LAB 5- Flight Database

Anitej Prasad

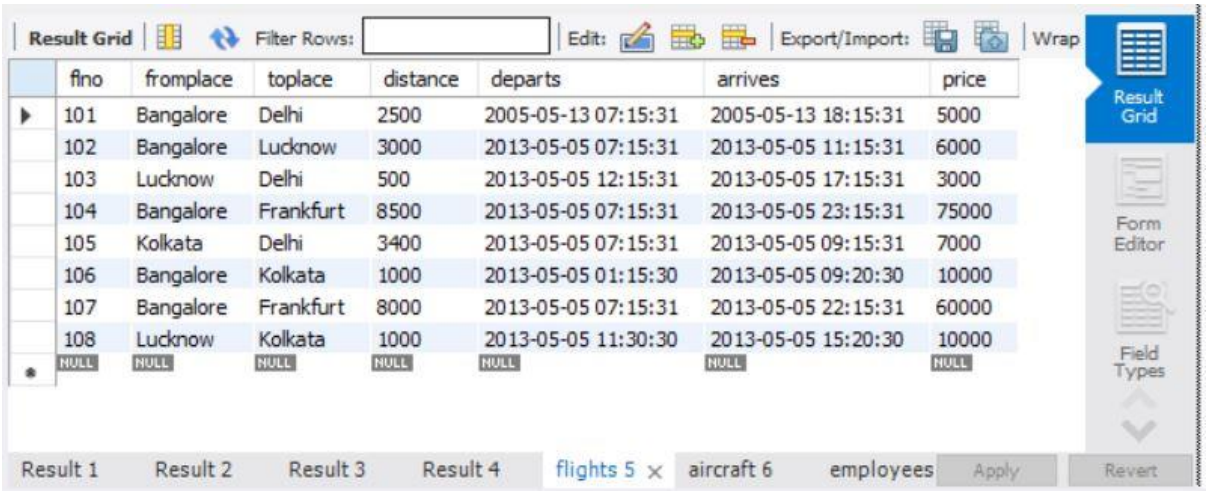
1BM19CS194

4-D

QUERIES:

```
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)
);
desc flights;

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

```
create table employees (
        eid int,
   ename varchar(15),
   salary int,
   primary key (eid)
);
desc employees;
create table certified (
        eid int,
   aid int,
   foreign key (eid) references employees(eid),
   foreign key (aid) references aircraft(aid)
);
desc certified;
insert into flights values(101, 'Bangalore', 'Delhi', 2500, '2005-05-13 07:15:31', '2005-05-13
18:15:31', 5000);
insert into flights values(102, 'Bangalore', 'Lucknow', 3000, '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, 'Bangalore', '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
23:15:31', 75000);
insert into flights values(105, 'Kolkata', 'Delhi', 3400, '2013-05-05 07:15:31', '2013-05-05 09:15:31',
7000);
insert into flights values(106, 'Bangalore', 'Kolkata', 1000, '2013-05-05 01:15:30', '2013-05-05
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);

commit;

select * from flights;
```



fino	fromplace	toplace	distance	departs	arrives	price
101	Bangalore	Delhi	2500	2005-05-13 07:15:31	2005-05-13 18:15:31	5000
102	Bangalore	Lucknow	3000	2013-05-05 07:15:31	2013-05-05 11:15:31	6000
103	Lucknow	Delhi	500	2013-05-05 12:15:31	2013-05-05 17:15:31	3000
104	Bangalore	Frankfurt	8500	2013-05-05 07:15:31	2013-05-05 23:15:31	75000
105	Kolkata	Delhi	3400	2013-05-05 07:15:31	2013-05-05 09:15:31	7000
106	Bangalore	Kolkata	1000	2013-05-05 01:15:30	2013-05-05 09:20:30	10000
107	Bangalore	Frankfurt	8000	2013-05-05 07:15:31	2013-05-05 22:15:31	60000
108	Lucknow	Kolkata	1000	2013-05-05 11:30:30	2013-05-05 15:20:30	10000
NULL	NULL	NULL	NULL	NULL	NULL	NULL

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);

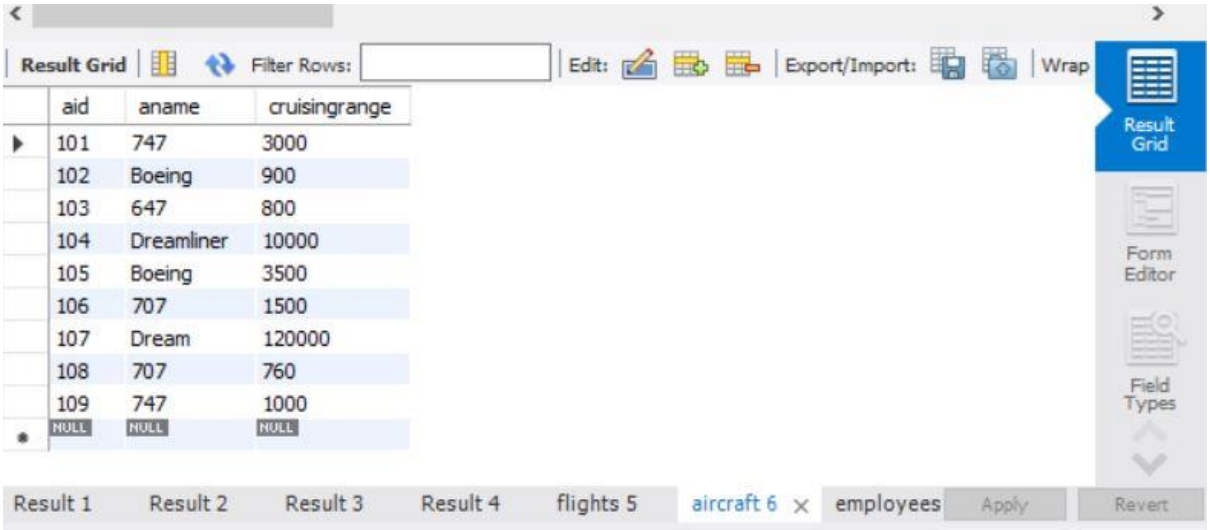
insert into aircraft values(107, 'Dream', 120000);

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

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

commit;

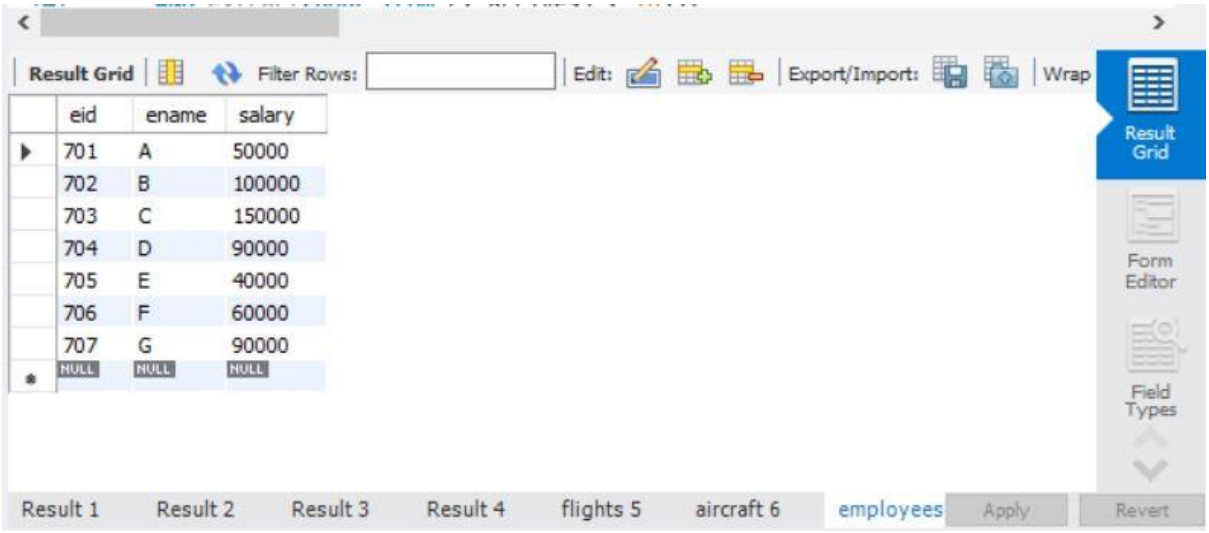
select * from aircraft;



aid	aname	cruisingrange
101	747	3000
102	Boeing	900
103	647	800
104	Dreamliner	10000
105	Boeing	3500
106	707	1500
107	Dream	120000
108	707	760
109	747	1000
NULL	NULL	NULL

```
insert into employees values(701, 'A', 50000);
insert into employees values(702, 'B', 100000);
insert into employees values(703, 'C', 150000);
insert into employees values(704, 'D', 90000);
insert into employees values(705, 'E', 40000);
insert into employees values(706, 'F', 60000);
insert into employees values(707, 'G', 90000);
commit;
```

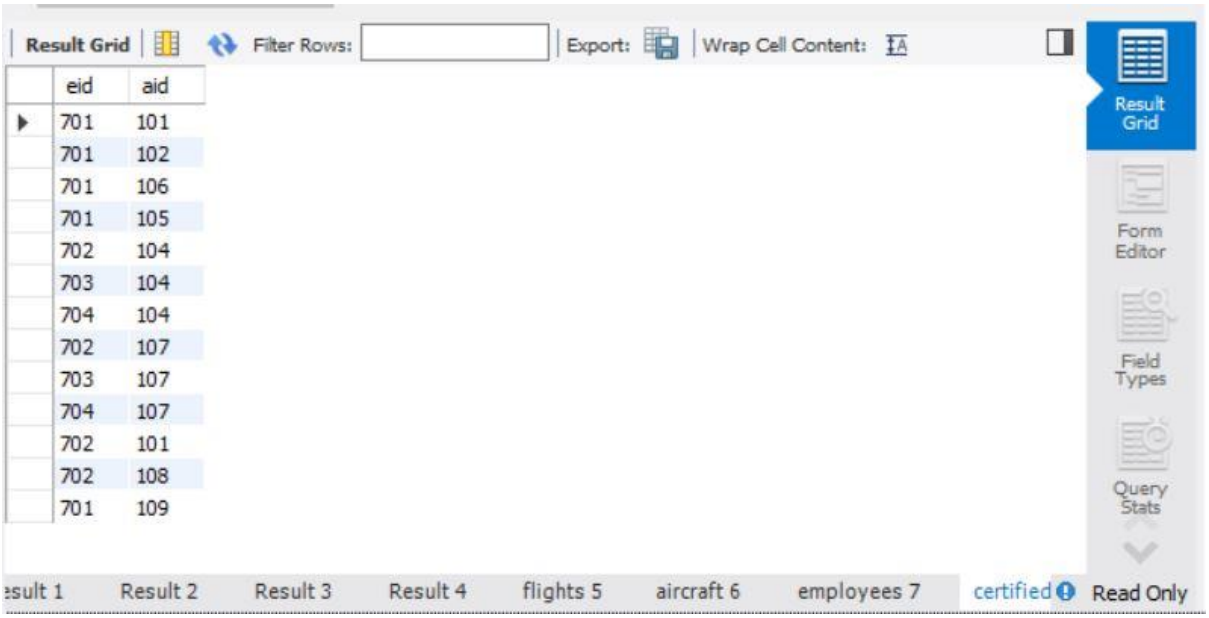
```
select * from employees;
```



eid	ename	salary
701	A	50000
702	B	100000
703	C	150000
704	D	90000
705	E	40000
706	F	60000
707	G	90000
NULL	NULL	NULL

```
insert into certified values(701, 101);
insert into certified values(701, 102);
insert into certified values(701, 106);
insert into certified values(701, 105);

insert into certified values(702, 104);
insert into certified values(703, 104);
insert into certified values(704, 104);

insert into certified values(702, 107);
```

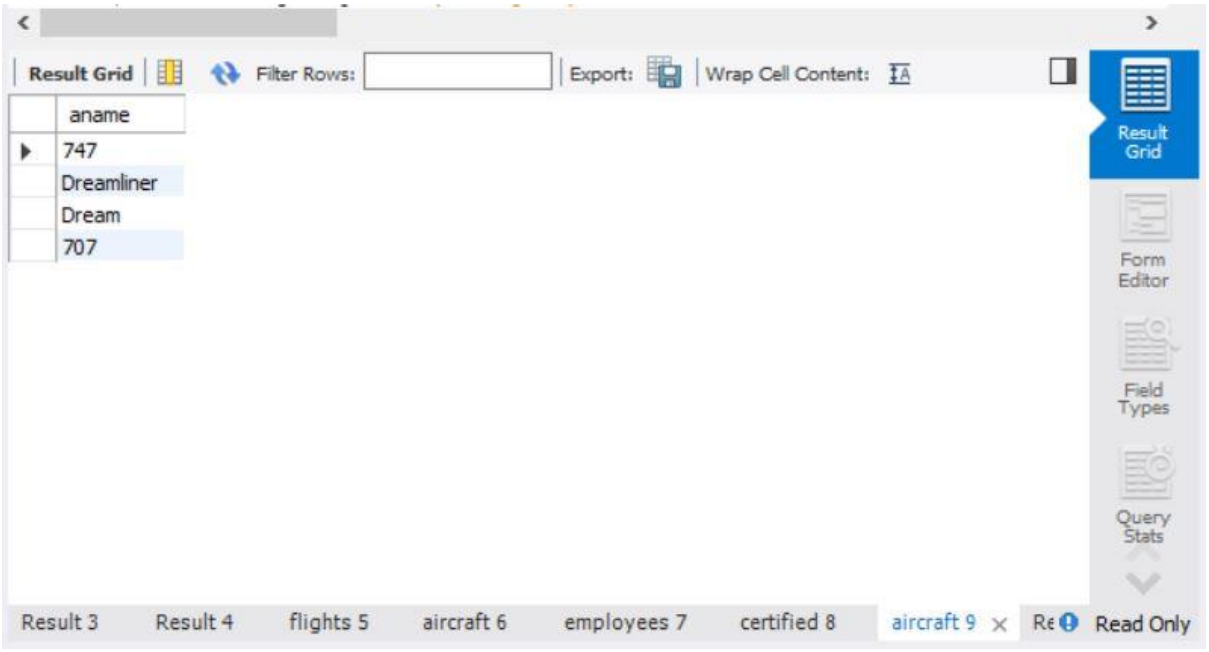
```
insert into certified values(703, 107);
insert into certified values(704, 107);

insert into certified values(702, 101);
insert into certified values(702, 108);
insert into certified values(701, 109);
commit;
select * from certified;
```



eid	aid
701	101
701	102
701	106
701	105
702	104
703	104
704	104
702	107
703	107
704	107
702	101
702	108
701	109

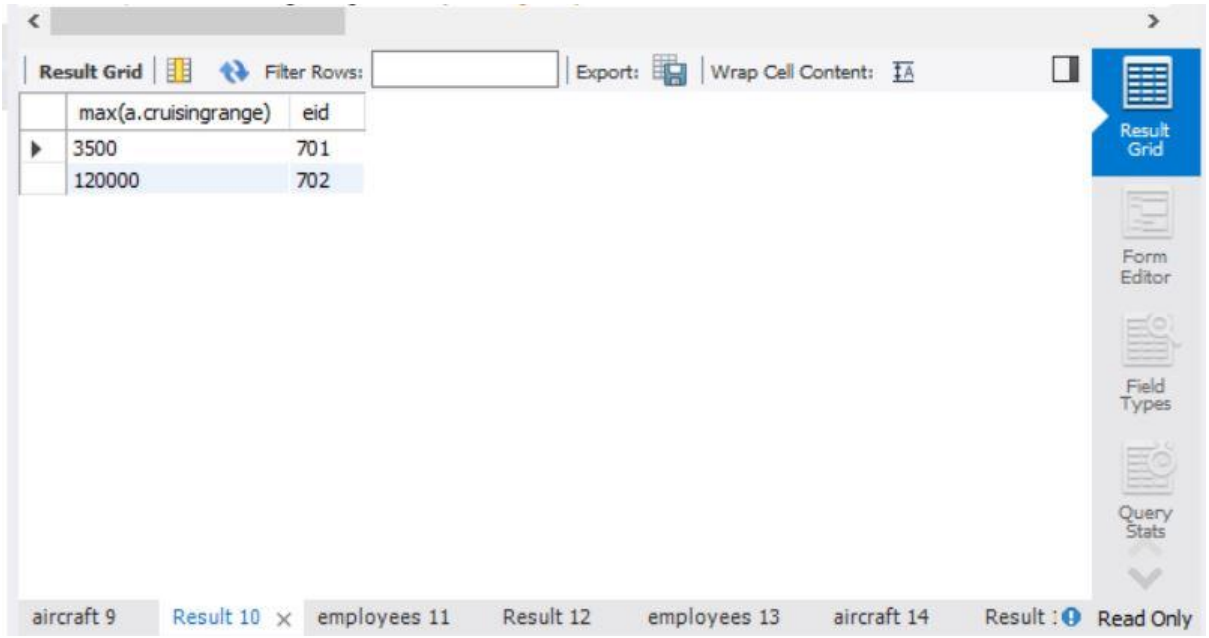
Additional Queries:

```
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
   )
);
```



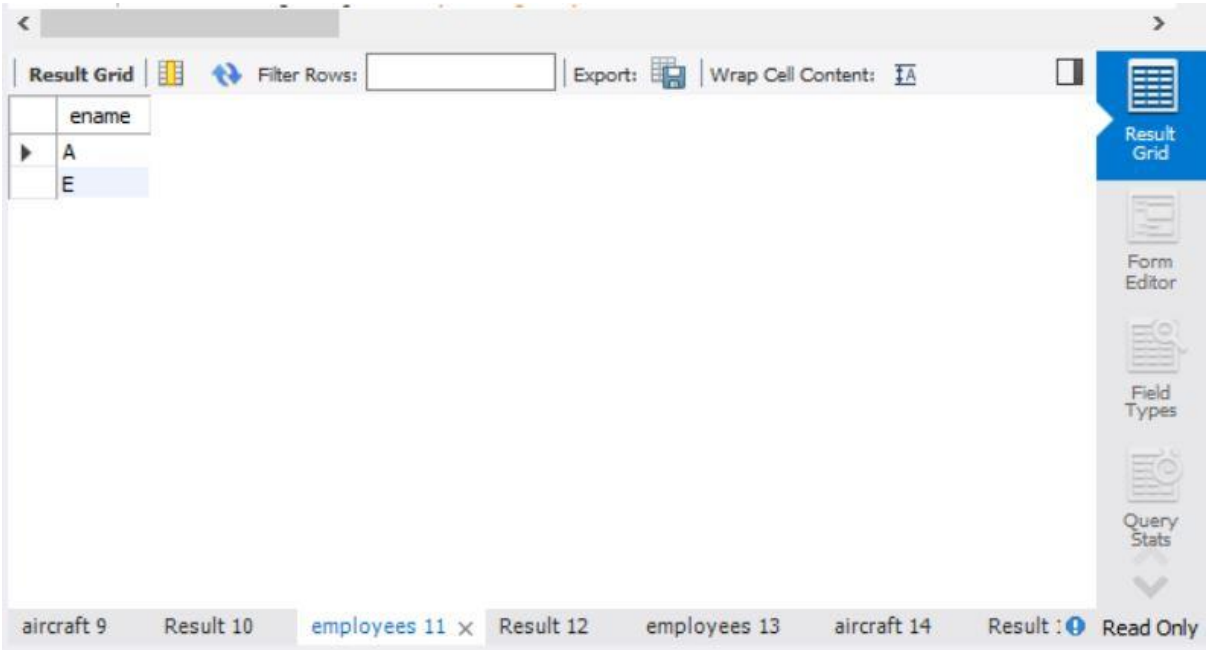
n

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;



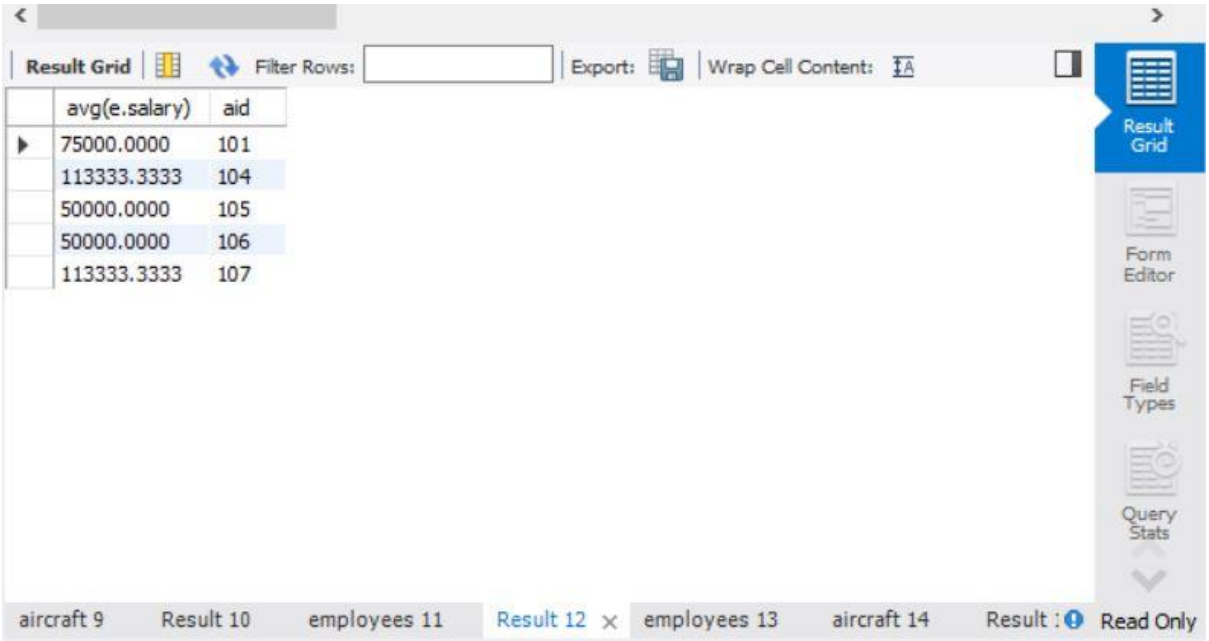
select ename from employees where salary <(

select min(price) from flights where fromplace='Bangalore' and toplace='Frankfurt');



select avg(e.salary), c.aid from certified c, employees e where c.aid in(

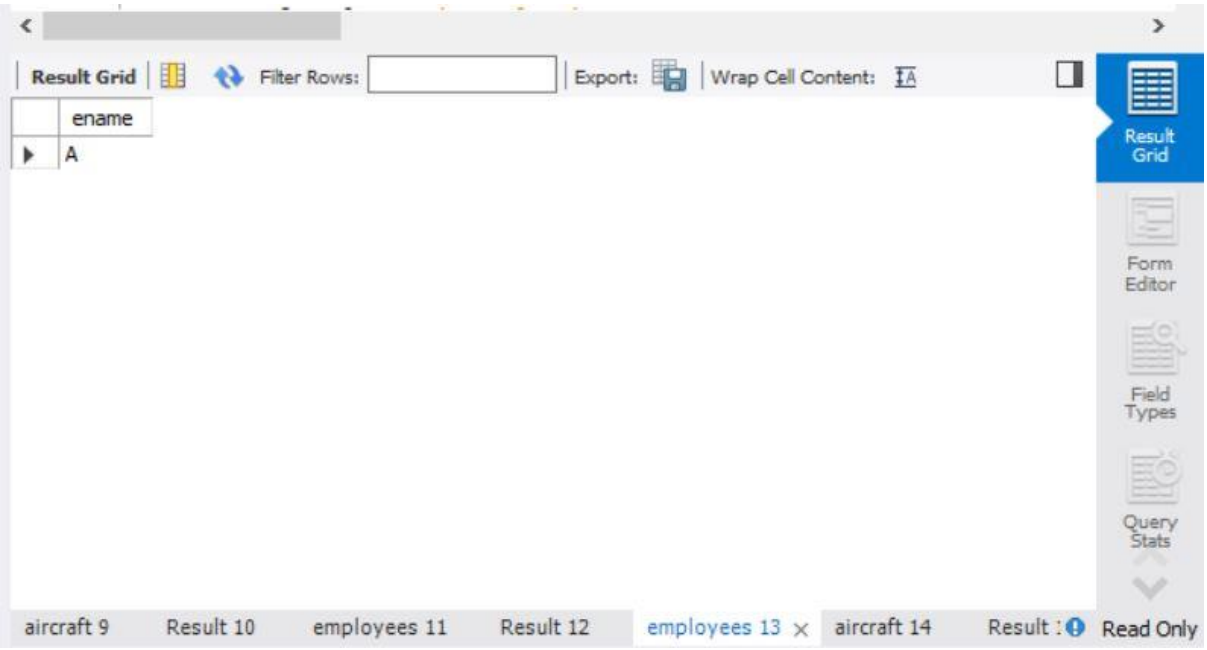
select aid from aircraft where cruisingrange>1000) and e.eid = c.eid group by c.aid;



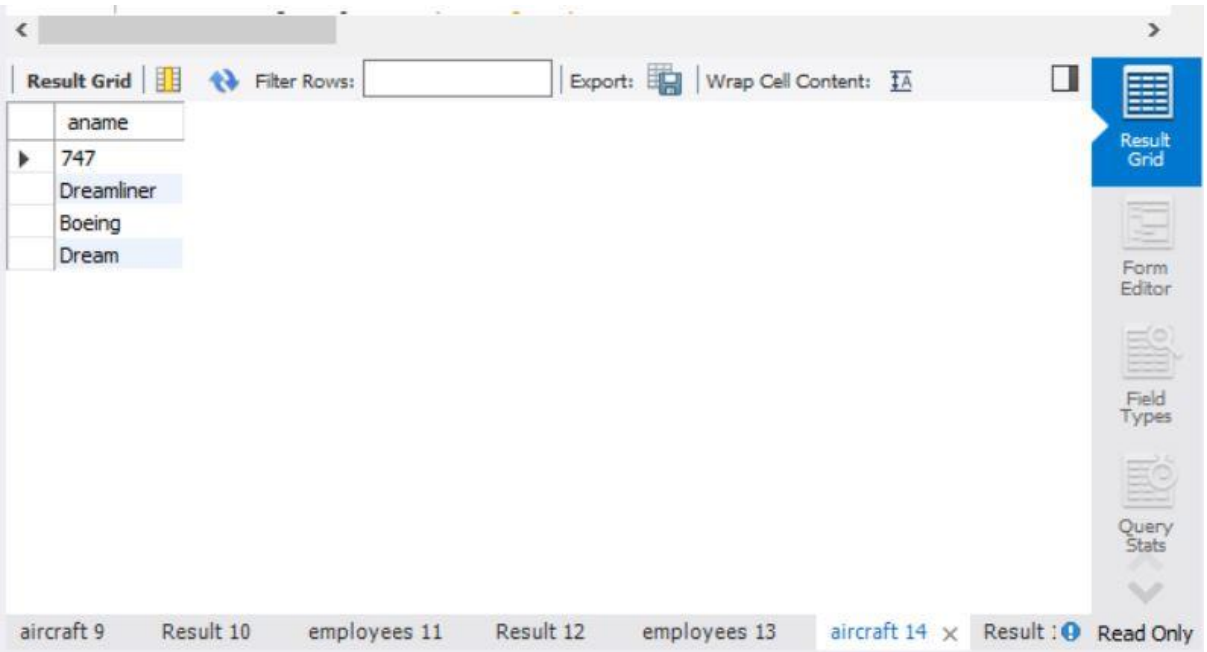
select ename from employees where eid in(

select eid from certified where aid in(

select aid from aircraft where aname = 'Boeing'));

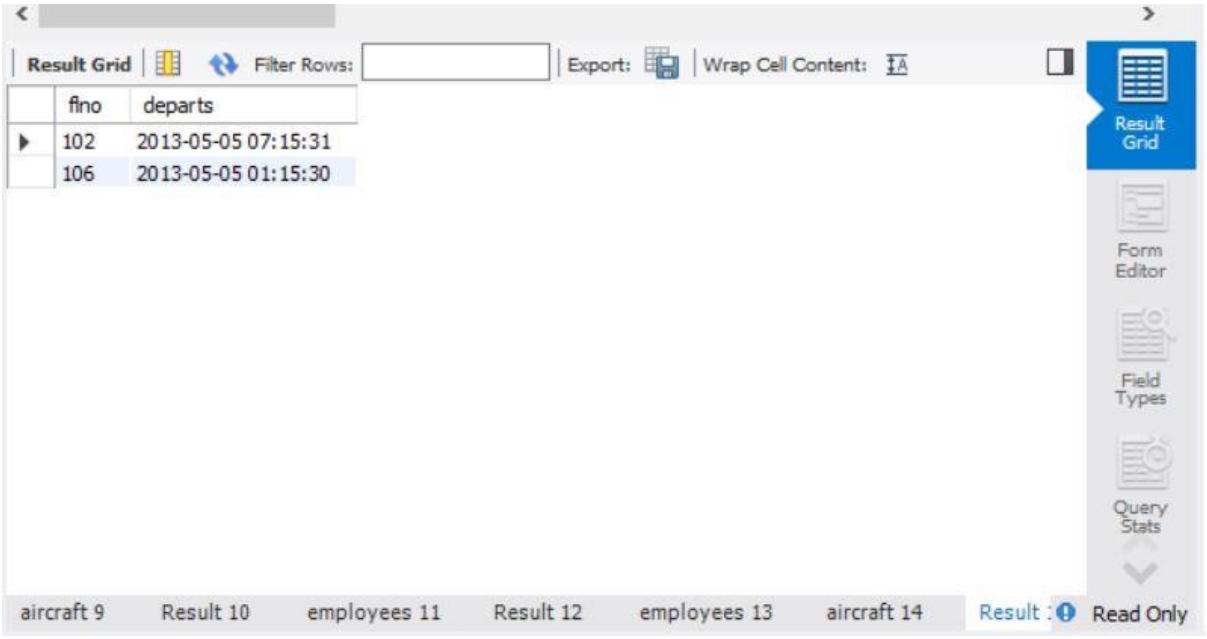


select aname from aircraft where cruisingrange > any (select distance from flights where fromplace='Bangalore' and toplace='Delhi');



SELECT F.flno, F.departs

```
FROM flights F
WHERE F.flno IN ( ( SELECT F0.flno
 FROM flights F0
 WHERE F0.fromplace = 'Bangalore' AND F0.toplace = 'Kolkata'
 AND extract(hour from F0.arrives) < 18 )
 UNION
( SELECT F0.flno
 FROM flights F0, flights F1
 WHERE F0.fromplace = 'Bangalore' AND F0.toplace <> 'Kolkata'
 AND F0.toplace = F1.fromplace AND F1.toplace = 'Kolkata'
 AND F1.departs > F0.arrives
 AND extract(hour from F1.arrives) < 18)
 UNION
( SELECT F0.flno
 FROM flights F0, flights F1, flights F2
 WHERE F0.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));
```


Result Grid
Filter Rows:
Export:
Wrap Cell Content:
fino
departs
102
2013-05-05 07:15:31
106
2013-05-05 01:15:30
Result Grid
Form Editor
Field Types
Query Stats
aircraft 9
Result 10
employees 11
Result 12
employees 13
aircraft 14
Result
Read Only