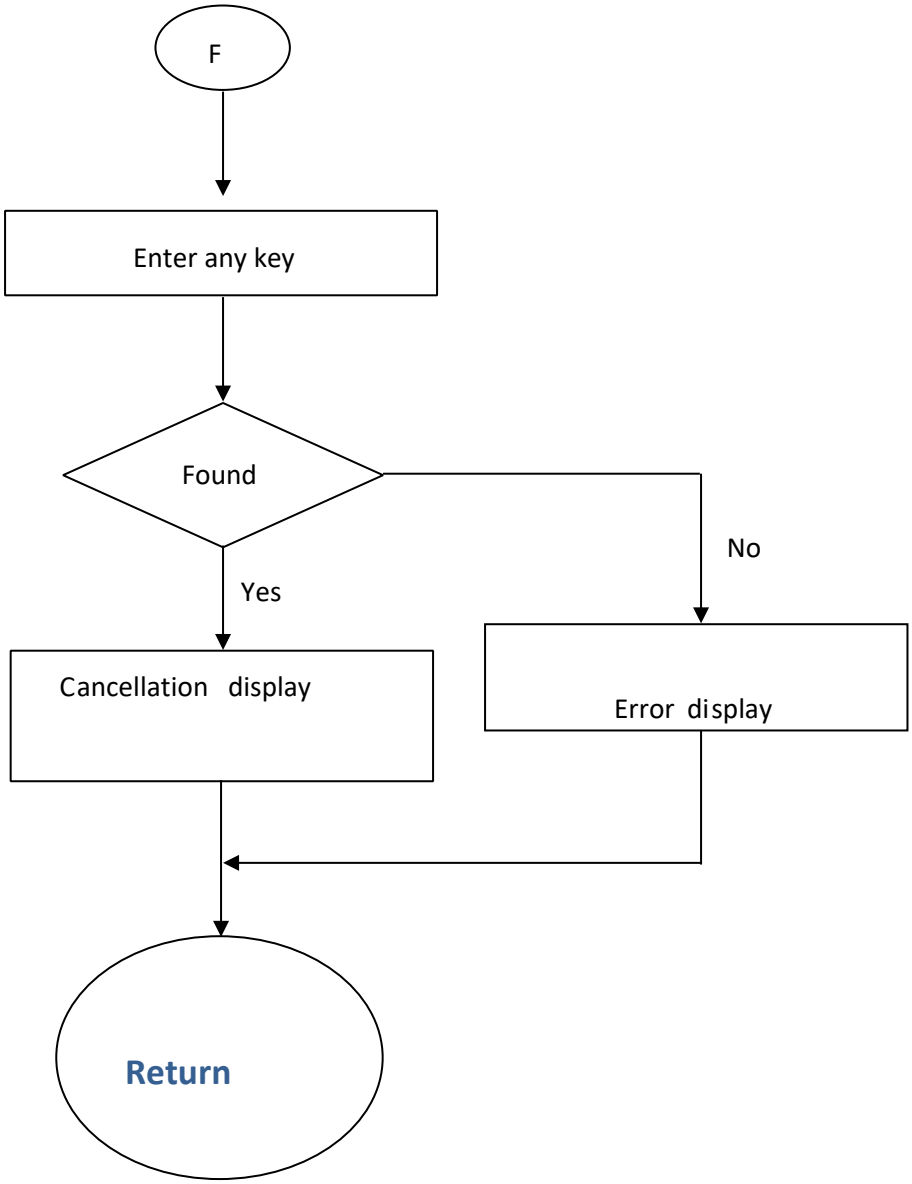

F
Enter any key
Found
No
Yes
Cancellation display
Error display
Return

Figure 9.5

DATABASE TABLE

Aircrafts

Field	Data Type	Descriptions	Constraints
Ac_ID	INT	Field will store unique row number	Primary Key
Ac_Number	Varchar (32)	Aircraft number that identifies the plane	NOT NULL
Capacity	INT	Number of seats available	NOT NULL
Mfd_By	Varchar(32)	Manufactured company	NOT NULL
Mfd_On	DATETIME	Manufactured date of aircraft	NOT NULL

Route

Field	Data Type	Descriptions	Constraints
Rt_ID	INT	Stores unique route id	Primary Key
Airport	Varchar (32)	From where the flight will take off	NOT NULL
Destination	Varchar (32)	Flight Destination	NOT NULL
Route Code	Varchar(32)	A unique route code generated using source and destination of flight	NOT NULL Unique

Air_Fare

Field	Data Type	Descriptions	Constraints
Af_ID	INT	Stores unique row id	Primary Key
Route	INT	Route ID form route table	Foreign Key
Fare	Currency	Stores service charge amount	NOT NULL
FSC	Currency	Stores fuel surcharge amount	NOT NULL

Flight_Schedule

Field	Data Type	Descriptions	Constraints
Fl_ID	INT	Unique number to identify the flight	Primary Key
Flight Date	DATETIME	Date of the flight	NOT NULL
Departure	DATETIME	Stores the departure time of the flight	
Arrival	DATETIME	Stores the arrival time of the flight on destination	

Field	Data Type	Descriptions	Constraints
Aircraft	INT	Aircraft number that will fly, from Aircrafts table	Foreign Key
Net_Fare	INT	To determine total fare of flight, an ID from Air_Fare table	Foreign Key

Discounts

Field	Data Type	Descriptions	Constraints
Di_ID	INT	Unique row ID	Primary Key
Title	Varchar (32)	Label to know discounts	NOT NULL
Ammount	INT	Discount ammount in %	NOT NULL
Description	Varchar (255)	Discounts remarks and details	

Charges

Field	Data Type	Descriptions	Constraints
Ch_ID	INT	Unique row ID	Primary_Key
Title	Varchar (32)	Label for charges	NOT NULL
Ammount	INT	Ammount of charge in %	NOT NULL
Description	Varchar (255)	Description cause of charge	

Countries

Field	Data Type	Descriptions	Constraints
Ct_ID	INT	Unique row ID	Primary Key
Country_Name	Varchar (32)	Describe the cause of charge	NOT NULL

States

Field	Data Type	Descriptions	Constraints
St_ID	INT	Unique row ID	Pprimary Key
State_Name	Varchar (32)	Name of the state from where the flight will take off	
Country	INT	Primary Key from Country table	Foreign Key

Contact_Details

Field	Data Type	Descriptions	Constraints
Cn_ID	INT	Unique row ID	Primary Key
Email	Varchar (32)	Email of passenger for transaction	NOT NULL
Cell	Varchar (16)	Cell Phone number	NOT NULL
Tel	Varchar (16)	Telephone Number	
Street	Varchar (64)	Street address of the passenger	NOT NULL
State	INT	Primary key from States table	Foreign Key

Passengers

Field	Data Type	Descriptions	Constraints
Ps_ID	INT	Unique row ID	Primary key
Name	Varchar (32)	Passenger's Name	NOT NULL
Address	Varchar (64)	Passenger's Address	NOT NULL
Age	INT	Passenger's Age	NOT NULL
Nationality	Varchar (16)	Nationality of the passenger	NOT NULL
Contacts	INT	Contact_ID from contact details table	Foreign Key

Branches

Field	Data Type	Descriptions	Constraints
Br_ID	INT	Unique ID for each branches	Priamary Key
Centre	Varchar (16)	Branch Title	NOT NULL
Address	Varchar (16)	Address of the branch	NOT NULL
State	INT	State_ID from State Table	Foreign Key

Employees

Field	Data Type	Descriptions	Constraints
Emp_ID	INT	Unique number to identify employee. Unique on entire database	Primary Key
Name	Varchar (32)	Name of the employee	NOT NULL
Address	Varchar (64)	Address of the employee	NOT NULL
Branch	INT	Associated Branch_ID from Branches	Foreign Key

Field	Data Type	Descriptions	Constraints
Designation	Varchar (32)	Working duty position	NOT NULL
Email	Varchar (32)	Email ID of the employee	NOT NULL
Tel	Varchar (16)	Contact Telephone number	

Transactions

Field	Data Type	Descriptions	Constraints
Ts_ID	INT	Unique row ID	Primary Key
Booking_Date	DATETIME	Keeps the booking date	NOT NULL
Departure_Date	DATETIME	Keeps the departure date	NOT NULL
Passenger	INT	Transaction creator passengers Row_ID to associate booking/ cancellation, Payments etc.	Foreign Key
Flight	INT	Flight number, a primary key from flight_schedule to determine flight details	Foreign Key
Type	BIT	Reservation/ Cancellation	NOT NULL
Employee	INT	Reservation agent, a Row_ID from employee who helps the passengers	Foreign Key
Charges	INT	If transaction is cancellation charges may apply as per business rule	NOT NULL
Discount	INT	Discount based on scheme	NOT NULL
Total	INT	Calculated actual payable cost	NOT NULL

Coding

CODING IN LOGIN SCREEN:-

```
Public Class Form1
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        If TextBox1.Text = "admin" And TextBox2.Text = "password" Then
            MsgBox("UserName and Password Accepted")
            mainmenu.Show()

        Else
            MsgBox("You have entered wrong Username or Password")
        End If

    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        TextBox1.Clear()
        TextBox2.Clear()
    End Sub
    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        MsgBox("Thanks for using Airline Reservation System ")

        Me.Close()
    End Sub
End Class
```

CODING IN MAIN MENU

```
Public Class mainmenu
    Private Sub ExitToolStripMenuItem_Click(ByVal sender As System.Object,
ByVal e As System.EventArgs) Handles ExitToolStripMenuItem.Click
        Me.Close()
    End Sub

    Private Sub FareDetailToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
FareDetailToolStripMenuItem.Click
        faredetails.Show()
    End Sub

    Private Sub TicketReservationToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
TicketReservationToolStripMenuItem.Click
        Ticketreservation.Show()
    End Sub

    Private Sub AddNewToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
AddNewToolStripMenuItem.Click
        customerdetails.Show()
    End Sub
```

```
    Private Sub DeleteToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
DeleteToolStripMenuItem.Click
        Delcustomer.Show()
    End Sub

    Private Sub UpdateToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
UpdateToolStripMenuItem.Click
        updatecustomer.Show()
    End Sub

    Private Sub AddNewToolStripMenuItem1_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
AddNewToolStripMenuItem1.Click
        flightdetails.Show()
    End Sub

    Private Sub DeleteToolStripMenuItem1_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
DeleteToolStripMenuItem1.Click
        Delflight.Show()
    End Sub

    Private Sub UpdateToolStripMenuItem1_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
UpdateToolStripMenuItem1.Click
        Updateplane.Show()
    End Sub

    Private Sub TicketCancellationToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
TicketCancellationToolStripMenuItem.Click
        TicketCancellation.Show()

    End Sub

    Private Sub ReservationEnquiryToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs) Handles
ReservationEnquiryToolStripMenuItem.Click
        TicketEnquiry.Show()
    End Sub

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    Private Sub CustomersToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs)
        customerdetails.Show()

    End Sub

    Private Sub FlightsToolStripMenuItem_Click(ByVal sender As
System.Object, ByVal e As System.EventArgs)
        flightdetails.Show()

    End Sub
End Class
```

CODING IN ADD NEW CUSTOMER:-

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient


Public Class customerdetails

    Private Sub Button5_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button5.Click
        If TextBox1.Text = "" Or TextBox2.Text = "" Or TextBox7.Text = ""
Or TextBox4.Text = "" Then
            MsgBox("fill the information properly")
        ElseIf IsNumeric(TextBox1.Text) Then
            MsgBox("name should not be numeric")
        ElseIf IsInputChar(TextBox4.Text) Then
            MsgBox("contct should not be char")
        ElseIf IsNumeric(TextBox2.Text) Then
            MsgBox(" Father's name should not be numeric")
        ElseIf IsInputChar(TextBox6.Text) Then
            MsgBox("Insert D_O_B")
        ElseIf IsNumeric(TextBox7.Text) Then
            MsgBox("address should not be numeric")
            Me.Hide()

        End If


        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()

        Dim PassportNo As String
        PassportNo = Format(DateTime.Now, "yyyyMMddhhmmss")
        Label4.Text = PassportNo

        Dim cmd As New SqlCommand("insert into customer_dtls
values(@passportno,@custname,@fathername,@d_o_b,@address,@contactno)", con)
        cmd.CommandType = CommandType.Text

        cmd.Parameters.Add("@passportNo", SqlDbType.VarChar, 50).Value =
PassportNo
        cmd.Parameters.Add("@custname", SqlDbType.VarChar, 50).Value =
TextBox1.Text
        cmd.Parameters.Add("@fathername", SqlDbType.VarChar, 50).Value =
TextBox2.Text
        cmd.Parameters.Add("@d_o_b", SqlDbType.DateTime).Value =
TextBox6.Text
        cmd.Parameters.Add("@address", SqlDbType.VarChar, 50).Value =
TextBox7.Text
        cmd.Parameters.Add("@contactno", SqlDbType.VarChar, 50).Value =
TextBox4.Text
        cmd.ExecuteNonQuery()
        cmd.Dispose()
        con.Close()
```

```
        MsgBox("welcome you are now the customer of airline")

    End Sub

    Private Sub Button1_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click

        mainmenu.Show()
        Me.Hide()


    End Sub


    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        TextBox1.Clear()
        TextBox2.Clear()
        TextBox4.Clear()
        TextBox6.Clear()
        TextBox7.Clear()
    End Sub

    Private Sub TextBox6_TextChanged(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles TextBox6.TextChanged
        If TextBox6.Text = "" Then
            MsgBox("Insert D_O_B")

        End If

    End Sub

    Private Sub TextBox7_TextChanged(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles TextBox7.TextChanged
        If TextBox7.Text = "" Then
            MsgBox("Insert Address")
        End If
    End Sub

    Private Sub TextBox4_TextChanged(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles TextBox4.TextChanged
        If TextBox4.Text = "" Then
            MsgBox("Insert Contact_No")
        End If
    End Sub

    Private Sub TextBox2_TextChanged(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles TextBox2.TextChanged
        If TextBox2.Text = "" Then
            MsgBox("Insert Father's Name")
        End If
    End Sub

    Private Sub TextBox1_TextChanged(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles TextBox1.TextChanged
        If TextBox1.Text = "" Then
            MsgBox("Insert Your Name")
        End If
    End Sub
End Class
```

CODING IN UPDATE CUSTOMER:-

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient
Public Class updatecustomer

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from customer_dtls where
passportNo=" + "'" + ComboBox1.Text + "'", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            TextBox2.Text = adp(1)
            TextBox3.Text = adp(2)
            TextBox4.Text = adp(3)
            TextBox5.Text = adp(4)
            TextBox6.Text = adp(5)
        End While
        adp.Close()
        con.Close()
    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()
        Dim cmd As New SqlCommand("Update customer_dtls set CustName=" +
"'" + TextBox2.Text + "'" + "," + "Fathername=" + "'" + TextBox3.Text + "'"
+ "," + "D_O_B=" + "'" + TextBox4.Text + "'" + "," + "Address=" + "'" +
TextBox5.Text + "'" + "," + "ContactNo=" + "'" + TextBox6.Text + "'" +
"where PassportNo=" + "'" + ComboBox1.Text + "'", con)
        cmd.CommandType = CommandType.Text

        cmd.ExecuteNonQuery()
        cmd.Dispose()
        con.Close()
        MsgBox("updated")
    End Sub

    Private Sub updatecustomer_Load(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Load
```

```
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from customer_dtls", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            ComboBox1.Items.Add(adp(0))
        End While
        adp.Close()
    End Sub

    Private Sub Button1_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        mainmenu.Show()
        Me.Close()
    End Sub
End Class
```

CODING IN FLIGHT DETAILS:-

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient

Public Class flightdetails

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()

        Dim cmd As New SqlCommand("insert into Flight_dtls
values(@flightname,@flightcode,@classname,@totalseats,@flightsource,@flight
destination,@departure,@arrival,@fare)", con)
        cmd.CommandType = CommandType.Text

        cmd.Parameters.Add("@flightname", SqlDbType.VarChar, 50).Value =
TextBox1.Text
        cmd.Parameters.Add("@flightcode", SqlDbType.VarChar, 50).Value =
TextBox2.Text
        cmd.Parameters.Add("@classname", SqlDbType.VarChar, 50).Value =
TextBox3.Text
        cmd.Parameters.Add("@totalseats", SqlDbType.VarChar, 50).Value =
TextBox4.Text
        cmd.Parameters.Add("@flightsource", SqlDbType.VarChar, 50).Value =
TextBox5.Text
        cmd.Parameters.Add("@flightdestination", SqlDbType.VarChar,
50).Value = TextBox6.Text
        cmd.Parameters.Add("@departure", SqlDbType.VarChar, 50).Value =
TextBox7.Text
```

```
        cmd.Parameters.Add("@arrival", SqlDbType.VarChar, 50).Value =
TextBox8.Text
        cmd.Parameters.Add("@fare", SqlDbType.VarChar, 50).Value =
TextBox9.Text

        cmd.ExecuteNonQuery()
        cmd.Dispose()
        con.Close()
        MsgBox("welcome in airline....new flight has been Added")



    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        TextBox1.Clear()
        TextBox2.Clear()
        TextBox3.Clear()
        TextBox4.Clear()
        TextBox5.Clear()
        TextBox6.Clear()
    End Sub

    Private Sub Button1_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        mainmenu.Show()
        Me.Hide()
    End Sub
End Class
```

CODING IN UPDATE Plane

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient
Public Class Updateplane
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()
        Dim cmd As New SqlCommand("Update flight_dtls set flightcode=" +
"'" + TextBox2.Text + "'" + "," + "classname=" + "'" + TextBox3.Text + "'"
+ "," + "totalseats=" + "'" + TextBox4.Text + "'" + "," + "flightsource=" +
"'" + TextBox5.Text + "'" + "," + "flightdestination=" + "'" +
TextBox6.Text + "'" + "where flightname=" + "'" + ComboBox1.Text + "'",
con)
        cmd.CommandType = CommandType.Text

        cmd.ExecuteNonQuery()
```

```
        cmd.Dispose()
        con.Close()
        MsgBox("updated")



    End Sub

    Private Sub Updateplane_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from flight_dtls", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            ComboBox1.Items.Add(adp(0))
        End While
        adp.Close()
        con.Close()
    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from flight_dtls where
flightname=" + "'" + ComboBox1.Text + "'", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            TextBox2.Text = adp(1)
            TextBox3.Text = adp(2)
            TextBox4.Text = adp(3)
            TextBox5.Text = adp(4)
            TextBox6.Text = adp(5)
            TextBox1.Text = adp(6)
            TextBox7.Text = adp(7)
            TextBox8.Text = adp(8)
        End While
        adp.Close()
        con.Close()

    End Sub

    Private Sub Button1_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        mainmenu.Show()
        Me.Close()
    End Sub
End Class
```

CODING IN TICKET RESERVATION

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient
Public Class Ticketreservation


    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        If ComboBox5.SelectedItem = 5 Then
            TextBox17.Text = 5 * TextBox5.Text
        ElseIf ComboBox5.SelectedItem = 4 Then
            TextBox17.Text = 4 * TextBox5.Text
        ElseIf ComboBox5.SelectedItem = 3 Then
            TextBox17.Text = 3 * TextBox5.Text
        ElseIf ComboBox5.SelectedItem = 2 Then
            TextBox17.Text = 2 * TextBox5.Text
        ElseIf ComboBox5.SelectedItem = 1 Then
            TextBox17.Text = 1 * TextBox5.Text
        End If
    End Sub

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    Private Sub Ticketreservation_Load(ByVal sender As System.Object, ByVal
e As System.EventArgs) Handles MyBase.Load
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()
        Dim adp As SqlDataReader
        Dim cmd As New SqlCommand("select * from flight_dtls", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            ComboBox1.Items.Add(adp(0))
        End While
        adp.Close()
        con.Close()
    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        '' Dim con As New SqlConnection("server=SAHIL-
PC;database=D:\Airline Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        'con.Open()
        'Dim cmd As New SqlCommand("insert into ticket_dtls
values(@ticketNumber,@customername,@Ticketreaservation)", con)
        'cmd.CommandType = CommandType.Text
        '
        '       Dim TicketNumber As String
```

```
        '       TicketNumber = Format(DateTime.Now, "yyyyMMddhhmmss")
        '      Label4.Text = TicketNumber
        '     cmd.ExecuteNonQuery()
        '    cmd.Dispose()
        '   con.Close()
        MsgBox("Ticket reserved")
    End Sub

    Private Sub Button2_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        mainmenu.Show()
        Me.Close()

    End Sub

    Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button4.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()
        Dim adp As SqlDataReader
        Dim cmd As New SqlCommand("select * from flight_dtls where
flightname=" + "'" + ComboBox1.Text + "'", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            TextBox1.Text = adp(6)
            TextBox2.Text = adp(7)
            TextBox3.Text = adp(4)
            TextBox4.Text = adp(5)
            TextBox5.Text = adp(8)
            TextBox22.Text = adp(2)
        End While
        adp.Close()
        con.Close()
    End Sub
End Class
```

CODING IN TICKET CANCELLATION

```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
Imports System.Web
Imports System.Data.SqlClient
Public Class TicketCancellation

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        TextBox5.Text = TextBox4.Text * 20 / 100
        TextBox6.Text = TextBox4.Text - TextBox5.Text

    End Sub

    Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()

    End Sub
```

```
    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader
        Dim cmd As New SqlCommand("select * from Cancel where
TicketNumber=" + "'" + ComboBox1.Text + "'", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            TextBox2.Text = adp(1)
            TextBox3.Text = adp(2)
            TextBox4.Text = adp(3)
        End While
        adp.Close()
        con.Close()

    End Sub

    Private Sub TicketCancellation_Load(ByVal sender As System.Object,
ByVal e As System.EventArgs) Handles MyBase.Load
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from Cancel", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            ComboBox1.Items.Add(adp(0))
        End While
        adp.Close()
    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")
        con.Open()
        Dim cmd As New SqlCommand("delete from cancel where TicketNumber="
& "'" & ComboBox1.Text & "'", con)
        cmd.CommandType = CommandType.Text

        cmd.ExecuteNonQuery()
        cmd.Dispose()
        con.Close()
        MsgBox("Ticket Cancelled")
    End Sub
End Class
```

CODING IN TICKET ENQUIRY

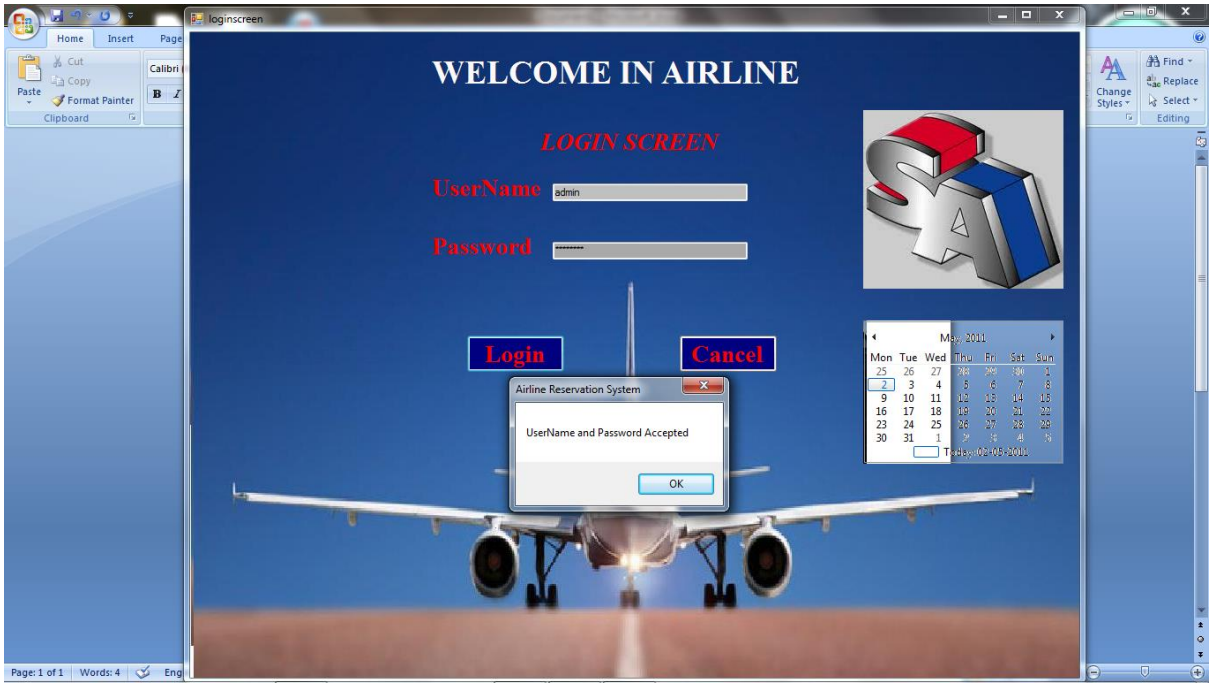
```
Imports System.Data
Imports System
Imports System.Collections
Imports System.Console
Imports System.Linq
```

```
Imports System.Web
Imports System.Data.SqlClient
Public Class TicketEnquiry

    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)
        Me.Close()
    End Sub

    Private Sub Button2_Click_1(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click
        mainmenu.Show()
        Me.Close()

    End Sub

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        Dim cmd As New SqlCommand("select * from cancel where
TicketNumber=" + "'" + ComboBox1.Text + "'", con)
        'Dim cmd As New SqlCommand("select * from flight_dtls where
TicketNumber=" + "'" + ComboBox1.Text + "'", con)
        adp = cmd.ExecuteReader()

        While adp.Read
            TextBox2.Text = adp(1)
            TextBox3.Text = adp(2)
            TextBox4.Text = adp(3)
            TextBox5.Text = adp(4)
            TextBox6.Text = adp(5)
        End While
        adp.Close()
        con.Close()
    End Sub

    Private Sub TicketEnquiry_Load(ByVal sender As System.Object, ByVal e
As System.EventArgs) Handles MyBase.Load
        Dim con As New SqlConnection("server=SAHIL-PC;database=D:\Airline
Reservation System - Copy\Airline Reservation
System\data\dbARS.mdf;Integrated Security=True")

        con.Open()
        Dim adp As SqlDataReader

        'Dim cmd As New SqlCommand("select * from cancel", con)
        Dim cmd As New SqlCommand("select * from flight_dtls", con)
        adp = cmd.ExecuteReader()
        While adp.Read
            ComboBox1.Items.Add(adp(0))
        End While
        adp.Close()
        con.Close()
    End Sub
End Class
```

INTERFACES

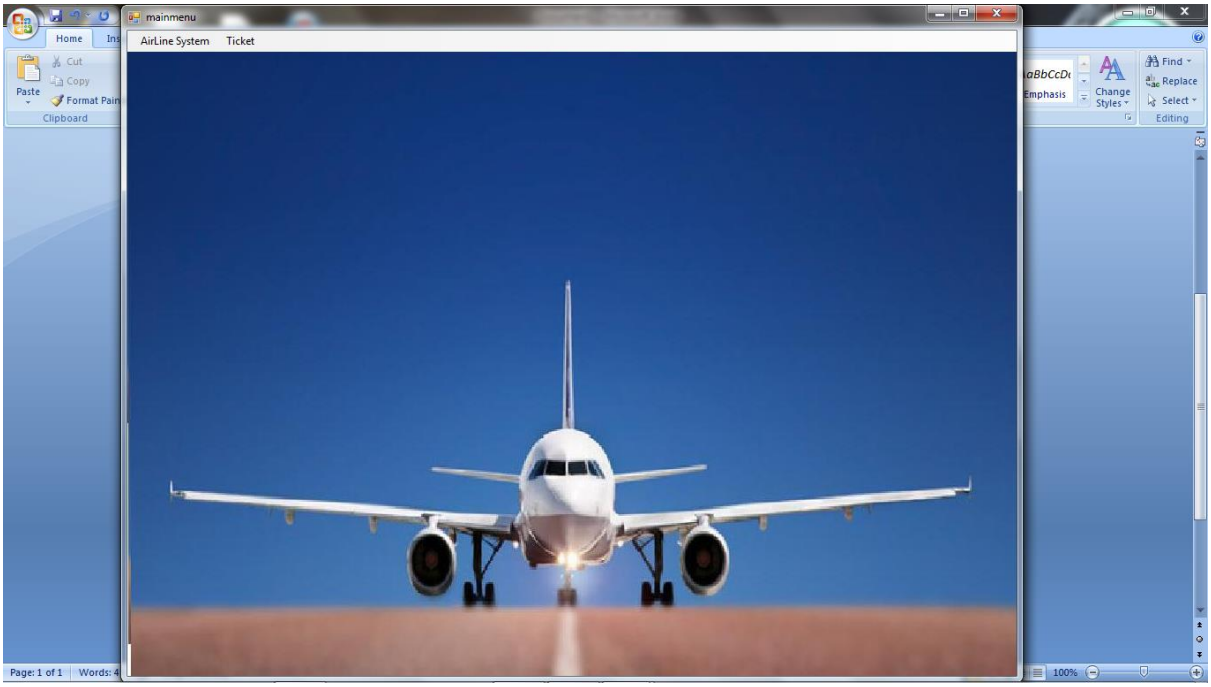
Screen shots:

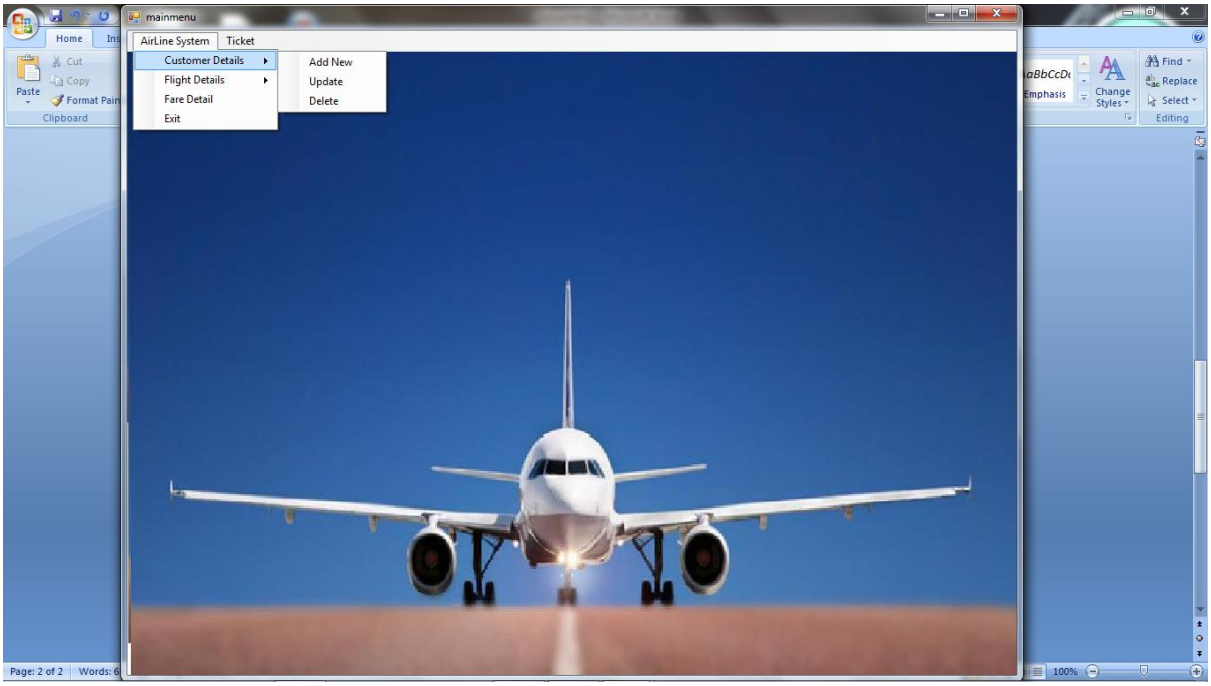
LOGIN Screen:-

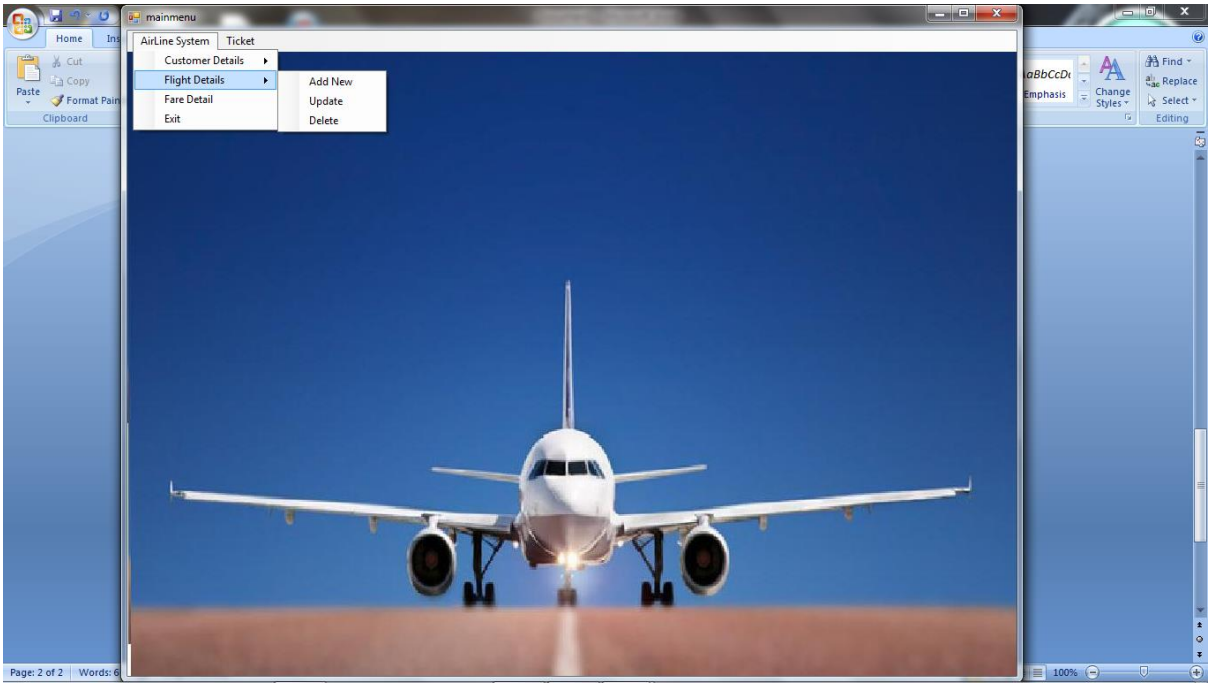


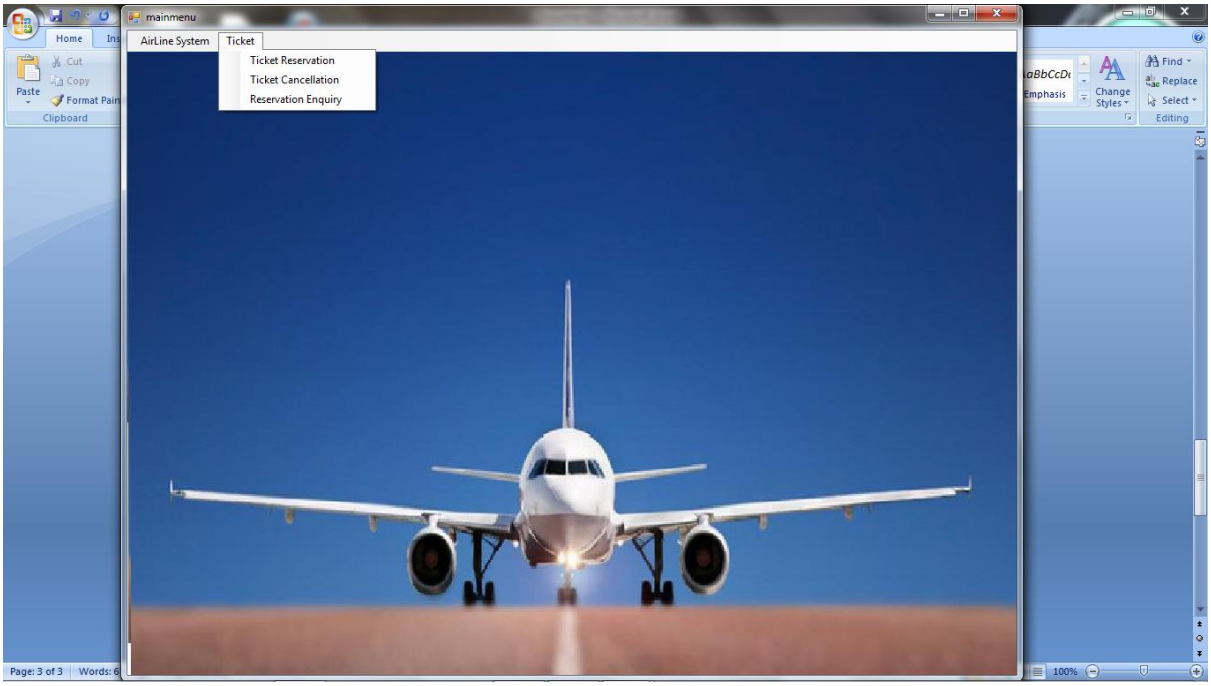

loginscreen
WELCOME IN AIRLINE
LOGIN SCREEN
UserName
admin
Password
Login
Cancel
Airline Reservation System
You have entered wrong Username or Password
OK

Main menu:-

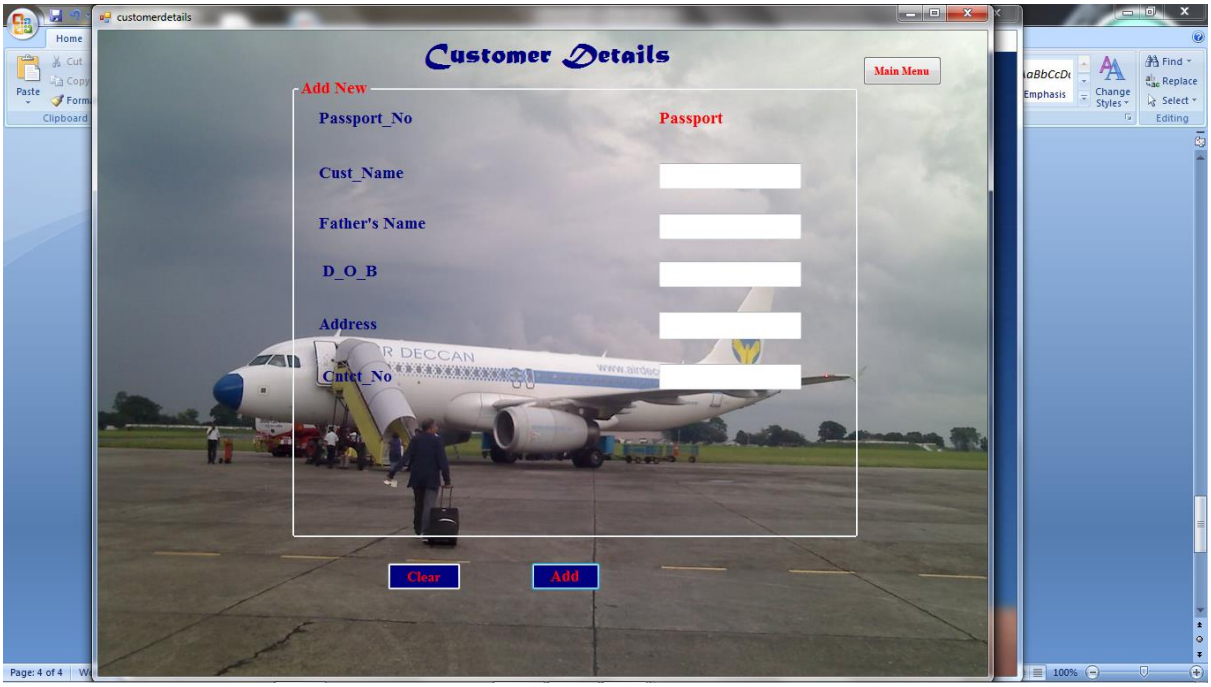

mainmenu
AirLine System
Ticket

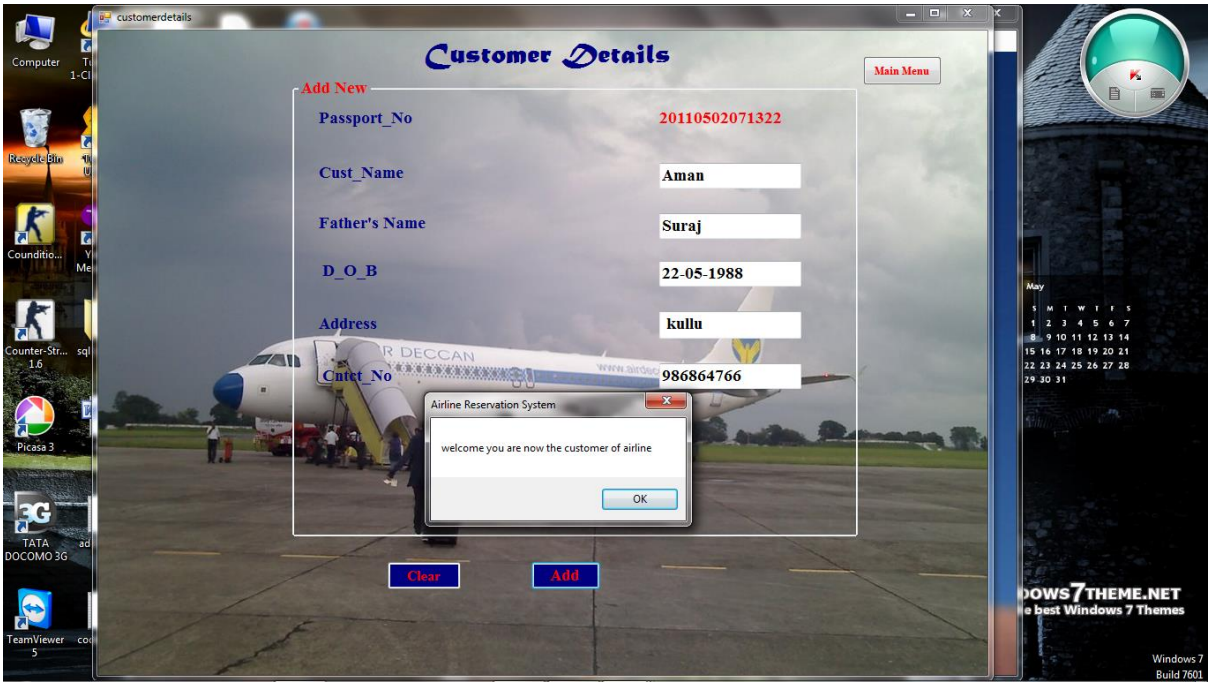

mainmenu
AirLine System
Ticket
Customer Details
Flight Details
Fare Detail
Exit
Add New
Update
Delete


mainmenu
AirLine System
Ticket
Customer Details
Flight Details
Fare Detail
Exit
Add New
Update
Delete



Customer add

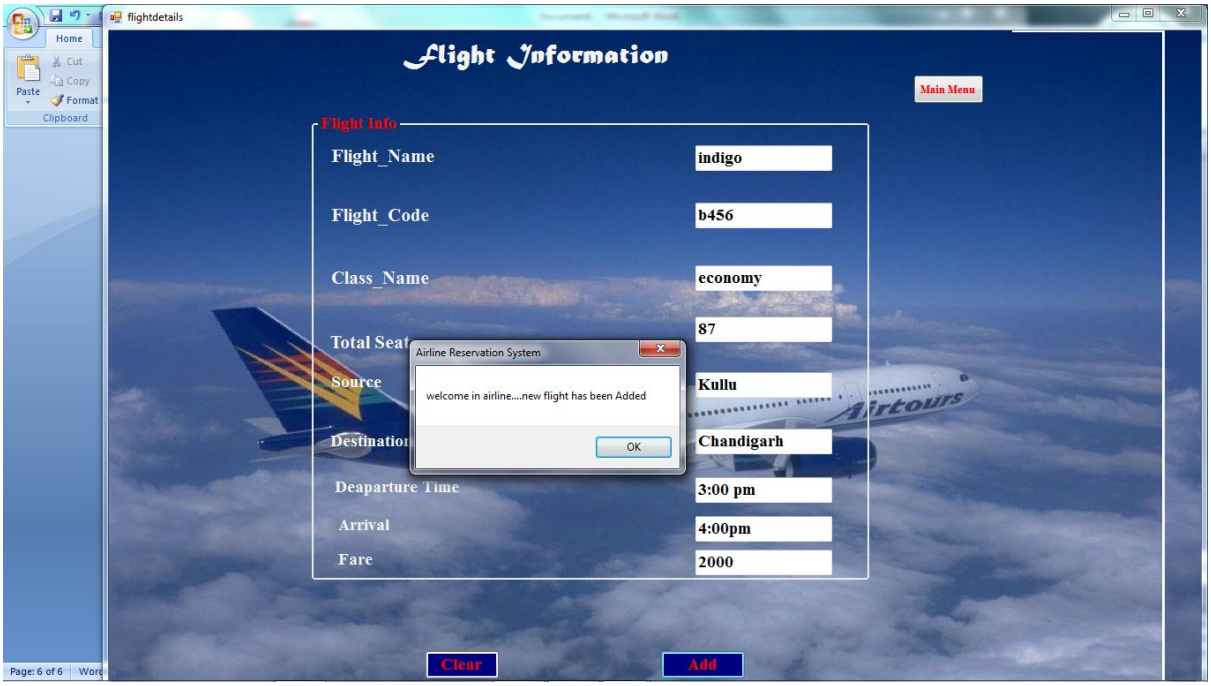



customerdetails
Customer Details
Main Menu
Add New
Passport_No
20110502071322
Cust_Name
Aman
Father's Name
Suraj
D_O_B
22-05-1988
Address
kullu
Cnct_No
986864766
Airline Reservation System
welcome you are now the customer of airline
OK
Clear
Add

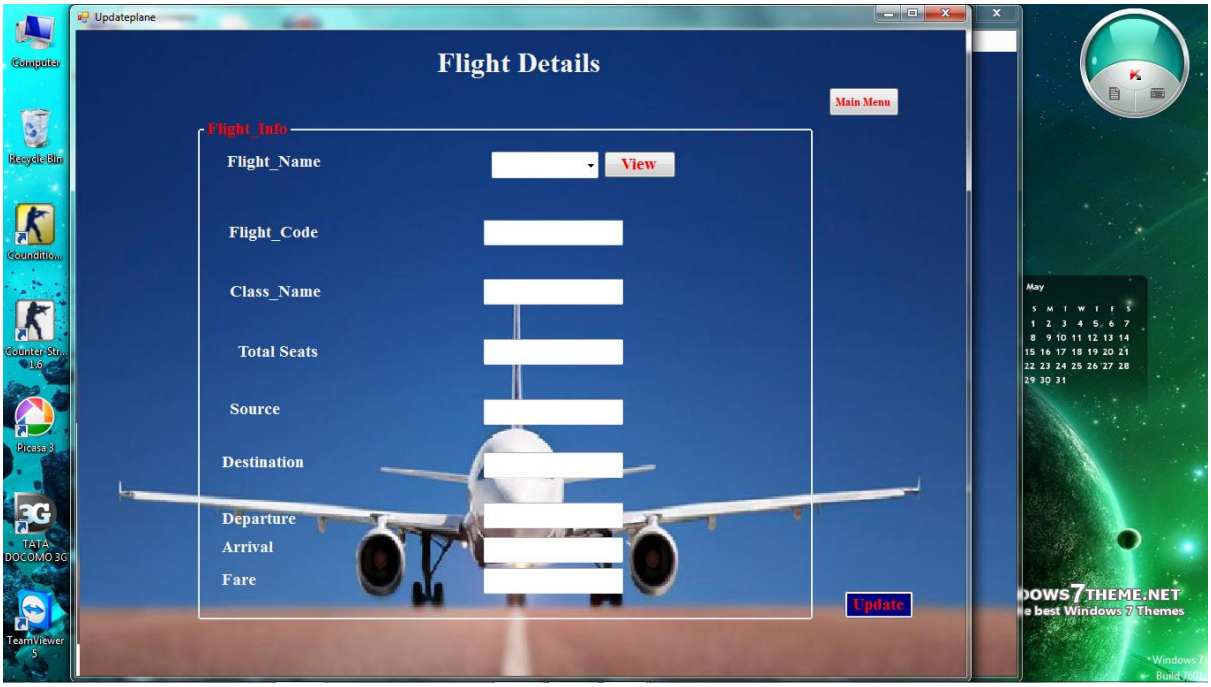
Update

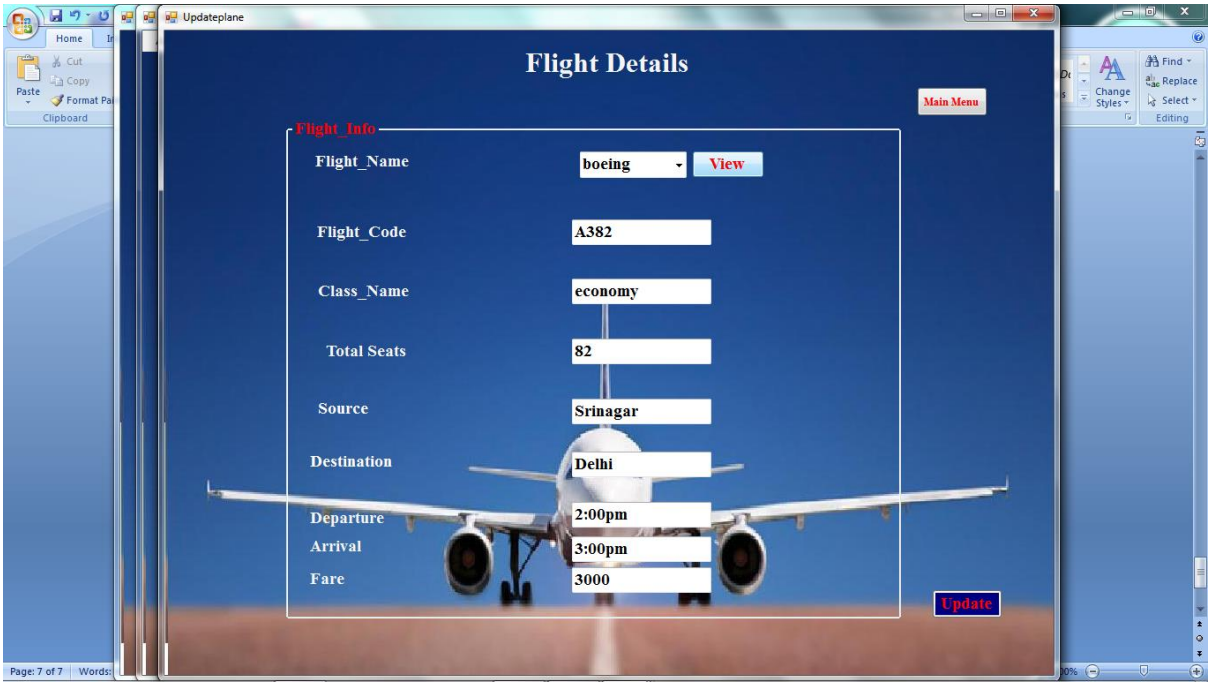

updatecustomer
Customer Details
Main Menu
Update
Passport_No
2011050205
Cust_Name
sanam
Father's Name
nitin
D_O_B
13-12-1990
Address
rajsthan
Cnct_No
9754678
Show
Update

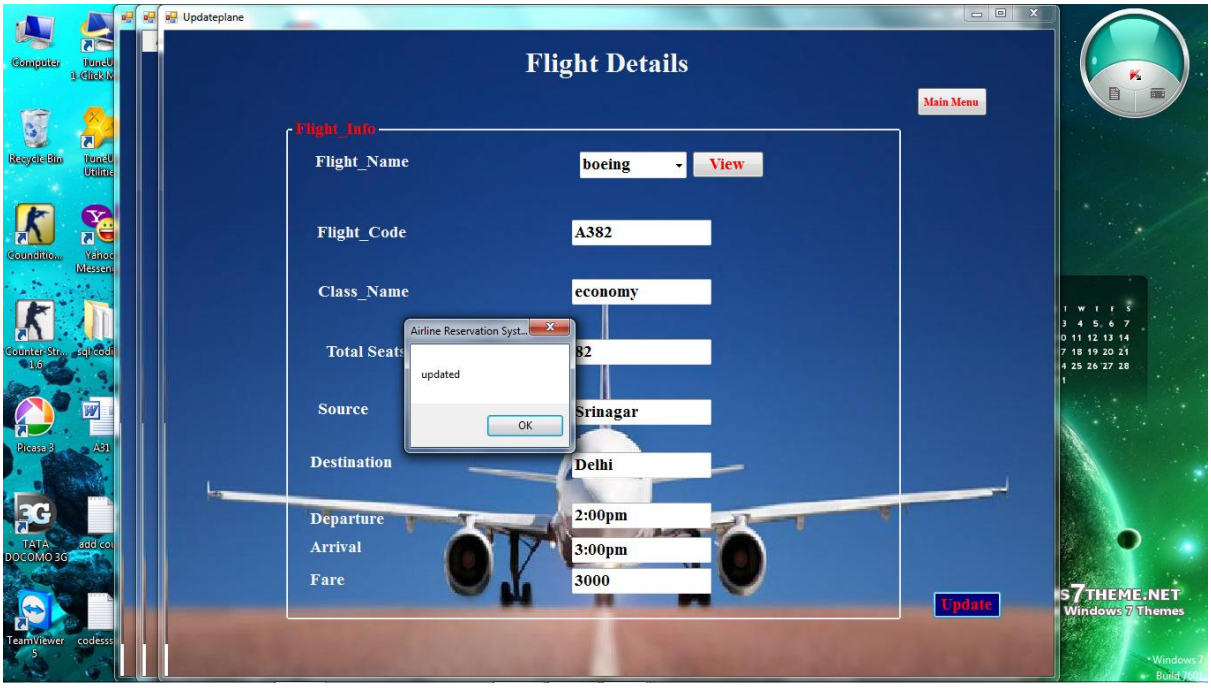
NEW ADD FLIGHT



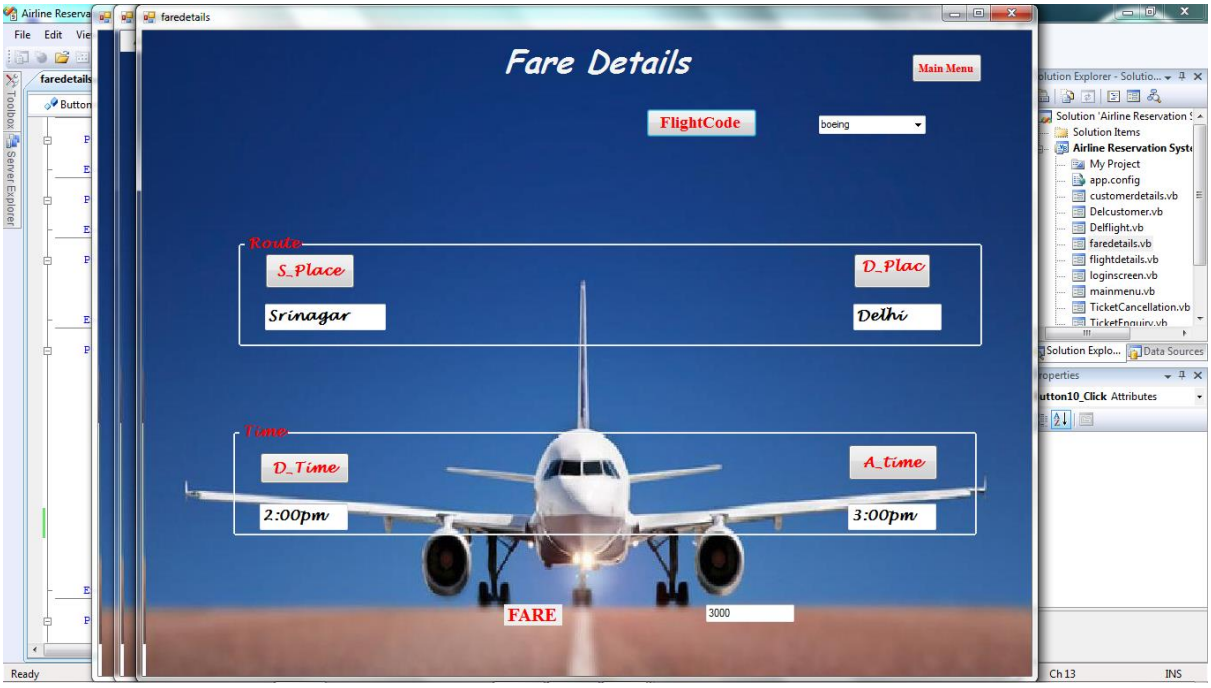
UPDATE FLIGHT



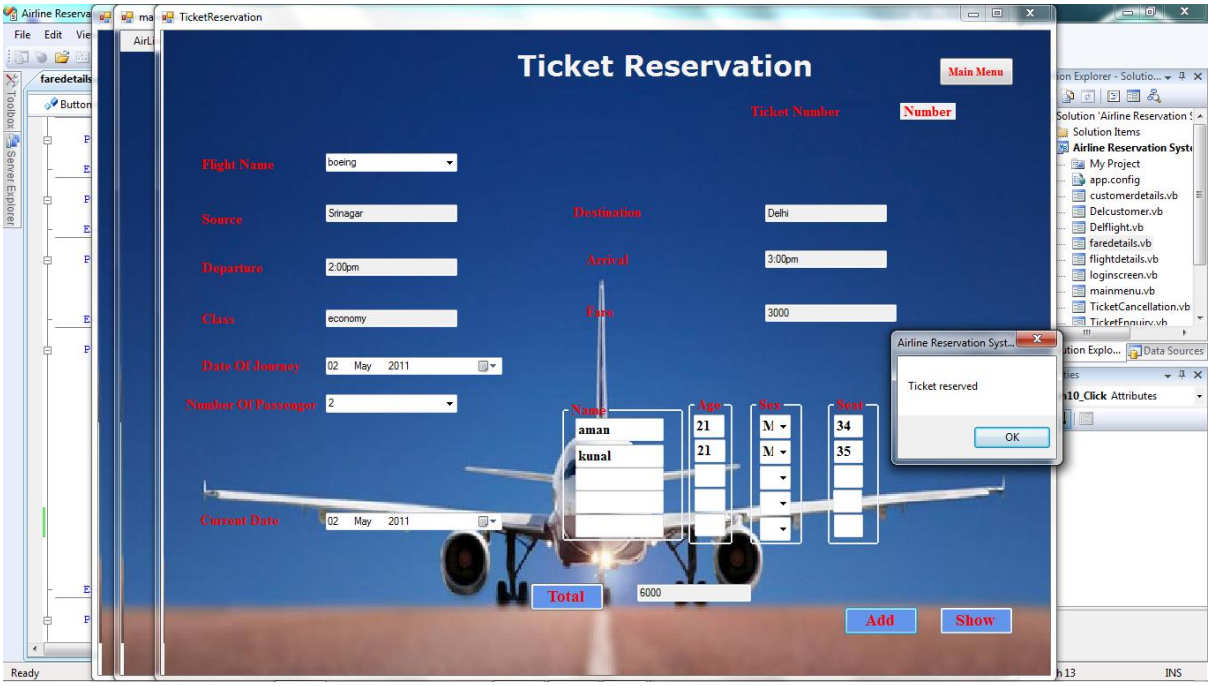

Updateplane
Flight Details
Main Menu
Flight_Info
Flight_Name
boeing
View
Flight_Code
A382
Class_Name
economy
Total Seats
82
Source
Srinagar
Destination
Delhi
Departure
2:00pm
Arrival
3:00pm
Fare
3000
Update


Updateplane
Flight Details
Main Menu
Flight_Info
Flight_Name
boeing
View
Flight_Code
A382
Class_Name
economy
Airline Reservation Syst...
updated
OK
Total Seats
82
Source
Srinagar
Destination
Delhi
Departure
2:00pm
Arrival
3:00pm
Fare
3000
Update

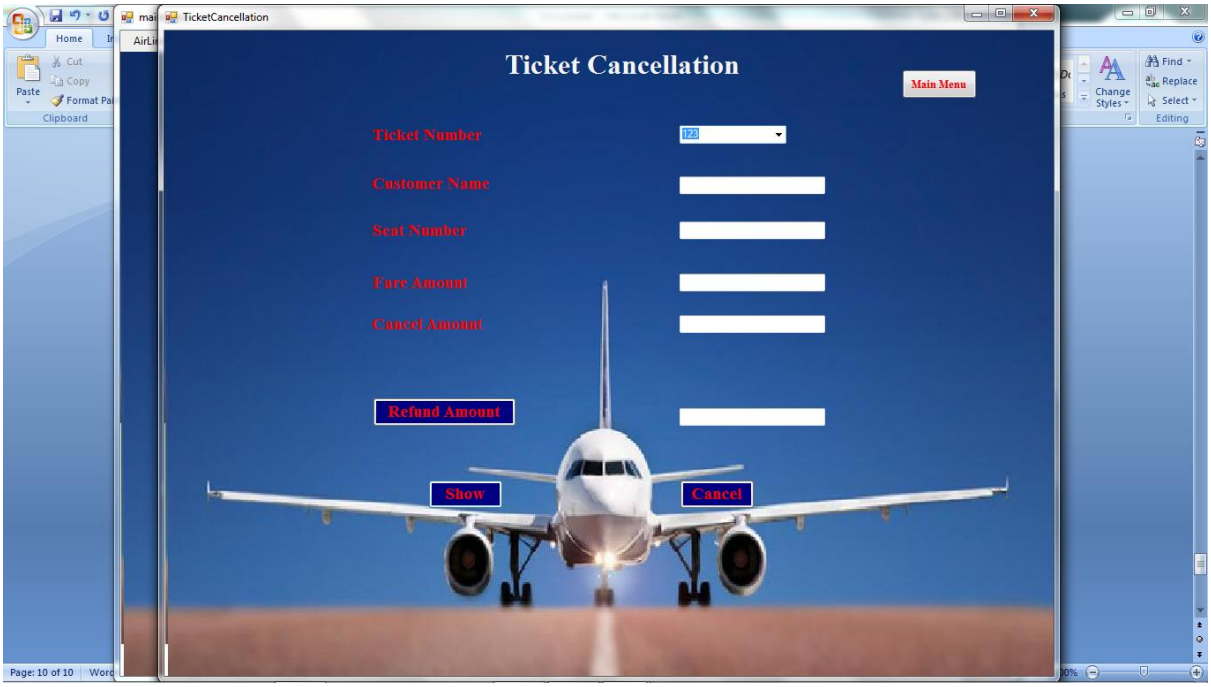
FARE



TICKET RESERVATION



TICKET CANCEL



7. Testing

Functional Testing

Functional testing is a type of black box testing that bases its test cases on the specifications of the software component under test. Functions are tested by feeding them input and examining the output, and internal program structure is rarely considered (Not like in white-box testing).

Functional testing differs from system testing in that functional testing a program by checking it against ... design document or specification", while system testing "validate a program by checking it against the published user or system requirements.

Functional testing typically involves five steps:->

1. The identification of functions that the software is expected to perform
2. The creation of input data based on the function's specifications
3. The determination of output based on the function's specifications
4. The execution of the test case
5. The comparison of actual and expected outputs

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. System testing falls within the scope of black box testing, and as such, should require no knowledge of the inner design of the code or logic.

Structural Testing

It determines the durability and integrity of complete structures or sub-assemblies, usually in multi-axis testing systems that replicate end use conditions. The product range extends from single-axis component testing through to complex testing systems for the simulation of almost all service loads affecting a vehicle or component. IST offers a wide range of modular standard testing systems for use in the automotive industry to test car components such as suspensions and steering systems. Alternatively, systems can be engineered to meet specific customer requirements.

Levels of testing

1) Unit testing
2) Integration testing
3) System testing
4) User acceptance testing

1)unit testing: individual software components of appication are tested in isolation from other part of the program.

bigban testing: individual software components of an aplivation are combined at once into system .every module is first init tested.then the entire sysetm is tested for communication interfaces between them.

bottom-up testing: in bottom-up integration testing begins from bottom of the module hierarchy and work up to the top to simulate higher level modules .every module is first unit tested then modules are added in acsending hierarchial order.lower level modules are tested first then the next set of higher level modules are tested with previuosly tested lower level modules.

top-down testing: begins testing from top of the module hierarchy and work down to the bottom to simulate lower interfacing modules.every module is first unit tested then the modules are added in descending hierarchial order.higher level modules are tested first then the next set of lower level modules are tested with previously tested higher level modules.

- **Testing of the Project**

Proofreading
Proofreading (also proof-reading) traditionally means reading a proof copy of a text in order to detect and correct any errors. Modern proofreading often requires reading copy at earlier stages as well.

Double Entry
In the double entry system transactions are entered twice in the accounts. For example, the same car purchased will result an increase in the "vehicle" account and a decrease in "cash" account. Therefore, the difference between the two is that in single entry system, transaction is entered only once and in double entry system it is entered twice

This is to find if any errors are present in the system. To check for the errors an artificial made database are fed to system and been checked and the errors will be verified accordingly.
Two main ways of data verifications are:-

Single Method: this is also known as proof reading method-

Typing the data twice and comparing the two database at the same time. This method is also known as double entry method.

6.2 FUTURE SCOPE OF THE PROJECT

By having this system, it helps the airline companies to update and save in the flights and packages schedules at different timings whereas the customers get to obtain flight price, seat, meal and any other assistance that would help them have a comfortable flight.

Moreover, for the future purpose this project is to reach and being understood even by the rural people whereas by development of this project we might use scan codes and applications, whereas all this is possible by having internet thus having sufficient infrastructure to provide them with internet that could help them save time moving to the city to meet the airline agencies.

6.3 CONCLUSION

In conclusion, the airline reservation system was successfully designed and implemented with the intension to limit manual operations. This system is user friendly and very much flexible to non-programmers.

It is also tested for maximum accuracy and quality validation. During this project designing, we have accomplished all the tasks and objectives to meet the organizational needs. The system will be used in searching, retrieving and generating processed information for the concerned request.

With this proposed system are reduced errors due to human intervention and conveniently maintains any modifications to the flight and cancellations in the reservations made at any point of time. It not only provides flight details but also creates a platform to book tickets online, cancels or modifies ticket timings or dates and even informs about the number of people available on board and seats that are already booked.

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