

## WEEK:08

Create table and enter values.

```
create database Airline_1bm21cs217;
```

```
use Airline_1bm21cs217;
```

```
create table Flights
```

```
(
```

```
fl_no int,
```

```
fl_fr char(50),
```

```
fl_to char(50),
```

```
distance float,
```

```
depart time,
```

```
arrive time,
```

```
price int,
```

```
primary key (fl_no)
```

```
);
```

```
create table Aircraft
```

```
(
```

```
a_id varchar(50),
```

```
a_name char(50),
```

```
cruising_range int,
```

```
primary key(a_id)
```

```
);
```

```
create table Employee
```

```
(  
e_id varchar(50),  
e_name char(50),  
salary int,  
primary key(e_id)  
);
```

create table Certified

```
(  
e_id varchar(50),  
a_id varchar(50),  
primary key (e_id,a_id),  
foreign key(e_id) references Employee(e_id),  
foreign key(a_id) references Aircraft(a_id)  
);
```

insert into Employee

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

select \* from Employee;

insert into Aircraft

values ('1','Airbus',2000),

('2','Boeing',700),

('3','JetAirways',550),

('4','Indigo',5000),

('5','Boeing',4500),

('6','Airbus',2200);

select \* from Aircraft;

insert into Flights

values (1,'Bengaluru','New Delhi','500','6:00:00','9:00:00',5000),

(2,'Bengaluru','Chennai','300','7:00:00','8:30:00',3000),

(3,'Trivandrum','New Delhi','800','8:00:00','11:30:00',6000),

(4,'Bengaluru','Frankfurt','10000','6:00:00','23:30:00',50000),

(5,'Kolkata','New Delhi','2400','11:00:00','3:30:00',9000),

(6,'Bengaluru','Frankfurt','8000','9:00:00','23:00:00',40000);

select \* from Flights;

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');

```

select \* from Certified;

	e_id	e_name	salary
▶	101	Avinash	50000
	102	Lokesh	60000
	103	Rakesh	70000
	104	Santosh	82000
	105	Tilak	5000
*	NULL	NULL	NULL

	e_id	a_id
▶	102	1
	104	1
	101	2
	103	2
	102	3
	103	3
	104	3
	105	3
	101	4
	101	5
	102	5
	103	5
	101	6
	103	6
	104	6
*	NULL	NULL

	a_id	a_name	cruising_range
▶	1	Airbus	2000
	2	Boeing	700
	3	JetAirways	550
	4	Indigo	5000
	5	Boeing	4500
	6	Airbus	2200
*	NULL	NULL	NULL

Result Grid							
	fl_no	fl_fr	fl_to	distance	depart	arrive	price
▶	1	Bengaluru	New Delhi	500	06:00:00	09:00:00	5000
	2	Bengaluru	Chennai	300	07:00:00	08:30:00	3000
	3	Trivandrum	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
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

## QUERIES

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

```

select a.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 Employee e
                               where salary>80000));

```

	a_name
▶	Airbus
	JetAirways
	Airbus

- ii. For each pilot who is certified for more than three aircrafts, find the eid and the maximum cruisingrange of the aircraft for which she or he is certified.

```
select c.e_id, MAX(a.cruising_range)
from Aircraft a , Certified c
where c.a_id=a.a_id
group by c.e_id
having count(*)>=3;
```

	e_id	MAX(a.cruising_range)
▶	102	4500
	104	2200
	101	5000
	103	4500

- 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 Employee e
where e.salary<(select MIN(f.price)
from FLights f
where f.fl_fr='Bengaluru' and f.fl_to='Frankfurt');
```

	e_name
▶	Tilak

- 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.a_name, avg(e. salary)
from Aircraft a, Employee e, Certified c
where a.a_id=c.a_id and e.e_id=c.e_id and a.cruising_range>1000
group by c.a_id;
```

	a_name	avg(e. 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.e_name
from Employee e
where e.e_id in(select c.e_id
from Certified c
where c.a_id in(select a.a_id
from Aircraft a
where a.a_name='Boeing'));
```

	e_name
▶	Avinash
	Lokesh
	Rakesh

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

```
select a.a_id
from Aircraft a
where a.cruising_range>(select f.distance
from Flights f
                        where fl_fr="Bengaluru" and fl_to="New Delhi");
```

	a_id
▶	1
	2
	3
	4
	5
	6