Airline company

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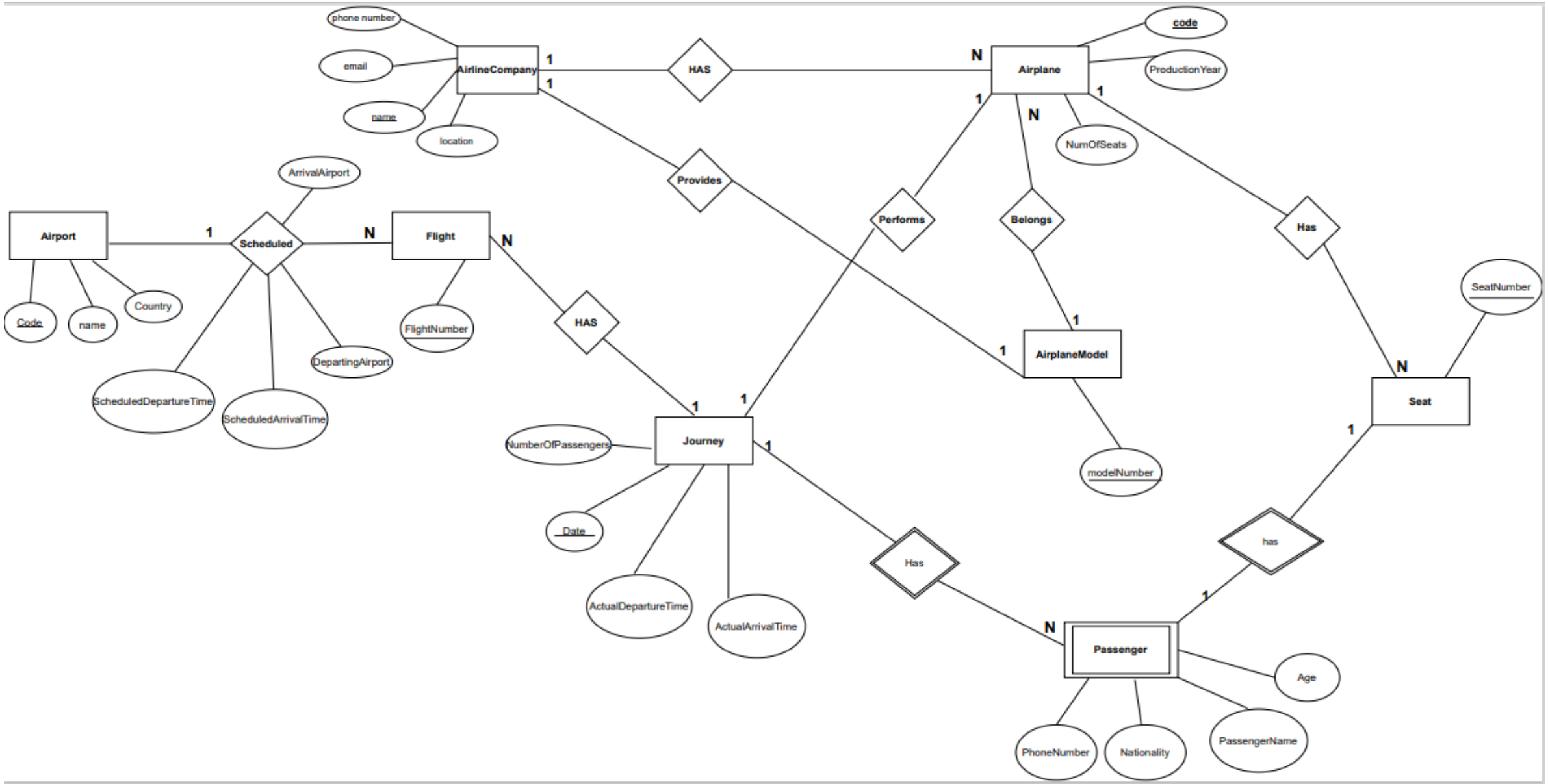
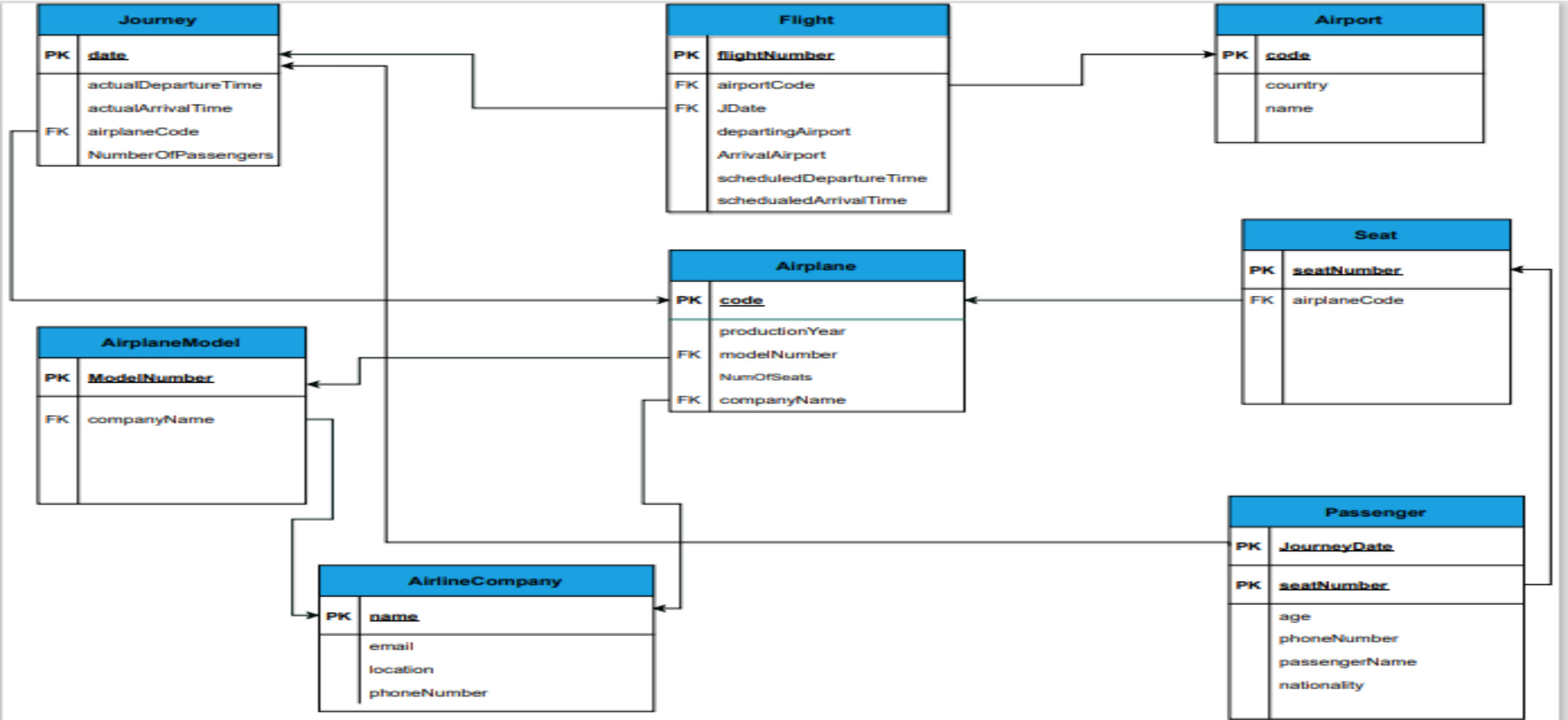
Introduction

- We need to design a database structure for "**Airline Company**" that meets all the given requirements. It must include the Entity Relationship Diagram (ERD) ,Relational Schema and the SQl commands.

ER DIAGRAM


phone number
email
name
location
AirlineCompany
HAS
Provides
code
ProductionYear
NumOfSeats
Airplane
Performs
Belongs
Has
AirplaneModel
modelNumber
SeatNumber
Seat
ArrivalAirport
Airport
Scheduled
Flight
Code
name
Country
FlightNumber
DepartingAirport
ScheduledDepartureTime
ScheduledArrivalTime
HAS
Journey
NumberOfPassengers
Date
ActualDepartureTime
ActualArrivalTime
Has
has
Passenger
Age
PhoneNumber
Nationality
PassengerName
1
N

Relational Schema



SQL QUERIES:

- List the total number of journeys done during October 2015.

```
--1
select count(*) as 'number of journeys done during October 2015'  from Journey
where dateOfjourney>='2015-10-01' and dateOfjourney<='2015-10-30';
```

100 %

Results | Messages

	number of journeys done during October 2015
1	3

- List the company name of all available airplanes.

```
--2
select companyName from AirlineCompany,Airplane
where CName=companyName;
```

100 %

Results | Messages

	companyName
1	China
2	AirAsia
3	ANA
4	airbus
5	ANA
6	Lion
7	Cathy
8	JetStar
9	JAL
10	Qatar

- List the total number of airports in each country.

```
--3
select country,Count(*) as'Count' from Airport
group by country;
```

100 %

Results | Messages

	country	Count
1	Emirates	2
2	France	1
3	Hong Kong	2
4	Kuala Lumpur	1
5	Lebanon	1
6	Melboume	1
7	Narita	1
8	Taipei	1

- List flight number, departing airport name, arrival airport name, scheduled departure time, scheduled arrival time of all the flights that has 'France' as their destination country.

```
--4
select flightNumber,arrivalAirport,departingAirport,schedualDepartureTime,schedualArrivalTime from Flight,Airport
where arrivalAirport=Airportname and  arrivalAirport='France International Airport' and country='France';
```

100 %

Results | Messages

	flightNumber	arrivalAirport	departingAirport	schedualDepartureTime	schedualArrivalTime
1	3	France International Airport	korea airport	3:00 PM	5:00 AM

- List the total number of passengers that traveled on '25-09-2015'.

```
--5
select count(*) as'number of passengers 'from Passenger
where journeyDate='2015-09-25';
```

100 %

Results | Messages

	number of passengers
1	2

- List the total number of passengers from each nationality that travelled on the journey date between '11-10-2015' and '16-10-2015' of the flight number '227'.

```
--6
select count(*) as 'NumberOfPassengers' , nationality as 'nationality'  from Passenger,Flight
where journeyDate=jDate and journeyDate>='2015-10-11' and journeyDate<='2015-10-16'
and flightNumber=227
group by nationality;
```

.00 %

Results | Messages

	NumberOfPassengers	nationality
1	1	American

- List journey date, flight number, departing airport name, arrival airport name, actual departure time, actual arrival time of all the journeys that departed or landed at 'Beirut International Airport'.

```
--7
select flightNumber,dateOfjourney,actualDepartureTime,actualArrivalTime, arrivalAirport,departingAirport from Journey,Flight
where dateOfjourney=jDate and arrivalAirport='Beirut International Airport';
```

100 %

Results | Messages

	flightNumber	dateOfjourney	actualDepartureTime	actualArrivalTime	arrivalAirport	departingAirport
1	6	2010-12-12	11:06 PM	12:40 PM	Beirut International Airport	Jordan airport
2	7	2015-10-15	4:04 AM	5:08 AM	Beirut International Airport	Africa airport

- List airplane code, number of seats, production year and airplane company of all airplanes produced after the year '2010'.

```
--8
select code,numberOfseats,productionYear,companyName from Airplane
where productionYear>'2010-12-31';
```

100 %

Results | Messages

	code	numberOfseats	productionYear	companyName
1	126	300	2014-05-12	AirAsia
2	143	145	2016-08-09	ANA
3	862	233	2018-06-03	JetStar
4	985	150	2018-07-25	Qatar

- List the average age of passengers who traveled to ‘Lebanon’ in ‘2015’.

```
--9
select AVG(age) as 'average age' from Passenger,Flight,Airport
where arrivalAirport=Airportname and country='Lebanon' and jDate=journeyDate
and journeyDate>='2015-01-01' and journeyDate<='2015-12-31' and arrivalAirport='Beirut International Airport';
```

100 %

Results | Messages

	average age
1	24

- List flight number, journey date, departing airport, actual departure time, arrival airport, actual arrival time of all flights that are done on airbus airplanes (company name = 'airbus') on '19-11-2015'

```
--10
select flightNumber,dateOfjourney,departingAirport,actualDepartureTime,arrivalAirport,actualArrivalTime from Flight,Journey,Airplane
where jDate=dateOfJourney and  airplaneCode=code and companyName='airbus';
```

100 %

Results | Messages

	flightNumber	dateOfjourney	departingAirport	actualDepartureTime	arrivalAirport	actualArrivalTime
1	2	2015-09-25	UK airport	3:00 PM	America airport	4:02 PM
2	4	2015-09-25	Canada International airport	3:00 PM	UK airport	4:02 PM

Conclusion

- As a conclusion, every database has a number of entities connected together with a one or more relations and here is the example of the airline company
- Thank You