WEEK 8

```
create database airlines;
use airlines;

create table flights(
flno int primary key,
_from varchar(30),
_to varchar(30),
distance int,
departs time,
arrives time,
price int
);

create table aircraft(
a_id int primary key,
a_name varchar(30),
crusing_range int
);

create table employees(
e_id int primary key,
e_name varchar(30),
salary int
);
```

```
create table certified(
a_id int,
e_id int,
foreign key (a_id) references aircraft(a_id),
foreign key (e_id) references employees(e_id)
);
insert into flights values (1,'Bengaluru','New Delhi',500,'6:00','9:00',5000);
insert into flights values (2,'Bengaluru','Chennai',300,'7:00','8:30',3000);
insert into flights values (3,'Trivandrum','New Delhi',800,'8:00','11:30',6000);
insert into flights values (4,'Bengaluru','Frankfurt',10000,'6:00','23:30',50000);
insert into flights values (5,'Kolkata','New Delhi',2400,'11:00','3:30',9000);
insert into flights values (6,'Bengaluru','Frankfurt',8000,'9:00','23:00',40000);

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);



insert into employees values (101,'Avinash',50000);
insert into employees values (102,'Lokesh',60000);
insert into employees values (103,'Rakesh',70000);
insert into employees values (104,'Santhosh',82000);
insert into employees values (105,'Tilak',5000);
```

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

TO DO

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

```
> select a_name
from aircraft a
where a.a_id in (select c.a_id
                 from certified c
```

where c.e_id in (select e.e_id

FROM employees e

where e.salary>80000));

```
78 •  select a_name
79    from aircraft a
80    where a.a_id in (select c.a_id
81                     from certified c
82                     where c.e_id in (select e.e_id
83                                      FROM employees e
84                                      where e.salary>80000));
85
86
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

a_name
Airbus
Jetairways
Airbus

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 e.e_id, max(crusing_range)

from employees e inner join certified c

on e.e_id=c.e_id inner join aircraft a

on c.a_id=a.a_id

group by e_id

having count(c.e_id)>=3;

```
86
87 •  select e.e_id, max(crusing_range)
88    from employees e inner join certified c
89    on e.e_id=c.e_id inner join aircraft a
90    on c.a_id=a.a_id
91    group by e_id
92    having count(c.e_id)>=3;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

e_id	max(crusing_range)
101	5000
102	4500
103	4500
104	2200

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

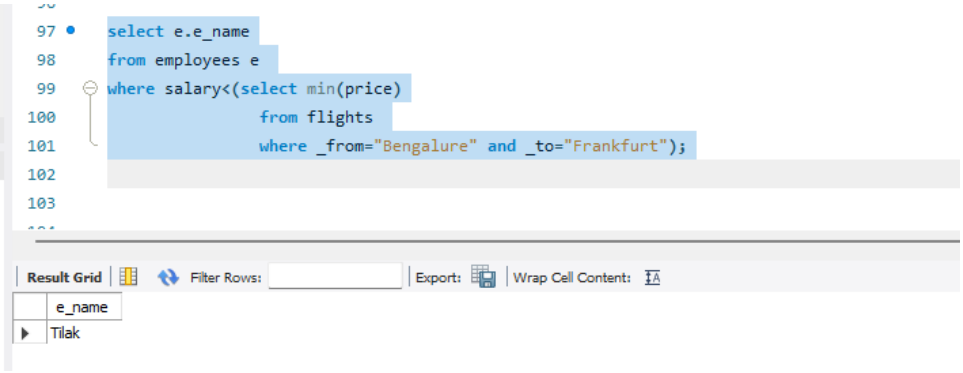
> select e.e_name

from employees e

where salary<(select min(price)

from flights

where _from="Bengaluru" and _to="Frankfurt");



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_name ,avg(salary)

from aircraft a inner join certified c

on a.a_id=c.a_id inner join employees e

on e.e_id=c.e_id

where a.crusing_range>1000

group by a.a_id;

```
103
104 •  select a_name ,avg(salary)
105    from aircraft a inner join certified c
106    on a.a_id=c.a_id inner join employees e
107    on e.e_id=c.e_id
108    where a.crusing_range>1000
109    group by a.a_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

a_name	avg(salary)
Airbus	71000.0000
Indigo	50000.0000
Boeing	60000.0000
Airbus	67333.3333

>

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

> select e_name

from employees

where e_id in(select e_id from certified where a_id in(select a_id from aircraft where a_name="Boeing"));

```
115 •  select e_name
116    from employees
117    where e_id in(select e_id from certified where a_id in(select a_id from aircraft where a_name="Boeing"));
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

e_name
Avinash
Lokesh
Rakesh

employees 12 ×

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

> select a_id from aircraft where crusing_range >=(select distance from flights where _from="Bengaluru" and _to="New Delhi");

```
123 •  select a_id from aircraft where crusing_range >=(select distance from flights where _from="Bengalure" and _to="New Delhi");
124
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

a_id
1
2
3
4
5
6
NULL