FLIGHT DATABASE WEEK 8:

```
create database flight;
use flight;
create table flights(
flno int,
fromPlace varchar(20),
toPlace varchar(20),
distance int,
departs time,
arrives time,
price int,
PRIMARY KEY(flno));
create table aircraft(
aid int,
aname varchar(20),
cruisingRange int,
PRIMARY KEY(aid));
create table employee(
eid int,
ename varchar(20),
salary int,
PRIMARY KEY(eid));
create table certified(
eid int,
aid int,
FOREIGN KEY(eid) REFERENCES employee(eid) on update cascade on delete cascade,
FOREIGN KEY(aid) REFERENCES aircraft(aid) on update cascade on delete cascade);
```

Employee:

```
insert into employee values(101,'avinash',50000);
insert into employee values(102,'lokesh',60000);
insert into employee values(103,'rakesh',70000);
insert into employee values(104,'santhosh',82000);
insert into employee values(105,'tilak',5000);
```

eid	ename	salary
101	avinash	50000
102	lokesh	60000
103	rakesh	70000
104	santhosh	82000
105	tilak	5000
NULL	NULL	NULL

Aircraft:

```
insert into aircraft values(1,'airbus',2000);
```

```
insert into aircraft values(2,'boeing',700);
insert into aircraft values(3,'jetairways',550);
insert into aircraft values(4,'indigo',5000);
insert into aircraft values(5,'boeing',4500);
insert into aircraft values(6,'airbus',2200);
```

aid	aname	cruisingRange
1	airbus	2000
2	boeing	700
3	jetairways	550
4	indigo	5000
5	boeing	4500
6	airbus	2200
NULL	NULL	NULL

Certified:

```
insert into certified values(101,2);
insert into certified values(101,4);
insert into certified values(101,5);
insert into certified values(101,6);
insert into certified values(102,1);
insert into certified values(102,3);
insert into certified values(102,5);
insert into certified values(103,2);
insert into certified values(103,3);
insert into certified values(103,5);
insert into certified values(103,6);
insert into certified values(104,6);
insert into certified values(104,1);
insert into certified values(104,3);
insert into certified values(105,3);
```

eid	aid
101	2
101	4
101	5
101	6
102	1
102	3
102	5
103	2
103	3
103	5
103	6
104	6
104	1
104	3
105	3

Flights:

```
insert into flights values(1,'bengaluru','newDelhi',500,'06:00','09:00',5000);
insert into flights values(2,'bengaluru','chennai',300,'07:00','08:30',3000);
insert into flights values(3,'trivandrum','newDelhi',800,'08:00','11:30',6000);
insert into flights values(4,'bengaluru','frankfurt',10000,'06:00','23:30',50000);
insert into flights values(5,'kolkata','newDelhi',2400,'11:00','03:30',9000);
insert into flights values(6,'bengaluru','frankfurt',8000,'09:00','23:00',40000);
```

flno	fromPlace	toPlace	distance	departs	arrives	price
1	bengaluru	newDelhi	500	06:00:00	09:00:00	5000
2	bengaluru	chennai	300	07:00:00	08:30:00	3000
3	trivandrum	newDelhi	800	08:00:00	11:30:00	6000
4	bengaluru	frankfurt	10000	06:00:00	23:30:00	50000
5	kolkata	newDelhi	2400	11:00:00	03:30:00	9000
6	bengaluru	frankfurt	8000	09:00:00	23:00:00	40000
NULL	NULL	NULL	NULL	NULL	NULL	NULL

i. Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000.

```
select distinct(a.aname) from employee e inner join certified c
on e.eid=c.eid and e.salary>80000 inner join aircraft a on a.aid=c.aid;
```

aname
airbus
airbus
jetairways

ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruising range of the aircraft for which she or he is certified

```
select c.eid, max(a.cruisingRange)
from aircraft a, certified c
where c.aid=a.aid group by c.eid having count(*)>=3;
```

eid	max(a.cruisingRange)
102	4500
104	2200
101	5000
103	4500

iii. Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.

```
select ename from employee where salary<some(select price from flights where
fromPlace='bengaluru' and toPlace='frankfurt');
```

ename
tilak

iv. For all aircraft with cruising range over 1000 Kms, find the name of the aircraft and the average salary of all pilots certified for this aircraft.

select a.aname, avg(e.salary) as average from certified c inner join aircraft a on c.aid=a.aid and a.cruisingRange>1000 inner join employee e on e.eid=c.eid group by c.aid;

aname	average
airbus	71000.0000
indigo	50000.0000
boeing	60000.0000
airbus	67333.3333

v. Find the names of pilots certified for some Boeing aircraft.

select ename from employee where eid in(select eid from certified where aid in(select aid from aircraft where aname='boeing'));

ename
avinash
lokesh
rakesh

vi. Find the aids of all aircraft that can be used on routes from Bengaluru to New Delhi.

select aid from aircraft where cruisingRange>(select distance from flights where fromPlace='bengaluru' and toPlace='newDelhi');

aid
1
2
3
4
5
6
NULL