WEEK 8

Airline Flight database

```
create database flight_253;
use flight_253;
create table flights(
flno integer,
ffrom varchar(20),
tto varchar(20),
distance integer,
depart time,
arrive time,
price integer,
primary key(flno));
create table aircraft(
aid integer,
aname varchar(20),
cru_range integer,
primary key(aid));
create table employees(
eid integer,
ename varchar(20),
salary integer,
primary key(eid));
create table certified(
eid integer,
aid integer,
primary key(eid,aid),
foreign key(eid) references employees(eid) on update cascade on delete cascade,
foreign key(aid) references aircraft(aid) on update cascade on delete cascade);
insert into employees values (101, 'Avinash',50000), (102, 'Lokesh',60000), (103,
'Rakesh',70000), (104, 'Santhosh',82000), (105, 'Tilak',5000);
insert into aircraft values(1,'Airbus',2000),(2,'Boeing',700),(3,'Jet
airways',550),(4,'Indigo',5000),(5,'Boeing',4500),(6,'Airbus',2200);
insert into flights values(1,'Bengaluru','New Delhi',500,'06:00:00','09:00:00',5000);
insert into flights
values(2,'Bengaluru','Chennai',300,'07:00:00','08:30:00',3000),(3,'Trivendrum','New
Delhi',800,'08:00:00','11:30:00',6000),
(4,'Bengaluru','Frankfurt',10000,'06:00:00','23:30:00',50000),(5,'Kolkata','New
Delhi',2400,'11:00:00','03:30:00',9000),(6,'Bengaluru','Frankfurt',8000,'09:00:00','23:00:00',40000
);
insert into certified values
```

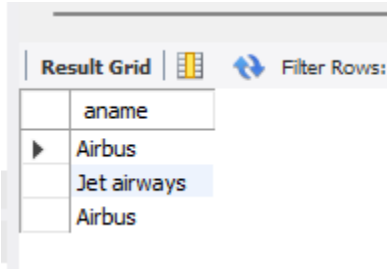
(101,2),(101,4),(101,5),(101,6),(102,1),(102,3),(102,5),(103,2),(103,3),(103,5),(103,6),(104,6),(104,1),(104,3),(105,3);

QUERIES

QUERY 1

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

select aname from aircraft where aid in(select aid from certified where eid in(select eid from employees where salary>80000));

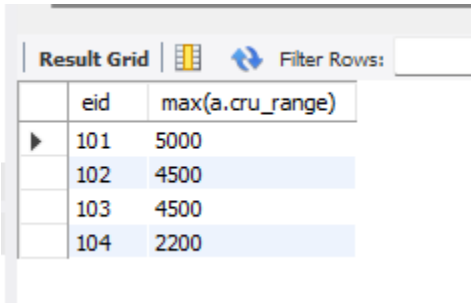

Result Grid | Filter Rows:

aname
Airbus
Jet airways
Airbus

QUERY 2

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 e.eid ,max(a.cru_range) from employees e,certified c,aircraft a where e.eid=c.eid and c.aid=a.aid group by c.eid having count(c.aid)>=3;

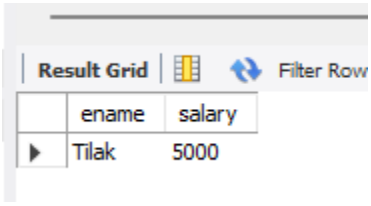

Result Grid | Filter Rows:

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

QUERY 3

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

select ename, salary from employees where salary<(select min(price) from flights where ffrom='Bengaluru' and tto='Frankfurt');

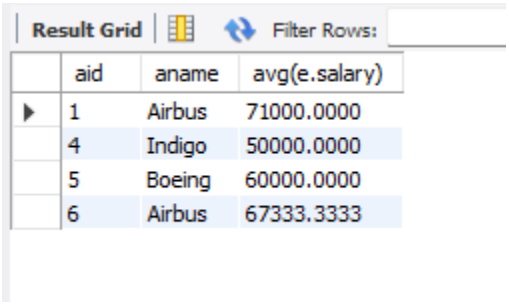

Result Grid | Filter Row

ename	salary
Tilak	5000

QUERY 4

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.aid,a.aname,avg(e.salary) from employees e,certified c,aircraft a where e.eid=c.eid and c.aid=a.aid and cru_range>1000 group by a.aname,a.aid;

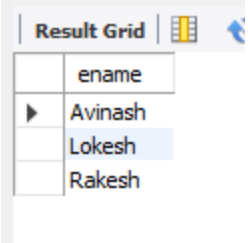

Result Grid | Filter Rows:

aid	aname	avg(e.salary)
1	Airbus	71000.0000
4	Indigo	50000.0000
5	Boeing	60000.0000
6	Airbus	67333.3333

QUERY 5

Find the names of pilots certified for some Boeing aircraft.

select ename from employees where eid in (select eid from certified c, aircraft a where c.aid=a.aid and a.aname='Boeing');



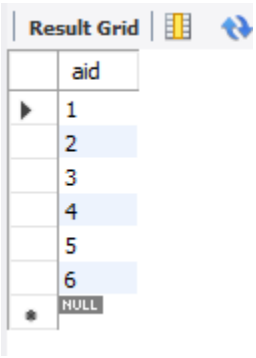
Result Grid

	ename
▶	Avinash
	Lokesh
	Rakesh

QUERY 6

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

select aid from aircraft where cru_range> (select distance from flights where ffrom='Bengaluru' and tto='New Delhi');



Result Grid

	aid
▶	1
	2
	3
	4
	5
	6
*	NULL