



Database Project

Project: Airline Database Project

Names:

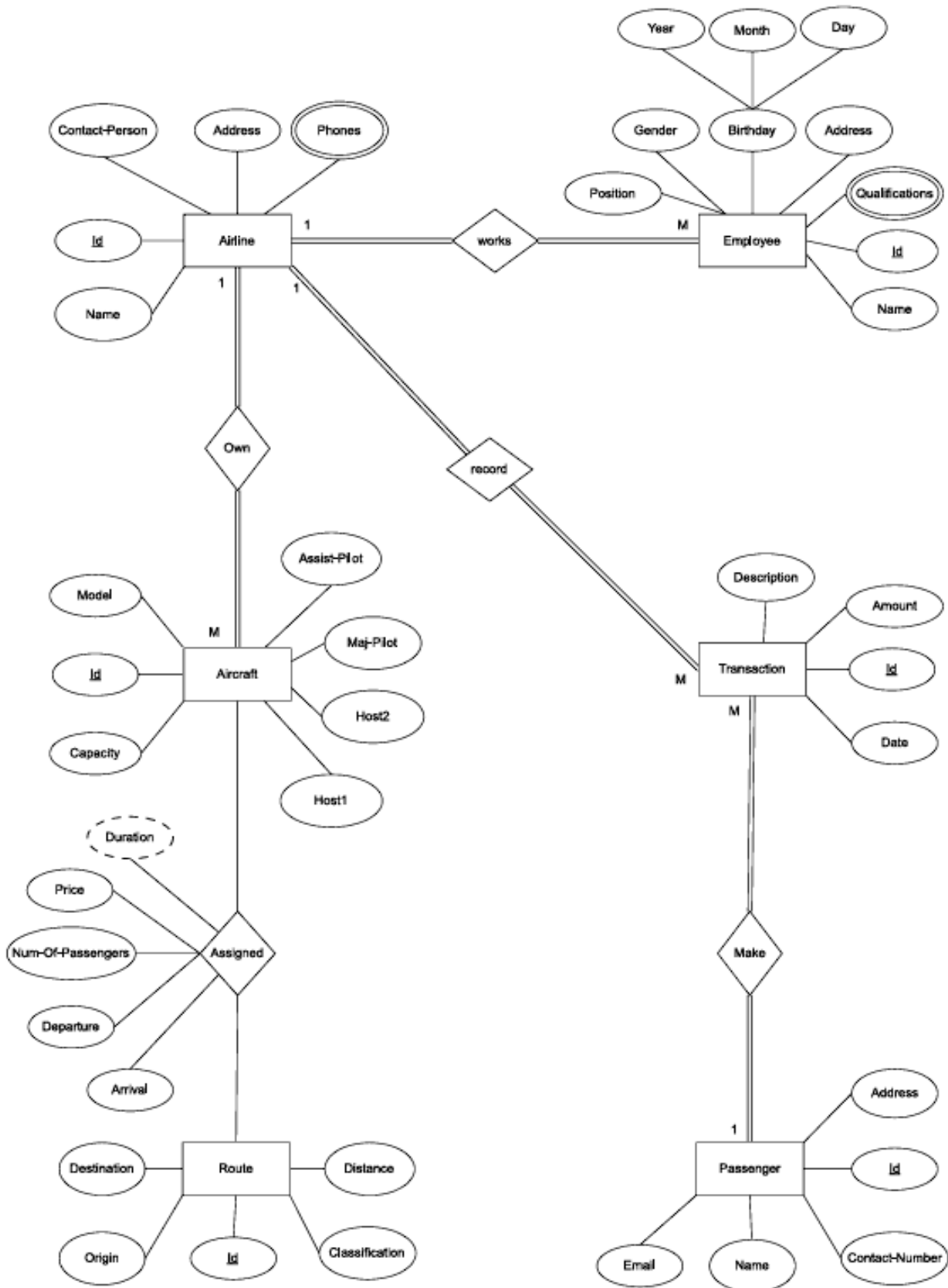
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Description

Major airlines companies that provide passenger services keep databases with lots of information on all airlines.

- Each airline has an identification number, name and address, name of the contact person and telephone numbers.
- Each employee who works in Airline Company has an employee identification number, name, address, birthday recorded as (day, month, year), gender, position with the company, and qualifications.
- Each airline owns different aircraft models. For each aircraft an aircraft identification number, capacity, and model are recorded.
- The aircraft are assigned to different routes. An aircraft can work on more than one route and a route has many aircraft going on it. Some information such as number of passengers, price per passenger, departure date time, arrival date time and the time that aircraft spent in traveling the route are recorded.
- Each route has a route identification number, origin, destination, distance, classification (e.g. domestic or international route).
- Each aircraft has its own crew (major pilot, assistant pilot and two hostesses), the aircraft crew not stored as employees.
- Each airline keeps information about their buy/sell transactions (for example selling an airplane ticket is a sell transaction, paying for maintenance is a buy transaction). Each transaction has a transaction identification number, date, description, and amount of money paid/received.
- Each passenger is identified by a unique Passenger ID, and the following details are recorded: Name, Address, Contact Number, Email. Passengers are linked to transactions. Each transaction is associated with a specific Passenger, ensuring that ticket purchases or other transactions can be tracked back to the individual passenger.

Entity Relationship Diagram



Mapping

Aircraft

<u>Id</u>	model	capacity	Major-pilot	Assistant-pilot	Host_1	Host_2	<u>Airlie-id</u>
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Route

<u>Id</u>	Classification	Distance	Destination	Origin
-----------	----------------	----------	-------------	--------

Aircraft-route

<u>Aircraft-Id</u>	<u>Route-id</u>	Number-of- Passenger	Arrival	departure	price
--------------------	-----------------	-------------------------	---------	-----------	-------

Airline

<u>Id</u>	Name	Contact-person	Address
-----------	------	----------------	---------

Airline phones

<u>Airline-id</u>	<u>phone</u>
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Transaction

<u>Id</u>	Description	Date	Amount	<u>Airline-Id</u>	<u>Passenger-id</u>
-----------	-------------	------	--------	-------------------	---------------------

Employee

<u>Id</u>	Position	Gender	Year	Month	Day	Address	Name	<u>Airline-Id</u>
-----------	----------	--------	------	-------	-----	---------	------	-------------------

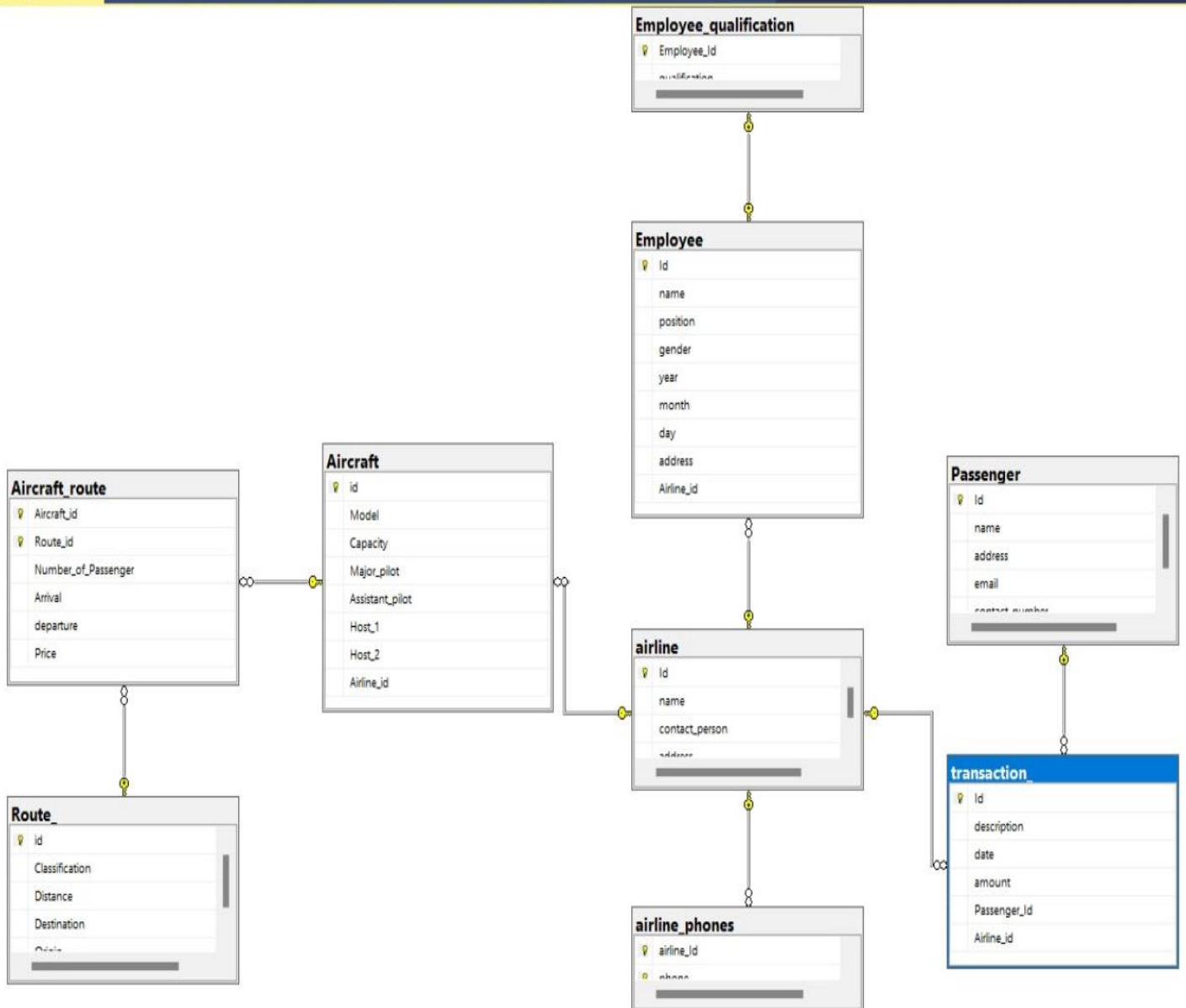
Employee qualifications

<u>Employee-id</u>	<u>Qualification</u>
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Passenger

<u>Id</u>	Name	Address	Email	Contact-Number
-----------	------	---------	-------	----------------

Database Relationship Diagram



Sample Data for Tables

Aircraft

Id	Model	Capacity	Major-pilot	Assistant-pilot	Host_1	Host_2	Airline-id
A101	Boeing 737	180	John Smith	Emily Carter	Sarah Lee	Tom Brown	AL01
A102	Airbus A320	160	Mike Davis	Hannah White	Lisa Green	Alan Jones	AL02
A103	Embraer 190	100	Laura Wilson	Kevin Moore	Sophie Black	Jack Taylor	AL03

Route

Id	Classification	Distance (km)	Destination	Origin
R001	Domestic	800	New York (JFK)	Chicago (ORD)
R002	International	7200	London (LHR)	Los Angeles (LAX)
R003	Domestic	500	Houston (IAH)	Dallas (DFW)

Aircraft Route

Aircraft-Id	Route-id	Number of Passengers	Arrival	Departure	Price (\$)
A101	R001	170	2024-11-24 10:00	2024-11-24 07:00	150
A102	R002	150	2024-11-25 16:00	2024-11-25 08:00	700
A103	R003	90	2024-11-26 13:00	2024-11-26 11:00	100

Airline

Id	Name	Contact-person	Address
AL01	SkyWings Airlines	Oliver Reed	123 Aviation Blvd, NY
AL02	Horizon Air	Charlotte King	456 Skyview Road, LA
AL03	Pacific Blue Airways	George Harris	789 Coastal Way, Seattle

Airline Phones

Airline-id	Phone
AL01	+121255501
AL01	+121255502
AL02	+131055503
AL03	+120655504

Transaction

Id	Description	Date	Amount (\$)	Airline-Id	Passenger-id
T001	Ticket Sale	2024-11-20	2000	AL01	P001
T002	Maintenance Expense	2024-11-21	1500	AL02	P002
T003	Fuel Cost	2024-11-22	3000	AL03	P003

Employee

Id	Position	Gender	Year	Month	Day	Address	Name	Airline-Id
E001	Pilot	Male	1980	5	20	12 Cloud St, NY	Adam Walker	AL01
E002	Flight Attendant	Female	1992	8	14	34 Wind Rd, LA	Eve Harris	AL02
E003	Engineer	Male	1985	3	10	56 Jet Way, Seattle	Alex Turner	AL03

Employee Qualifications

Employee-id	Qualification
E001	Commercial Pilot License
E002	Cabin Crew Training
E003	Aircraft Maintenance Certification

Passenger

Id	Name	Address	Email	Contact-Number
P001	Dave Turner	12 Cloud St,	DaveTurner@gmail.com	+155512345
P002	John Oliver	34 Wind Rd,	JohnOliver@gmail.com	+155598765
P003	Mike Walter	56 Jet Way,	MikeWalter@gmail.com	+155511122

SQL Query

Create database Airline

```
Create table Aircraft(  
id nvarchar(10) not null,  
Model nvarchar(15) not null,  
Capacity Int not null,  
Major_pilot nvarchar(20) not null,  
Assistant_pilot nvarchar(20) not null,  
Host_1 nvarchar(25) not null,  
Host_2 nvarchar(25) not null,  
    Primary key (id),  
);  
Create table Route_  
id nvarchar(10) not null,  
Classification nvarchar(15) not null,  
Distance decimal(10,3) not null,  
Destination nvarchar(15) not null,  
Origin nvarchar(15) not null,  
    Primary key (id),  
);  
Create table Aircraft_route(  
Aircraft_id nvarchar(10)not null,  
Route_id nvarchar(10) not null,  
Number_of_Passenger Int not null,  
Arrival date not null,  
departure date not null,  
Price decimal(10,3),  
    Primary key(Aircraft_id , Route_id),  
    Foreign key (Aircraft_id) References Aircraft  
on update cascade  
on delete cascade,  
    Foreign key (Route_id) References Route_  
on update cascade  
on delete cascade,  
);
```



```
create table Employee
(
  Id nvarchar(10) not null,
  name nvarchar(50) not null,
  position nvarchar(50) not null,
  gender nvarchar(20) not null,
  year int not null,
  month int not null,
  day int not null,
  address nvarchar(40),
  primary key (Id)
)

create table Employee_qualification
(
  Employee_Id nvarchar(10) not null,
  qualification nvarchar(50) not null,
  primary key(Employee_Id),
  foreign key (Employee_Id) references employee
  on update cascade
  on delete cascade,
)

create table Passenger
(
  Id nvarchar(10) not null,
  name nvarchar(50) not null,
  address nvarchar(40),
  email nvarchar(50),
  contact_number nvarchar(11) not null,
  primary key (Id)
)
```

```
create table transaction_  
(  
  Id nvarchar(10) not null,  
  description nvarchar(50) not null,  
  date date not null,  
  amount decimal(10,3) not null,  
  Passenger_Id nvarchar(10) not null,  
  primary key(Id),  
  foreign key (Passenger_Id) references Passenger  
  on update cascade  
  on delete cascade,  
)  
  
create table airline  
(  
  Id nvarchar(10) not null,  
  name nvarchar(50) not null,  
  contact_person nvarchar(50) not null,  
  address nvarchar(40) not null,  
  primary key(Id)  
)  
  
create table airline_phones  
(  
  airline_Id nvarchar(10) not null,  
  phone nvarchar(11) not null,  
  primary key (airline_Id, phone),  
  foreign key (airline_Id) references airline  
  on update cascade  
  on delete cascade,  
)
```

```

alter table Aircraft add Airline_id nvarchar(10) references Airline;
alter table Transaction_ add Airline_id nvarchar(10) references Airline;
alter table Employee add Airline_id nvarchar(10) references Airline;

INSERT INTO Airline (Id, Name, Contact_person, Address)
VALUES
('AL01', 'SkyWings Airlines', 'Oliver Reed', '123 Aviation Blvd, NY'),
('AL02', 'Horizon Air', 'Charlotte King', '456 Skyview Road, LA'),
('AL03', 'Pacific Blue Airways', 'George Harris', '789 Coastal Way, Seattle');

INSERT INTO Aircraft (Id, Model, Capacity, Major_pilot, Assistant_pilot, Host_1, Host_2, Airline_id)
VALUES
('A101', 'Boeing 737', 180, 'John Smith', 'Emily Carter', 'Sarah Lee', 'Tom Brown', 'AL01'),
('A102', 'Airbus A320', 160, 'Mike Davis', 'Hannah White', 'Lisa Green', 'Alan Jones', 'AL02'),
('A103', 'Embraer 190', 100, 'Laura Wilson', 'Kevin Moore', 'Sophie Black', 'Jack Taylor', 'AL03');

INSERT INTO Route_ (Id, Classification, Distance, Destination, Origin)
VALUES
('R001', 'Domestic', 800.000, 'New York (JFK)', 'Chicago (ORD)'),
('R002', 'International', 7200.000, 'London (LHR)', 'LosAngeles(LAX)'),
('R003', 'Domestic', 500.000, 'Houston (IAH)', 'Dallas (DFW)');

INSERT INTO Aircraft_route (Aircraft_id, Route_id, Number_of_Passenger, Arrival, Departure, Price)
VALUES
('A101', 'R001', 170, '2024-11-24', '2024-11-24', 150.000),
('A102', 'R002', 150, '2024-11-25', '2024-11-25', 700.000),
('A103', 'R003', 90, '2024-11-26', '2024-11-26', 100.000);

INSERT INTO Airline_Phones (Airline_Id, Phone)
VALUES
('AL01', '+121255501'),
('AL01', '+121255502'),
('AL02', '+131055503'),
('AL03', '+120655504');

INSERT INTO Employee (Id,name, Position, Gender, Year, Month, Day, Address, Airline_Id)
VALUES
('E001','Adam Walker', 'Pilot', 'Male', 1980, 5, 20, '12 Cloud St, NY', 'AL01'),
('E002','Eve Harris', 'Flight Attendant', 'Female', 1992, 8, 14, '34 Wind Rd, LA', 'AL02'),
('E003','Alex Turner', 'Engineer', 'Male', 1985, 3, 10, '56 Jet Way, Seattle', 'AL03');

```

```
INSERT INTO Employee_qualification (Employee_Id, Qualification)
VALUES
('E001', 'Commercial Pilot License'),
('E002', 'Cabin Crew Training'),
('E003', 'Aircraft Maintenance Certification');

INSERT INTO Passenger(Id,name, Address,email, contact_number)
VALUES
('P001','Dave Turner','12 Cloud St,', ' DaveTurner@gmail.com', '+155512345'),
('P002','John Oliver','34 Wind Rd,', 'JohnOliver@gmail.com', '+155598765' ),
('P003','Mike Walter','56 Jet Way,', 'MikeWalter@gmail.com', '+155511122');

INSERT INTO Transaction_ (Id, Description, Date, Amount, Airline_id,Passenger_Id)
VALUES
('T001', 'Ticket Sale', '2024-11-20', 2000.000, 'AL01','P001'),
('T002', 'Maintenance Expense', '2024-11-21', 1500.000, 'AL02','P002'),
('T003', 'Fuel Cost', '2024-11-22', 3000.000, 'AL03','P003');
```

GUI Code

```
Employee_quali...cs.cs [Design]    Passenger.cs [Design]    Route_cs [Design]    transaction_cs [Design]    Aircraft.cs [X]
Project_database
    Project_database.Aircraft
        button1_Click(object sender, EventArgs e)
1  using System;
2  using System.Collections.Generic;
3  using System.ComponentModel;
4  using System.Data;
5  using System.Drawing;
6  using System.Linq;
7  using System.Text;
8  using System.Threading.Tasks;
9  using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     public partial class Aircraft : Form
15     {
16         4 references
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21         1 reference
22         public Aircraft()
23         {
24             InitializeComponent();
25             da = new SqlDataAdapter("select * from Aircraft", con);
26             da.Fill(dt);
27             dataGridView1.DataSource = dt;
28         }
29         1 reference
30         private void Aircraft_Load(object sender, EventArgs e)
31         {
32             // TODO: This line of code loads data into the 'airlineDataSet.Aircraft' table. You can move, or remove it, as needed.
33             this.aircraftTableAdapter.Fill(this.airlineDataSet.Aircraft);
34         }
35         1 reference
36         private void button1_Click(object sender, EventArgs e)
37         {
38             cmd = new SqlCommandBuilder(da);
39             da.Update(dt);
40             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
41         }
42     }
43 }
44
```

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     public partial class Aircraft_route : Form
15     {
16         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
17         SqlDataAdapter da = new SqlDataAdapter();
18         DataTable dt = new DataTable();
19         SqlCommandBuilder cmd;
20
21         public Aircraft_route()
22         {
23             InitializeComponent();
24             da = new SqlDataAdapter("select * from Aircraft_route", con);
25             da.Fill(dt);
26             dataGridView1.DataSource = dt;
27         }
28
29         private void Aircraft_route_Load(object sender, EventArgs e)
30         {
31             // TODO: This line of code loads data into the 'airlineDataSet.Aircraft_route' table. You can move, or remove it, as needed.
32             this.aircraft_routeTableAdapter.Fill(this.airlineDataSet.Aircraft_route);
33         }
34
35         private void button1_Click(object sender, EventArgs e)
36         {
37             cmd = new SqlCommandBuilder(da);
38             da.Update(dt);
39             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
40         }
41     }
42 }
43
```

```
Passenger.cs [Design] Route_cs [Design] transaction_cs [Design] Aircraft.cs Aircraft_route.cs airline.cs airline_phones.cs
Project_database Project_database.airline_phones airline_phones_Load(object sender, EventArgs e)

1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     4 references
15     public partial class airline_phones : Form
16     {
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21         1 reference
22         public airline_phones()
23         {
24             InitializeComponent();
25             da = new SqlDataAdapter("select * from airline_phones", con);
26             da.Fill(dt);
27             dataGridView1.DataSource = dt;
28         }
29         1 reference
30         private void airline_phones_Load(object sender, EventArgs e)
31         {
32             // TODO: This line of code loads data into the 'airlineDataSet.airline_phones' table. You can move, or remove it, as needed.
33             this.airline_phonesTableAdapter.Fill(this.airlineDataSet.airline_phones);
34         }
35
36         1 reference
37         private void button1_Click(object sender, EventArgs e)
38         {
39             cmd = new SqlCommandBuilder(da);
40             da.Update(dt);
41             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
42         }
43     }
44 }
```

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Passenger.cs [Design]Route_cs [Design]transaction_cs [Design]Aircraft.csAircraft_route.csairline.cs X

Project_databaseProject_database.airlinebutton1_Click(object sender, EventArgs e)

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     4 references
15     public partial class airline : Form
16     {
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21         1 reference
22         public airline()
23         {
24             InitializeComponent();
25             da = new SqlDataAdapter("select * from airline", con);
26             da.Fill(dt);
27             dataGridView1.DataSource = dt;
28         }
29         1 reference
30         private void airline_Load(object sender, EventArgs e)
31         {
32             // TODO: This line of code loads data into the 'airlineDataSet.airline' table. You can move, or remove it, as needed.
33             this.airlineTableAdapter.Fill(this.airlineDataSet.airline);
34         }
35         1 reference
36         private void button1_Click(object sender, EventArgs e)
37         {
38             cmd = new SqlCommandBuilder(da);
39             da.Update(dt);
40             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
41         }
42     }
43 }
```



```
Aircraft.cs  Aircraft_route.cs  airline.cs  airline_phones.cs  Employee.cs  Employee_qualificationcs.cs  X
Project_database
Project_database.Employee_qualifications  button6_Click(object sender, EventArgs e)

1  using System;
2  using System.Collections.Generic;
3  using System.ComponentModel;
4  using System.Data;
5  using System.Drawing;
6  using System.Linq;
7  using System.Text;
8  using System.Threading.Tasks;
9  using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     4 references
15     public partial class Employee_qualificationcs : Form
16     {
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21     }
22     1 reference
23     public Employee_qualificationcs()
24     {
25         InitializeComponent();
26         da = new SqlDataAdapter("select * from Employee_qualification", con);
27         da.Fill(dt);
28         dataGridView1.DataSource = dt;
29     }
30     1 reference
31     private void Employee_qualificationcs_Load(object sender, EventArgs e)
32     {
33         // TODO: This line of code loads data into the 'airlineDataSet.Employee_qualification' table. You can move, or remove it, as needed.
34         this.employee_qualificationTableAdapter.Fill(this.airlineDataSet.Employee_qualification);
35     }
36     1 reference
37     private void button6_Click(object sender, EventArgs e)
38     {
39         cmd = new SqlCommandBuilder(da);
40         da.Update(dt);
41         MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
42     }
43 }
```

Route_cs [Design] transaction_cs [Design] Aircraft.cs Aircraft_route.cs airline.cs airline_phones.cs Employee.cs X

Project_database Project_database.Employee button5_Click(object sender, EventArgs e)

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     4 references
15     public partial class Employee : Form
16     {
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21         1 reference
22         public Employee()
23         {
24             InitializeComponent();
25             da = new SqlDataAdapter("select * from Employee", con);
26             da.Fill(dt);
27             dataGridView1.DataSource = dt;
28         }
29         1 reference
30         private void Employee_Load(object sender, EventArgs e)
31         {
32             // TODO: This line of code loads data into the 'airlineDataSet.Employee' table. You can move, or remove it, as needed.
33             this.employeeTableAdapter.Fill(this.airlineDataSet.Employee);
34         }
35         1 reference
36         private void button5_Click(object sender, EventArgs e)
37         {
38             cmd = new SqlCommandBuilder(da);
39             da.Update(dt);
40             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
41         }
42     }
43 }
```

C# Project_database

Project_database.Passenger

button7_Click(object sender, EventArgs e)

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     public partial class Passenger : Form
15     {
16         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-GML7GCVV;Initial Catalog=Airline;Integrated Security=True");
17         SqlDataAdapter da = new SqlDataAdapter();
18         DataTable dt = new DataTable();
19         SqlCommandBuilder cmd;
20
21         public Passenger()
22         {
23             InitializeComponent();
24             da = new SqlDataAdapter("select * from Passenger", con);
25             da.Fill(dt);
26             dataGridView1.DataSource = dt;
27         }
28
29         private void Passenger_Load(object sender, EventArgs e)
30         {
31             // TODO: This line of code loads data into the 'airlineDataSet.Passenger' table. You can move, or remove it, as needed.
32             this.passengerTableAdapter.Fill(this.airlineDataSet.Passenger);
33         }
34
35         private void button7_Click(object sender, EventArgs e)
36         {
37             cmd = new SqlCommandBuilder(da);
38             da.Update(dt);
39             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
40         }
41     }
42 }
43
```

🔧 AirlineDataSet.PassengerDataTable AirlineDataSet.Passenger { get; }

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12
13 namespace Project_database
14 {
15     4 references
16     public partial class Route_ : Form
17     {
18         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCVV;Initial Catalog=Airline;Integrated Security=True");
19         SqlDataAdapter da = new SqlDataAdapter();
20         DataTable dt = new DataTable();
21         SqlCommandBuilder cmd;
22         1 reference
23         public Route_()
24         {
25             InitializeComponent();
26             da = new SqlDataAdapter("select * from Route_", con);
27             da.Fill(dt);
28             dataGridView1.DataSource = dt;
29         }
30         1 reference
31         private void Route__Load(object sender, EventArgs e)
32         {
33             // TODO: This line of code loads data into the 'airlineDataSet.Route_' table. You can move, or remove it, as needed.
34             this.route_TableAdapter.Fill(this.airlineDataSet.Route_);
35         }
36         1 reference
37         private void button8_Click(object sender, EventArgs e)
38         {
39             cmd = new SqlCommandBuilder(da);
40             da.Update(dt);
41             MessageBox.Show("Passed Sucessfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
42         }
43     }
44 }
```

C# Project_database

Project_database.transaction_

transactionBindingSource

```
1 using System;
2 using System.Collections.Generic;
3 using System.ComponentModel;
4 using System.Data;
5 using System.Drawing;
6 using System.Linq;
7 using System.Text;
8 using System.Threading.Tasks;
9 using System.Windows.Forms;
10 using System.Data.SqlClient;
11
12 namespace Project_database
13 {
14     4 references
15     public partial class transaction_ : Form
16     {
17         SqlConnection con = new SqlConnection(@"Data Source=LAPTOP-6ML7GCWV;Initial Catalog=Airline;Integrated Security=True");
18         SqlDataAdapter da = new SqlDataAdapter();
19         DataTable dt = new DataTable();
20         SqlCommandBuilder cmd;
21         1 reference
22         public transaction_()
23         {
24             InitializeComponent();
25             da = new SqlDataAdapter("select * from transaction_", con);
26             da.Fill(dt);
27             dataGridView1.DataSource = dt;
28         }
29         1 reference
30         private void transaction__Load(object sender, EventArgs e)
31         {
32             // TODO: This line of code loads data into the 'airlineDataSet.transaction_' table. You can move, or remove it, as needed.
33             this.transaction_TableAdapter.Fill(this.airlineDataSet.transaction_);
34         }
35         1 reference
36         private void backgroundWorker1_DoWork(object sender, DoWorkEventArgs e)
37         {
38         }
39
40         1 reference
41         private void button9_Click(object sender, EventArgs e)
42         {
43             cmd = new SqlCommandBuilder(da);
44             da.Update(dt);
45             MessageBox.Show("Passed Successfully", "Success", MessageBoxButtons.OK, MessageBoxIcon.Information);
46         }
47     }
48 }
```


Interface

Aircraft

	Capacity	Major_pilot	Assistant_pilot	Host_1	Host_2	Airline_id
	180	John Smith	Emily Carter	Sarah Lee	Tom Brown	AL01
▶	160	Mike Davis	Hannah White	Lisa Green	Alan Jones	AL02
	100	Laura Wilson	Kevin Moore	Sophie Black	Jack Taylor	AL03
*						

confirm

Aircraft

	id	Model	Capacity	Major_pilot	Assistant_pilot	Host_1	Host_2
▶	A101	Boeing 737	180	John Smith	Emily Carter	Sarah Lee	Tom Brown
	A102	Airbus A320	160	Mike Davis	Hannah White	Lisa Green	Alan Jones
	A103	Embraer 190	100	Laura Wilson	Kevin Moore	Sophie Black	Jack Taylor
*							

confirm

airline

	Id	name	contact_person	address
▶	AL01	SkyWings Airlines	Oliver Reed	123 Aviation Blvd, NY
	AL02	Horizon Air	Charlotte King	456 Skyview Road, LA
	AL03	Pacific Blue Airways	George Harris	789 Coastal Way, Sea...
•				

confirm

Aircraft_route

	Aircraft_id	Route_id	Number_of_Passenger	Arrival	departure
▶	A101	R001	170	11/24/2024	11/24/2024
	A102	R002	150	11/25/2024	11/25/2024
	A103	R003	90	11/26/2024	11/26/2024
•					

confirm

	airline_id	phone
▶	AL01	+121255501
	AL01	+121255502
	AL02	+131055503
	AL03	+120655504
*		

confirm

	Id	name	position	gender	year	month	day
▶	E001	Adam Walker	Pilot	Male	1980	5	20
	E002	Eve Harris	Flight Attendant	Female	1992	8	14
	E003	Alex Turner	Engineer	Male	1985	3	10
*							

confirm

Employee_qualificationcs

	Employee_Id	qualification
▶	E001	Commercial Pilot License
	E002	Cabin Crew Training
	E003	Aircraft Maintenance C...
*		

confirm

transaction_

	Id	description	date	amount	Pa
▶	T001	Ticket Sale	11/20/2024	2000.000	P00
	T002	Maintenance Expense	11/21/2024	1500.000	P00
	T003	Fuel Cost	11/22/2024	3000.000	P00
*					

confirm

Route_

	id	Classification	Distance	Destination	Or
▶	R001	Domestic	800.000	New York (JFK)	Chi
	R002	International	7200.000	London (LHR)	Los
	R003	Domestic	500.000	Houston (IAH)	Dal
*					

confirm

Passenger

	Id	name	address	email	cc
▶	P001	Dave Turner	12 Cloud St,	DaveTurner@gmail.c...	+1
	P002	John Oliver	34 Wind Rd,	JohnOliver@gmail.com	+1
	P003	Mike Walter	56 Jet Way,	MikeWalter@gmail.com	+1
*					

confirm