B.M.S COLLEGE OF ENGINEERING BENGALURU
Autonomous Institute, Affiliated To VTU

Bachelor of Engineering
in
Computer Science and Engineering

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LAB 6

AIRLINE FLIGHT DATABASES

QUERY:

```
create table flights(
flno int,
ffrom varchar(20),
tto varchar(20),
distance int,
depart timestamp,
arrives timestamp,
price int,
primary key(flno));

create table aircrafts(
aid int,
aname varchar(20),
cruisingrange int,
primary key(aid));

create table employess(
eid int,
ename varchar(20),
salary int,
primary key(eid));

create table certified(
eid int,
aid int,
foreign key(eid) references employess(eid),
foreign key(aid) references aircrafts(aid));

insert into aircrafts values('&aid','&aname','&cruisingrange');
commit;
```

```sql
insert into employess values('&eid','&ename','&salary');
commit;

insert into certified
values('&eid','&aid'); commit;

alter session set nls_timestamp_format='rr/mm/dd hh24:mi:ssxff';

alter session set nls_date_language ='english';

insert into flights
values('&flno','&ffrom','&tto','&distance','&depart','&arrives','&price');
commit;

select * from flights;

select * from aircrafts;

select * from employess;

select * from certified;


select distinct aname from aircrafts
where aid in(select c.aid from certified c,
employess e where c.eid=e.eid and
not exists( select * from employess e1 where e1.eid=e.eid
and e1.salary<80000));

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

```sql
select ename from employess
where salary<(select min(f.price) from
flights f where f.ffrom='bangalore' and f.tto='frankfurt');


select a.aname, e.salary from

aircrafts a,employess e, certified c where c.aid=a.aid
and c.eid=e.eid and a.cruisingrange>1000 group by
a.aid,a.aname;


select temp.name, temp.avgsalary

from ( select a.aid, a.aname as name, avg (e.salary) as avgsalary
 from aircrafts a, certified c, employess e

 where a.aid = c.aid and c.eid = e.eid and a.cruisingrange >
 1000 group by a.aid, a.aname ) temp;


select distinct e.ename from employess e, certified c, aircrafts
a where e.eid=c.eid and c.aid=a.aid and a.aname like 'boeing%';


select aid from aircrafts a

where a.cruisingrange>(select min(f.distance) from flights
f where f.ffrom='bangalore' and f.tto='frankfurt');


select f.depart
from flights f
where f.flno in ( ( select f0.flno
 from flights f0

 where f0.ffrom = 'bangalore' and f0.tto = 'delhi'
 and extract(hour from f0.arrives) < 18 ) union

( select f0.flno
 from flights f0, flights f1

 where f0.ffrom = 'bangalore' and f0.tto <> 'delhi'
 and f0.tto = f1.ffrom and f1.tto = 'delhi' and
 f1.depart > f0.arrives
```

```sql
 and extract(hour from f1.arrives) < 18)
 union
( select f0.flno
 from flights f0, flights f1, flights f2
 where f0.ffrom = 'bangalore'
 and f0.tto = f1.ffrom
 and f1.tto = f2.ffrom
 and f2.tto = 'delhi'
 and f0.tto <> 'delhi'
 and f1.tto <> 'delhi'
 and f1.depart > f0.arrives
 and f2.depart > f1.arrives
 and extract(hour from f2.arrives) < 18));

 select e.ename, e.salary
from employess e
where e.eid not in ( select distinct c.eid
 from certified c )
and e.salary >( select avg (e1.salary)
 from employess e1
 where e1.eid in
( select distinct c1.eid
 from certified c1 ) );
```

OUTPUTS:

Flight table:

	FLNO	FFROM	TTO	DISTANCE	DEPART	ARRIVES	PRICE
1	101	bangalore	delhi	2500	05/05/13 07:15:31.000000000	05/05/13 17:15:31.000000000	5000
2	102	bangalore	lucknow	3000	05/05/13 07:15:31.000000000	05/05/13 11:15:31.000000000	6000
3	103	lucknow	delhi	500	05/05/13 12:15:31.000000000	05/05/13 17:15:31.000000000	3000
4	107	bangalore	frankfurt	8000	05/05/13 07:15:31.000000000	05/05/13 22:15:31.000000000	60000
5	104	bangalore	frankfurt	8500	05/05/13 07:15:31.000000000	05/05/13 23:15:31.000000000	75000
6	105	kolkata	delhi	3400	05/05/13 07:15:31.000000000	05/05/13 09:15:31.000000000	7000

Aircrafts table:

	AID	ANAME	CRUISINGRANGE
1	101	747	3000
2	102	boeing	900
3	103	647	800
4	104	dreamliner	10000
5	105	boeing	3500
6	106	707	1500
7	107	dream	120000

employees table:

	EID	ENAME	SALARY
1	701	A	50000
2	702	B	100000
3	703	C	150000
4	704	D	90000
5	705	E	40000
6	706	F	60000
7	707	G	90000

Certified table:

	EID	AID
1	701	101
2	701	102
3	701	106
4	701	105
5	702	104
6	703	104
7	704	104
8	702	107
9	703	107
10	704	107
11	702	101
12	703	105
13	704	105
14	705	103

Query 1:

	ANAME
1	747
2	dream
3	dreamliner
4	boeing

Query 2:

	EID	MAX(A.CRUISINGRANGE)
1	701	3500

Query 3:

	ENAME
1	A
2	E

Query 4:

	NAME	AVGSALARY
1	747	75000
2	707	50000
3	boeing	96666.6666666666666666666666666666667
4	dreamliner	113333.333333333333333333333333333333
5	dream	113333.333333333333333333333333333333

Query 5:   Query 6:   Query 7:

	ENAME
1	C
2	A
3	D

	AID
1	104
2	107

	DEPART
1	05/05/13 07:15:31.000000000
2	05/05/13 07:15:31.000000000

Query 8:

	ENAME	SALARY
1	G	90000