DBMS LAB-5

1. Query:

```
create database flightdb;
use flightdb;

create table flights (
flno int,
fromplace varchar (15),
toplace varchar (15),
distance int,
departs datetime,
arrives datetime,
price int,
primary key (flno));

create table aircraft(
aid int,
aname varchar (15),
cruisingrange int,
primary key (aid));

create table employees (
eid int,
ename varchar (15),
salary int,
primary key (eid));

create table certified (
eid int, aid int,
foreign key (eid) references employees (eid), foreign key (aid) references aircraft (aid));
```

→ Query 2

use flightdb;

insert into flights values (101, 'Bangalore', 'Delhi', 2500, '2005-05-13 07:15:31', '2005-05-13 16:15:31', 5000);

insert into flights values (102, 'Bangalore', 'Lucknow', 300, '2013-05-05 07:15:31', '2013-05-05 11:15:31', 6000);

insert into flights values (103, 'Lucknow', 'Delhi', 500, '2013-05-05 12:15:31', '2013-05-05 17:15:31', 3000);

insert into flights values (107, 'Banglore', 'Frankfurt', 8000, '2013-05-05 07:15:31', '2013-05-05 22:15:31', 60000);

insert into flights values (104, 'Bangalore', 'Frankfurt', 8500, '2013-05-05 07:15:31', '2013-05-05 22:15:31', 75000);

insert into flights values (105, 'Kolkata', 'Delhi', 3460, '2013-05-05 07:15:31', '2013-05-05 09:15:31', 7000);

insert into flights values (106, 'Bangalore', 'Kolkata', 1000, '2013-05-05 21:15:30', '2013-05-06 09:20:30', 10000);

insert into flights values (108, 'Lucknow', 'Kolkata', 1000, '2013-05-05 11:30:30', '2013-05-05 15:20:30', 10000);

select * from flights;

insert into aircraft values (101, '747', 3000);

insert into aircraft values (102, 'Boeing', 900);

insert into aircraft values (103, '647', 800);

insert into aircraft values (104, 'Dreamliner', 10000);

insert into aircraft values (105, 'Boeing', 3500);

insert into aircraft values (106, '707', 1500);

insert into aircraft values (107, 'Dream', 120000);

insert into aircraft values (108, '707', 760);

insert into aircraft values (109, '747', 1000);

select * from aircraft;

```
insert into employees values (F01, 'A', 50000);
insert into employees values (F02, 'B', 100000);
insert into employees values (F03, 'C', 150000);
insert into employees values (F04, 'D', 90000);
insert into employees values (F05, 'E', 40000);
insert into employee values (F06, 'F', 60000);
insert into employees values (F07, 'G', 90000);
select * from employees;

insert into certified values ('F01, 101);
insert into certified values (F01, 102);
insert into certified values (F01, 106);
insert into certified values (F01, 105);
insert into certified values (F02, 104);
insert into certified values (F03, 104);
insert into certified values (F04, 104);
insert into certified values (F02, 107);
insert into certified values (F03, 107);
insert into certified values (F04, 107);
insert into certified values (F02, 101);
insert into certified values (F02, 108);
insert into certified values (F01, 109);
select * from certified;
```

→ Query 3

```
use flightdb;
select distinct a.aname from aircraft a where a.aid in (
select c.aid from certified c, employees e
where c.eid = e.eid and not exists (
select * from employees e1 where e1.eid = e.eid and e1.salary < 80000));
```

→ Query 4

```
use flightdb;
select MAX(a.cruisingrange), c.eid from certified c, aircraft a
where c.aid = a.aid group by c.eid having count(c.eid) > 3;
```

→ Query 5

```
use flightdb;
select name from employees
where salary < (select MIN(price) from flights
where fromplace = 'Bangalore' and toplace = 'Frankfurt');
```

→ Query 6

```
use flightdb;
salary avg(e.salary), c.aid from certified c, employees e
where c.aid in (select aid
from aircraft where cruisingrange > 1000)
and e.eid = c.eid group by c.aid;
```

→ Query 7

```
use flightdb;
select ~~name~~ ename from employees where eid in(
select eid from certified where aid in(
select aid from aircraft where ename = 'Boeing'));
```

→ Query 8

```
use flightdb;
select aname from aircraft
where cruisingrange> any (select distance
from flights where fromplace= 'Bangalore' and toplace = 'Delhi');
```

→ Query 9

```
use flightdb;
select F.flno, F.departs from flights F
where F.flno in ((select Fo.flno
from flights Fo
where Fo.fromplace = 'Bangalore' and ~~Fo.toplace~~ Fo.toplace = 'Kolkata'
and EXTRACT (hour from Fo.arrives) <18)
UNION (select Fo.flno
from flights Fo, flights F1
where Fo.fromplace = 'Bangalore' and Fo.toplace <> 'Kolkata'
and Fo.toplace = F1.fromplace and F1.toplace= 'Kolkata'
and F1.departs > Fo.arrives
and EXTRACT (hour from F1.arrives) <18)
UNION (select Fo.flno
from flights Fo, flights F1, flights F2
where Fo.fromplace = 'Bangalore'
```

and F0.toplace = F1.fromplace

and F1.toplace = F2.fromplace

and F2.toplace = 'Kolkata'

and F0.toplace = 'Kolkata'

and F1.toplace = 'Kolkata'

and F1.departs > F0.arrives

and F2.departs > F1.arrives

and EXTRACT (hour from F2.arrives) < 18))