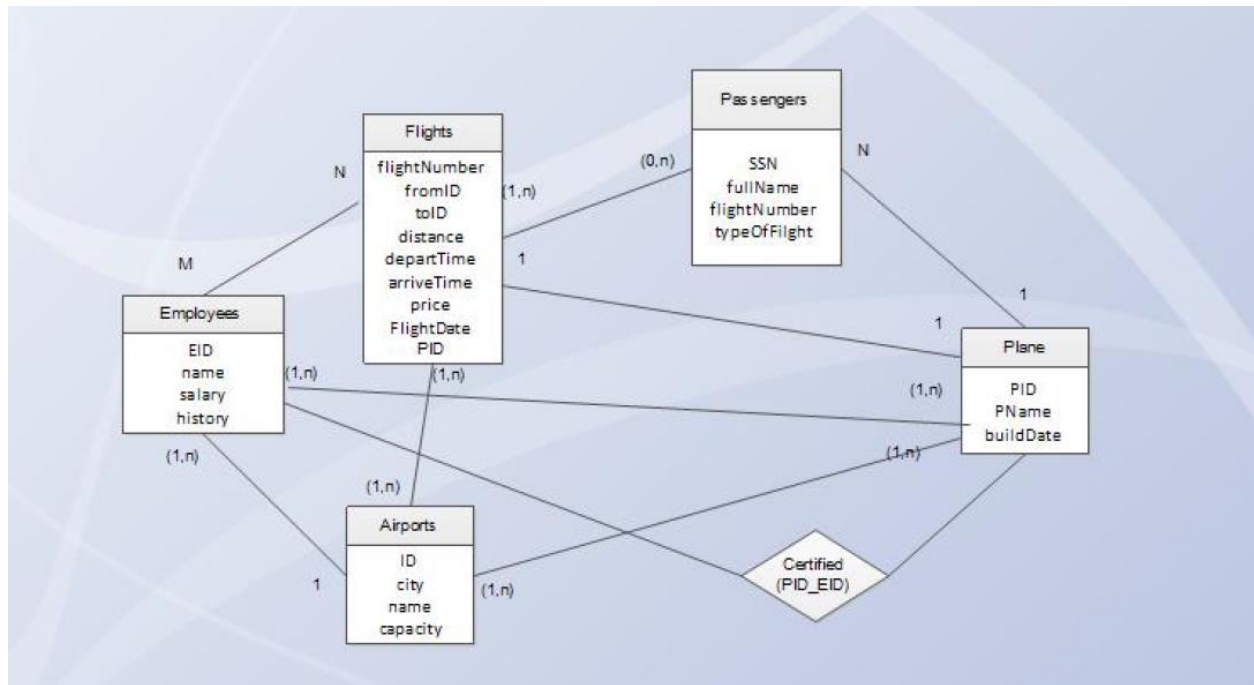
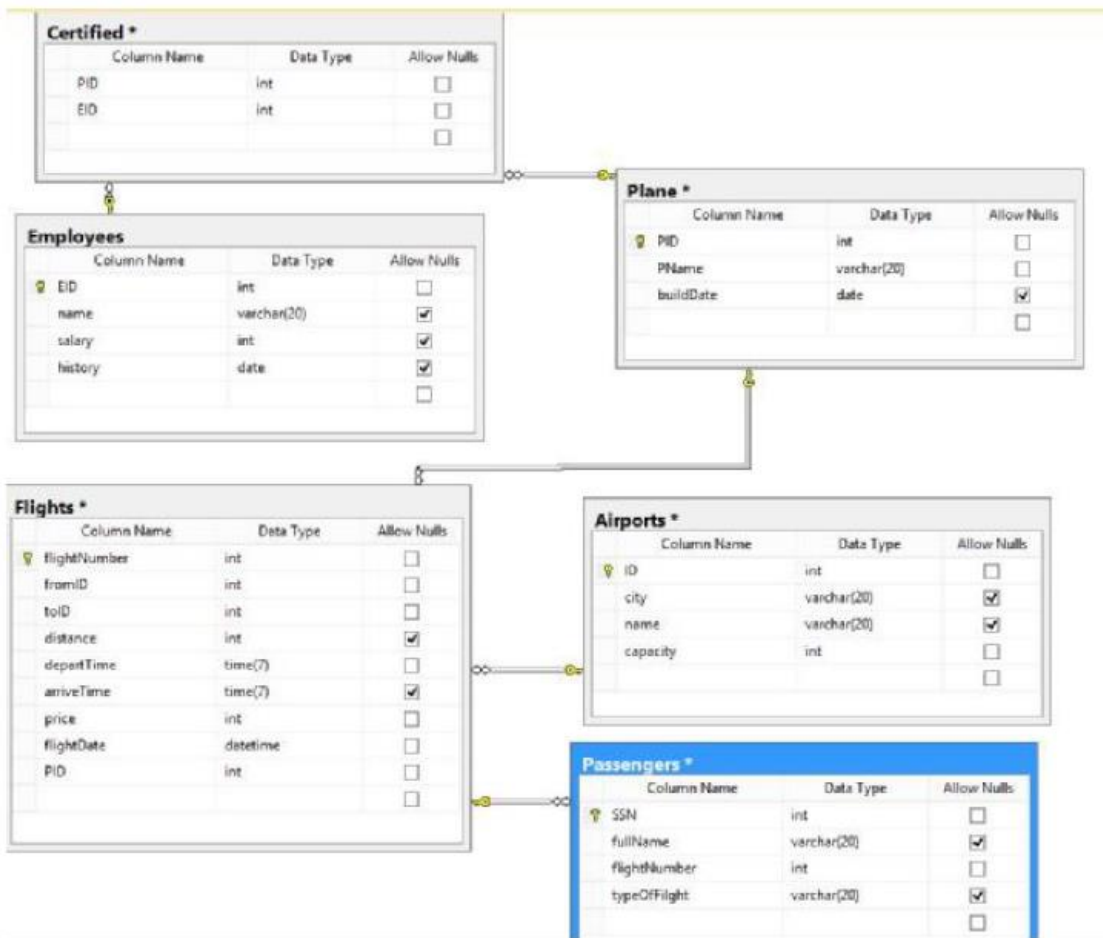


Airport Tables Schema

flightNumber, from, to, airport distance, departTime, arriveTime, price	Flights
PID, PName, buildDate, certifiedEID	Plane
EID, name, salary, history, certifiedPID, airport	Employees
SSN, fullName, flightNumber, flightTime, source, destination, airport, typeOfFlight	Passengers

flightNumber, fromID, toID, distance, departTime, arriveTime, price, flightDate, PID	Flights
PID, PName, buildDate	Plane
PID, EID	Certified
EID, name, salary, history	Employees
SSN, fullName, flightNumber, typeOfFlight	Passengers
ID, city, name, capacity	Airports





1) Return name of all pilots who their salaries are less than cheapest flight's ticket

```
SELECT DISTINCT E.name
FROM Employees as E
WHERE E.salary < (
    SELECT MIN (F.price)
    FROM Flights as F
)
```

	name
1	Ali
2	Alireza
3	Amirhossein
4	Ashkan
5	Hasan
6	Hossein
7	Majid

2) Difference between average of pilots salaries and staff.

```
SELECT p1.Pavg - p2.Eavg
FROM (
    SELECT AVG(E.salary) as Pavg
    FROM Employees as E
    WHERE E.eid IN (
        SELECT DISTINCT C.eid
        FROM Certified as C
    )
) as p1
,
(
    SELECT AVG(Em.salary) as Eavg
    FROM Employees as Em
) as p2
```

	(No column name)
1	23394

3) Top 3 pilots who have been traveled the most. (in Mileage)

```
select top 3 fullname, sum (f.distance) as ss
from passengers as p
join flights as f on f.flightnumber = p.flightnumber

group by fullname
order by ss
```

	fullname	ss
1	Alhedi	450
2	Al Zdg	450
3	Ali Zahertudi	450

4) Airplanes with most number of flights

```
with w1 as (SELECT COUNT(*) as co , p.PID
            FROM Plane as p,Certified as C
            WHERE p.PID = C.PID
            group by p.PID)

SELECT w1.co,w1.PID
FROM w1
where w1.co = (select max(w1.co) from w1)
```

	co	PID
1	3	1001

5) Pilots who only have flyed Boeing airplanes.

```
SELECT E.EID, E.name
FROM Employees as E, Certified as C, Plane as P
WHERE E.EID=C.EID
      AND C.PID=P.PID
      AND P.PName='Boeing'
```

	EID	name
1	2002	Mohamad
2	2002	Mohamad
3	2005	Naser
4	2004	Pezhman

6) Flights from New York to the airports with more than average capacity.

```
SELECT f.flightNumber
FROM Flights as F
WHERE F.fromID=13
      AND F.toID=(SELECT A.ID
                  FROM Airports as A
                  WHERE A.capacity > (
                      SELECT AVG(A.capacity)
                      From Airports as A
                  )
                )
```

	flightNumber
1	4005
2	4006
3	4007
4	4008

7) Total number of passengers who have been flight from Isfahan to Tehran in 2011

```
SELECT COUNT(p.ssn)
FROM Passengers as P, Flights as F
where p.flightNumber=f.flightNumber
      AND Year(f.flightDate) = 2011
      AND f.toID=3000 --tehran
      AND f.fromID=3001 --isfahan
```

8) Pilots with flights that had more than \$800 worth of each ticket.

```
with numbers as (SELECT count(*) as co, E.EID, e.name
FROM Flights as f, Employees as E, Certified as C
WHERE f.price>800
      AND e.EID=C.EID
      AND f.PID=c.PID
group by E.EID, e.name
)
SELECT max(n.co), n.EID, n.name
from numbers as n
group by n.EID, n.name
```

	(No column name)	EID	name
1	4	2000	Ali
2	4	2001	Hossein
3	5	2002	Mohamad
4	2	2003	Naghi
5	4	2004	Pezhman
6	9	2005	Naser

9) Number of flights that had a specific passenger with a specific airplane.

```
select count(P.flightnumber), p.fullName, pl.PName
from Passengers as P join Flights as F
on P.flightnumber = F.flightnumber
join plane as Pl on pl.pid = f.pid
group by fullname, pname
```

	(No column name)	fullname	pname
1	1	Ali Zdg	Airbus
2	1	Alhedi	Airbus
3	1	Ali dfhZahedi	Airbus
4	1	Ali ereZahedi	Airbus
5	1	Ali fghdhedi	Airbus
6	1	Ali fhedi	Airbus
7	1	Ali ghkZahedi	Airbus
8	1	Ali sdgsggheduki	Airbus
9	1	Ali tiZahedi	Airbus
10	1	Ali Zafgjhedi	Airbus
11	3	Ali Zahedi	Airbus
12	1	Ali Zahedi	Airbus

10) Flight with the most speed

```
SELECT f.flightNumber
FROM Flights as F
WHERE (DATEDIFF(second, f.departTime, f.arriveTime) / f.distance )=
      (SELECT min(DATEDIFF(second, f.departTime, f.arriveTime) / f.distance )
      FROM Flights as f)
```

11) Pilots with the most experience

```
select year(getdate())-year(E.history) as history, e.name
from Employees as E join certified as C on E.EID=C.EID
WHERE year(getdate())-year(E.history) = (
    SELECT min(year(getdate())-year(Es.history))
    FROM Employees as es)
```

	history	name
1	4	Naser

12) Passengers who have flown more than 2 times with a specific pilot.

```
with mywith as (
    SELECT count(*) as co, p.fullName, e.name
    FROM Passengers as p, Flights as f, Certified as C, Employees as E
    WHERE C.EID=e.EID
        AND P.flightNumber=f.flightNumber
        AND f.PID=C.PID
    group by p.fullName, e.name)
```

```
SELECT m.co, m.fullName, m.name
FROM mywith as m
WHERE m.co>2
```

	co	fullName	name
1	3	Ali Zahedi	Naser

13) Salaries of pilots who have had flights from Tehran to other cities with more than 400KM of Radius

```
SELECT e.salary
FROM Employees as E, Certified as C, Flights as F
WHERE E.EID=C.EID
    AND f.PID=C.PID
    AND f.toID=11 --tehran
    AND f.distance>400
```

	salary
1	65000
2	65000
3	65000
4	50000

14) Passengers who have flown only once from Isfahan to Tehran

```
select tmp.fullname
from (
    select p.fullName, count(p.flightNumber) as co
    from Passengers as p join flights as f on p.flightnumber=f.flightnumber
    where f.fromid =3001 and f.toid =3000
    group by p.fullName) as tmp
```

```
Where tmp.co=1
```

	fullname
1	Ali Zahertudi

15) Flights that have cheaper "First Class" tickets than flight from Tehran to Shiraz

```
SELECT distinct f.flightNumber
FROM Flights as F, Passengers as p
WHERE f.flightNumber = p.flightNumber
AND p.typeOfFlight='First Class'
AND f.price < (SELECT max(f.price)
FROM Flights as F, Passengers as p
WHERE f.flightNumber = p.flightNumber
AND p.typeOfFlight='Ordinary'
AND f.toID=3002 --shiraz
AND f.fromID=3000 --tehran
)
```

	flightNumber
1	4000