Ahsanullah University of Science and Technology

Department of Computer Science and Engineering

Project Name : **Fly Sky(Air Ticket Management System)**

Couse Name: Database Lab
Couse ID: CSE 3104
Semester : FALL 2018

Student ID :	**Student Name**
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Introduction:

“Fly Sky” is a software based on air ticket management system. This is an offline software where the admin, customer and sale’s representative meet on the same point for achieving the goal of this software. This software is a platform where the customer seeks for air-ticket and the admin and sale’s representative make sure that the customer can find the desired result. This project is made from the perspective of a company which sells air-ticket and the maintenance is done by the database manager of the company and the tickets are sold by the sell’s representative.

Motivation and Objective:

“Fly Sky”- A Dream Project. Firstly, analyzing the market it has found that ,there is no single platform air-ticket seller in our country. So the motivation has lighten up here and

the working process has started to achieve this goal . At this moment, people are very interested in finding results in a single package ,they want someone or something to analyze the market for them and also want the best possible combination to be done for them. That is why we planned for a platform where all the airlines can meet at one point and the customer can differ, compare and then make a decision for them from a huge variety of results. Our goal is to optimize the software and make an online version of this software so that people from our country can book air-tickets from their home without any hassle and complexity.

Database Tables:

Table 01: Airline

Field	Type	Constraint
AirLineId	Int	P.K (IS: 1)
AirLineName	Varchar(50)	Not Null
TotalSeatNo	Int	Not Null

Table 02: BusinessClass

Field	Type	Constraint
SeatId	Int	P.K (IS:1)
RouteId	Varchar(50)	NOT NULL
AirLineId	int	F.K (AirLine)
ClassBaseFare	Money	NOT NULL
DepartureCity	Varchar(50)	NOT NULL
DepartureDate	Date	NOT NULL
DepartureTime	Time	NOT NULL
ArrivalCity	Varchar(50)	NOT NULL

SeatNumber	Varchar(50)	NOT NULL
SpecialRequirementName	Varchar(50)	NULL
JTime	Int	NOT NULL
TransitCity	Varchar(50)	NULL
TransitTime	Int	NULL

Table 03: EconomyClass

Field	Type	Constraint
SeatId	Int	P.K (IS:1)
RouteId	Varchar(50)	NOT NULL
AirLineId	int	F.K (AirLine)
ClassBaseFare	Money	NOT NULL
DepartureCity	Varchar(50)	NOT NULL
DepartureDate	Date	NOT NULL
DepartureTime	Time	NOT NULL
ArrivalCity	Varchar(50)	NOT NULL
SeatNumber	Varchar(50)	NOT NULL
SpecialRequirementName	Varchar(50)	NULL
JTime	Int	NOT NULL
TransitCity	Varchar(50)	NULL
TransitTime	Int	NULL

Table 04: Buyer

Field	Type	Constraint
BuyerId	Int	P.K (IS: 1)
Firstname	Varchar(50)	NOT NULL
LastName	Varchar(50)	NOT NULL
Address	Varchar(50)	

PassportNumber	Varchar(50)	NOT NULL
PhoneNumber	Varchar(50)	NOT NULL
Email	Varchar(50)	NOT NULL
SpecialRequirementName	Varchar(50)	

Table 05: SelectTicket

Field	Type	Constraint
AirlineId	Int	F.K (**AirLine**)
DepartureCity	Varchar(50)	NOT NULL
DepartureTime	Time	NOT NULL
DepartureDate	Date	NOT NULL
ArrivalCity	Varchar(50)	NOT NULL

Table 06: BTicket

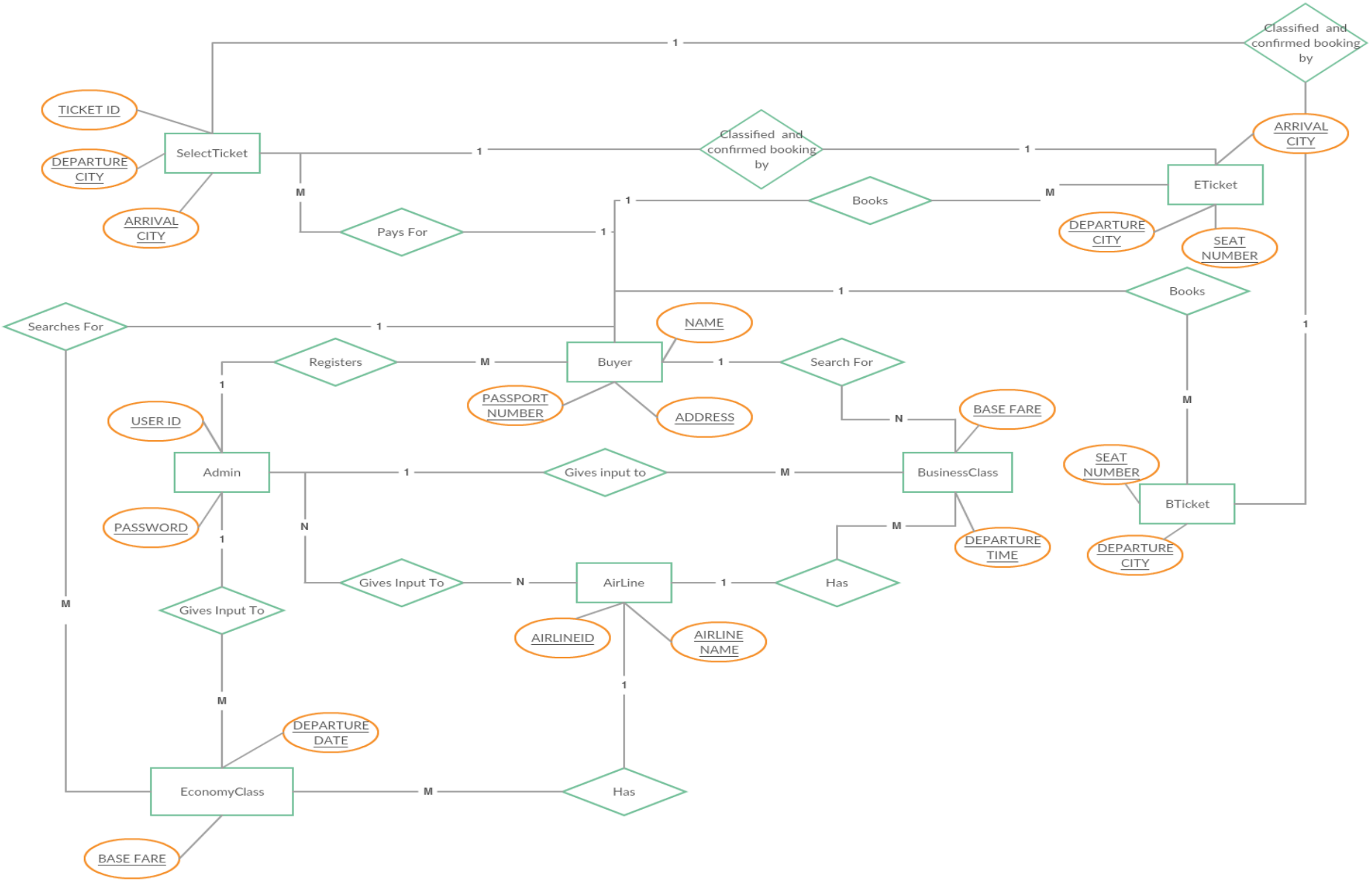
Field	Type	Constraint
TicketId	Int	P.K (IS: 1)
AirLineName	Varchar(50)	NOT NULL
DepartureCity	Varchar(50)	NOT NULL
DepartureTime	Numeric(5)	NOT NULL
DepartureDate	Date	NOT NULL
ArrivalCity	Numeric(8,2)	NOT NULL
TransitCity	Varchar(50)	NOT NULL

SeatNumber	Varchar(10)	NOT NULL
BuyerId	Int	F.K(Buyer)

Table 06: ETicket

Field	Type	Constraint
TicketId	Int	P.K (IS: 1)
AirLineName	Varchar(50)	NOT NULL
DepartureCity	Varchar(50)	NOT NULL
DepartureTime	Numeric(5)	NOT NULL
DepartureDate	Date	NOT NULL
ArrivalCity	Numeric(8,2)	NOT NULL
TransitCity	Varchar(50)	NOT NULL
SeatNumber	Varchar(10)	NOT NULL
BuyerId	Int	F.K(Buyer)

Entity Relationship Diagram:



Query Tables Construction

1.AirLine Table

```
create table Airline(
AirLineId int IDENTITY(1,1) PRIMARY KEY,
AirLineName varchar(50) NOT NULL,
TotalSeatNo INT NOT NULL,
        );
```

2.EconomyClass Table

```
Create table EconomyClass(
SeatId int Identity(1,1) Primary key,
RouteId varchar(50) NOT NULL,
AirLineId int NOT NULL FOREIGN KEY REFERENCES AIRLINE(AIRLINEID),
ClassBaseFare MONEY NOT NULL,
DepartureCity varchar(50) not null,
DepartureDATE DATE NOT NULL,
DepartureTime time Not NULL,
ArrivalCity varchar(50) not null,
SeatNumber VARCHAR(50) NOT NULL,
SpecialRequirementName VARCHAR(50),
Jtime int NOT NULL,
TransitCity varchar(50),
TransitTime int,
);
```

3.BusinessClass Table

```
Create table BusinessClass(
SeatId int Identity(1,1) Primary key,
RouteId varchar(50) NOT NULL,
```

```
AirLineId int NOT NULL FOREIGN KEY REFERENCES AIRLINE(AIRLINEID),
ClassBaseFare MONEY NOT NULL,
DepartureCity varchar(50) not null,
DepartureDATE DATE NOT NULL,
DepartureTime time Not NULL,
ArrivalCity varchar(50) not null,
SeatNumber VARCHAR(50) NOT NULL,
SpecialRequirementName VARCHAR(50),
Jtime int NOT NULL,
TransitCity varchar(50),
TransitTime int,
);
```

4.Buyer Table

```
CREATE TABLE BUYER(
BuyerId INT IDENTITY(1,5001) PRIMARY KEY NOT NULL,
FirstName VARCHAR(50) NOT NULL,
LastName VARCHAR(50) NOT NULL,
Address VARCHAR(50),
PassportNumber VARCHAR(50) NOT NULL,
PhoneNumber VARCHAR(20) NOT NULL,
Email VARCHAR(50) NOT NULL,
SpecialRequirementName VARCHAR(50),
);
```

5.SelectTicket Table

```
create table selectticket(
airlineid int not null foreign key references airline(airlineid),
departurecity varchar(50),
daparturetime time not null,
departuredate date not null,
arrivalcity varchar(50) not null
);
```

6.BTicket Table

```
create table bticket(
ticketid int identity(1,1) primary key not null,
airlinename varchar(50) not null,
departurecity varchar(50) not null,
departuredate date not null,
departuretime time not null,
arrivalcity varchar(50) not null,
transitcity varchar(50) not null,
seatnumber varchar(50) not null,
 BuyerId int not null);
```

7.ETicket Table

```
create table eticket(
ticketid int identity(1,1) primary key not null,
airlinename varchar(50) not null,
departurecity varchar(50) not null,
departuredate date not null,
departuretime time not null,
arrivalcity varchar(50) not null,
transitcity varchar(50) not null,
seatnumber varchar(50) not null,
BuyerId int not null
);
```

Query Insertion of Data

1. "insert into Route(RouteId,AirlineId,DepartureCityName,DepartureDate,DepartureTime,ArrivalCityName,ArrivalDate,ArrivalTime,Jtime,TransitCity,TransitTime) values(?,?,?,?,?,?,?,?,?,?,?)"

2. "insert into Airline(AirlineId,AirlineName,TotalseatNo) values(?,?,?)";

3. "insert into Businessclass(RouteId,AirLineId,ClassBaseFare,DepartureCity,DepartureDATE,DepartureTime,ArrivalCity,SeatNumber,SpecialRequirementName,Jtime,TransitCity,TransitTime) values(?,?,?,?,?,?,?,?,?,?,?,?)";

4. "insert into Economyclass(RouteId,AirLineId,ClassBaseFare,DepartureCity,DepartureDATE,DepartureTime,ArrivalCity,SeatNumber,SpecialRequirementName,Jtime,TransitCity,TransitTime) values(?,?,?,?,?,?,?,?,?,?,?,?)";

Query for Value Update, Setting Constraints and Rules

1.UPDATE BUYER SET Name=upper(FirstName)

2.UPDATE BUYER SET Name=upper(LastName)

3. delete from businessclass where departurecity=? AND departuretime=? AND arrivalcity=? AND seatnumber=?

4. "delete from economyclass where departurecity=? AND departuretime=? AND arrivalcity=? AND seatnumber=? "

Query for Aggregate functions you have used

1.

```
SELECT BTICKET.TICKETID,BTICKET.SEATNUMBER,BUYER.BUYERID,

SUM( ) AS ‘TOTAL TICKET’

FROM BTICKET.BUYERID=BUYER.BUYERID

GROUP BY BUYER.BUYERID
```

2.

```
SELECT ETICKET.TICKETID,ETICKET.SEATNUMBER,BUYER.BUYERID,

SUM( ) AS ‘TOTAL TICKET’

FROM ETICKET.BUYERID=BUYER.BUYERID

GROUP BY BUYER.BUYERID
```

Query for the Join and Binary Operation (like Union,except) you have used

1.

select distinct businessclass.airlineid,
Airline.AirLineName,businessclass.departurecity,businessclass.departuredate,businessclass.departuretime,businessclass.arrivalcity,businessclass.jtime,businessclass.transitcity,businessclass.transittime,businessclass.classbasefare*?\n"

+ "from\n"

+ "businessclass inner join Airline\n"

+ "on businessclass.airlineid=Airline.AirLineId where DepartureCity=? AND DepartureDate=? AND ArrivalCity=?"

2.

"select distinct EconomyClass.airlineid,
Airline.AirLineName,EconomyClass.departurecity,EconomyClass.departuredate,EconomyClass.departuretime,EconomyClass.arrivalcity,EconomyClass.jtime,EconomyClass.transitcity,EconomyClass.transittime,EconomyClass.classbasefare*?\n"

+ "from\n"

+ "EconomyClass inner join Airline\n"

+ "on EconomyClass.airlineid=Airline.AirLineId where DepartureCity=? AND DepartureDate=? AND ArrivalCity=?"

3. "select username,password_ from admin_sign_in where username like ? and password_ like ?”

Query that you have used by the form of sub query

No sub query have been used.

Screen Shots of project interface design

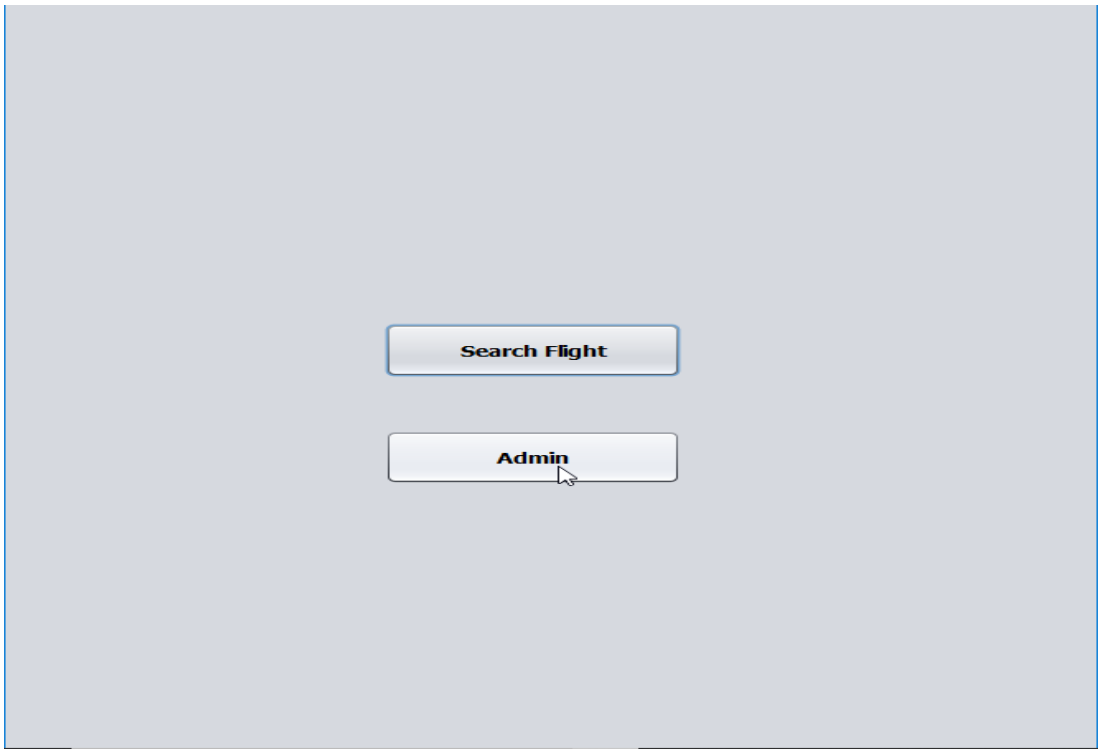


Image 01: Front Page

Image 02: Log In Page

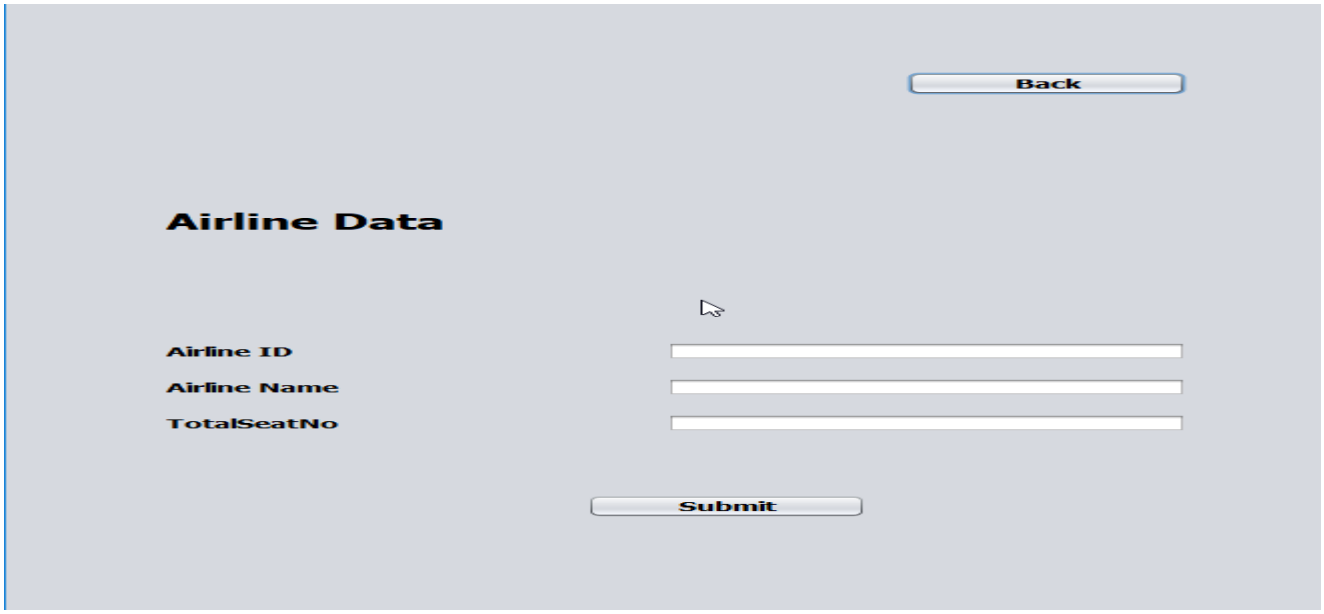


Image 03:Data Insert For Air Line

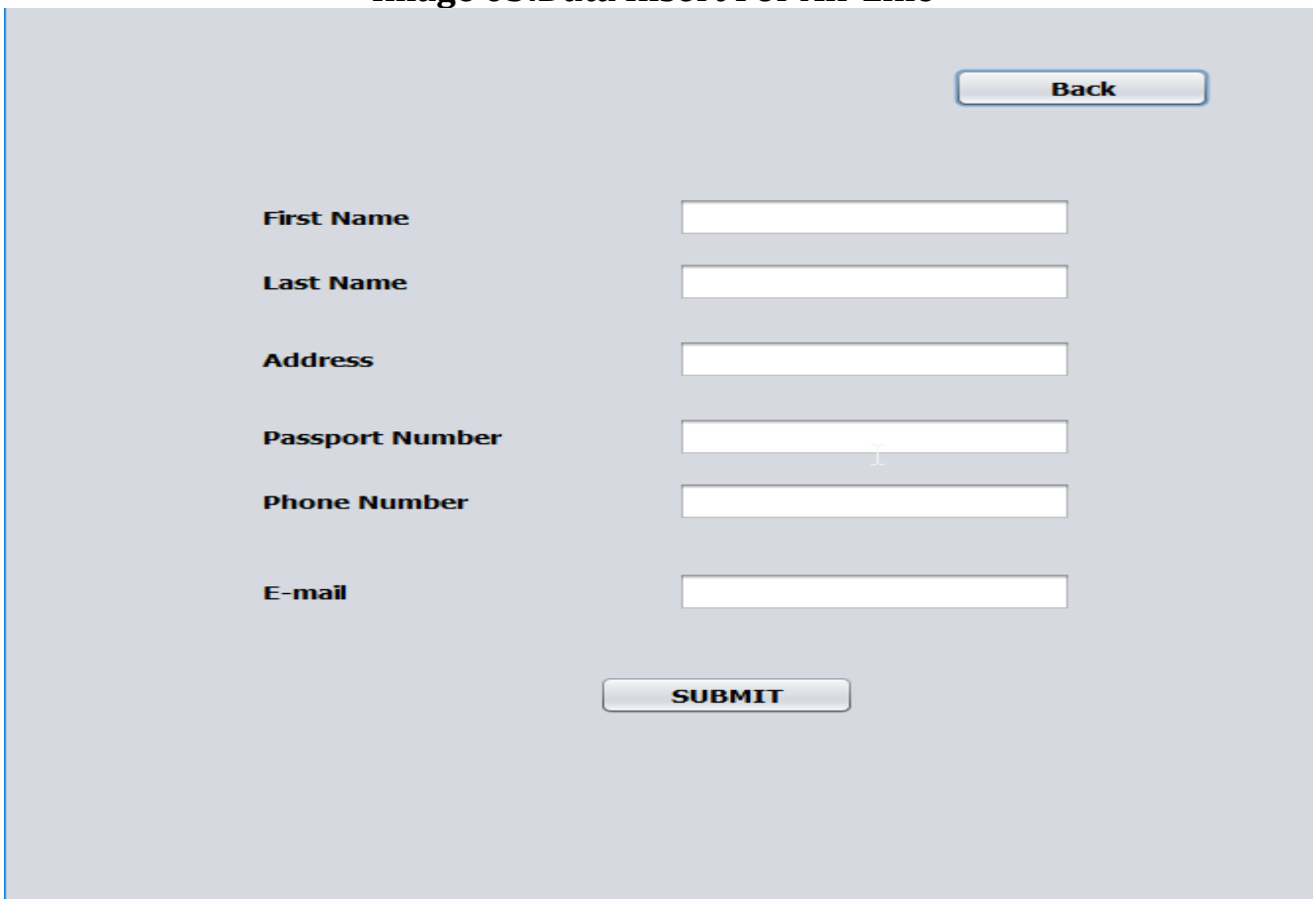


Image 04: Buyer Registration

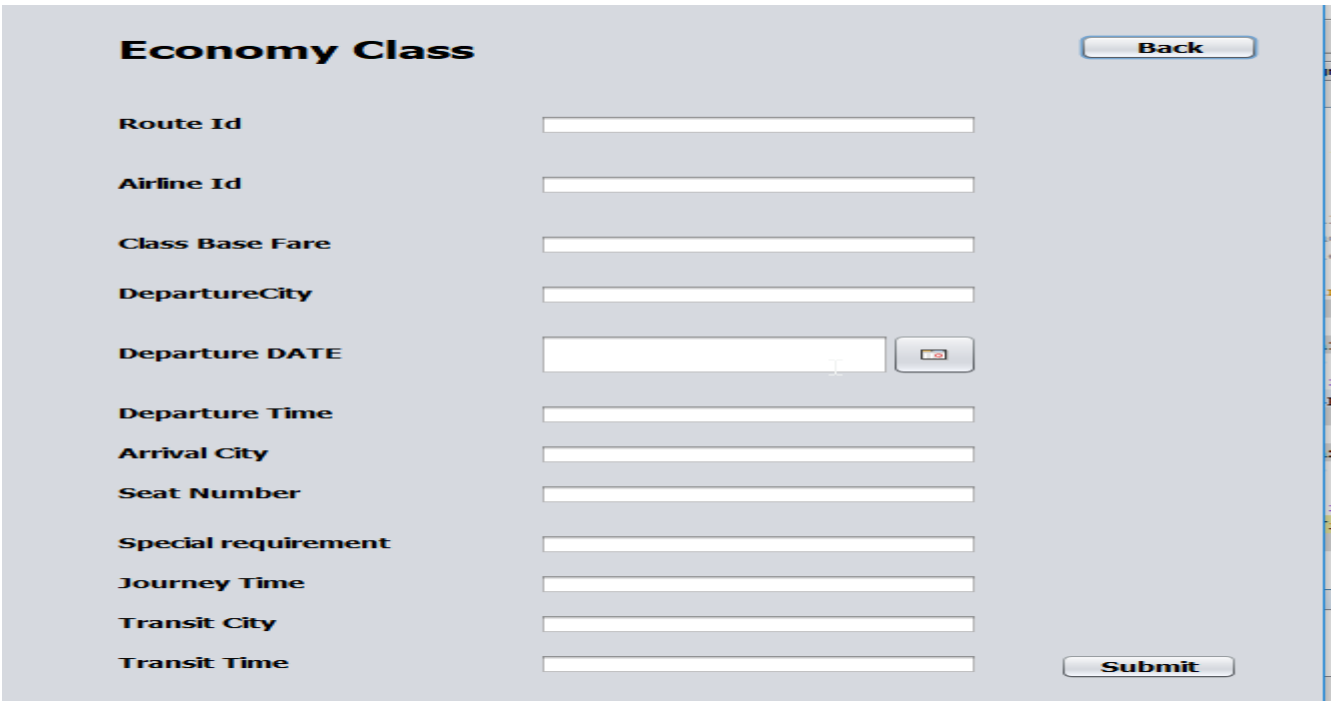


Image 05:Air Ticket Data Insertion Page

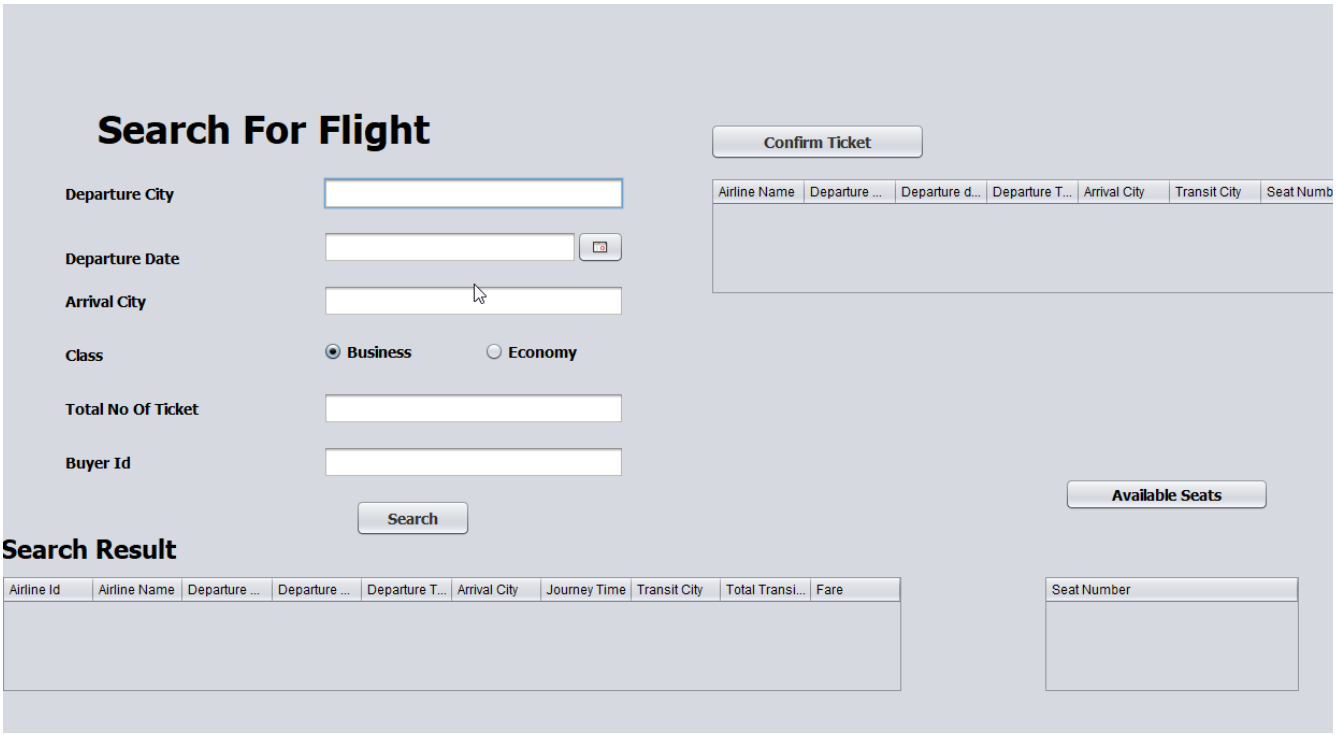


Image 06: Search and Ticket Booking panel

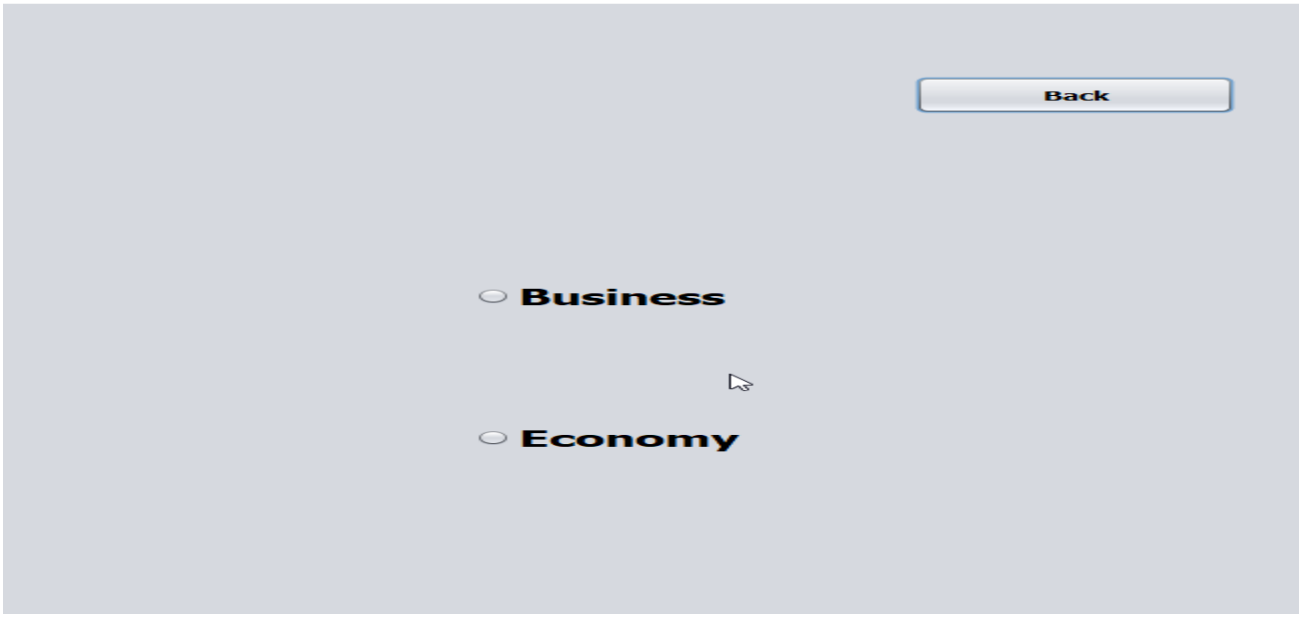


Image 07:Selection of Class Page

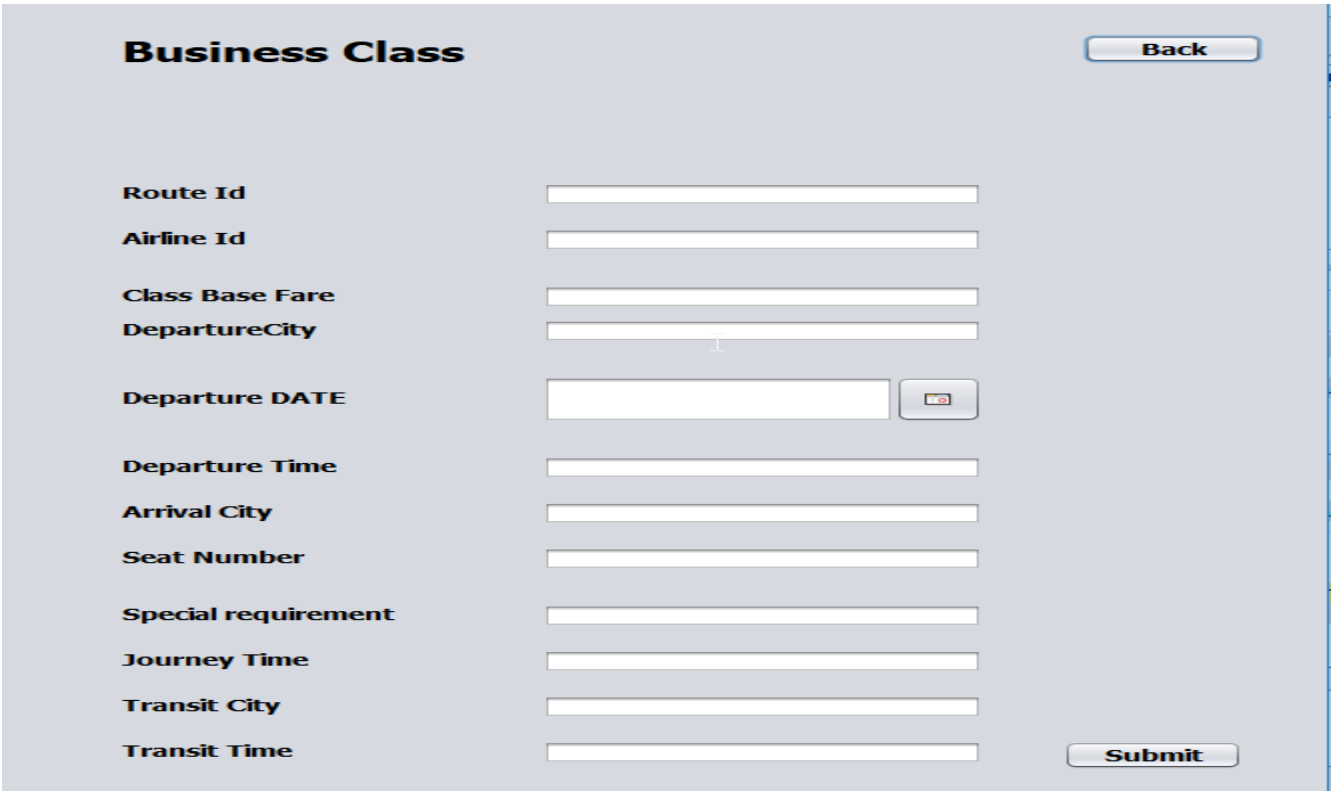


Image 08:Data Insertion for Business Class Ticket

Conclusion:

As a team we have tried to make this project. Though the project has several optimization issues , we will continue our effort to make this program more optimized and user friendly .

Contribution: