

## WEEK 8

```
create database airline_flight;  
use airline_flight ;
```

```
create table FLIGHTS(flno int, departs_from varchar(50), arrives_to varchar(30), distance int,  
departs time, arrives time, price int, primary key (flno));
```

```
INSERT INTO FLIGHTS VALUES (1,'Bengaluru','New Delhi',500,'6:00','9:00',50000);  
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);
```

```
create table Aircraft ( aid int, aname varchar(50), cruising_range int, primary key (aid));
```

```
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);
```

```
create table certified ( aid int, eID varchar(50), primary key (aid, eID),  
foreign key (aid) REFERENCES Aircraft (aid), foreign key (eID) REFERENCES EMPLOYEE  
(eID));
```

```
create table certified ( eID int, aid INT, primary key (eID, aid),  
foreign key (eID) REFERENCES EMPLOYEE (eID),foreign key (aid) REFERENCES Aircraft  
(aid));
```

```
insert into certified values(101,2);  
insert into certified values(101,4);  
insert into certified values(101,5);  
insert into certified values(101,6);  
insert into certified values(102,1);
```

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

```
create table EMPLOYEE ( eID int, ename varchar(20), salary real,
primary key (eID));
```

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

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

```
SELECT a.aname
FROM Aircraft a,certified c,EMPLOYEE e
WHERE a.aid=c.aid
AND c.eid=e.eid
AND NOT EXISTS
(SELECT *
FROM EMPLOYEE e1
WHERE e1.eid=e.eid
AND e1.salary<80000);
```

Result Grid		Filter Rows
	aname	
▶	Airbus	
	JetAirways	
	Airbus	

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

```
SELECT e.ename
FROM EMPLOYEE e
WHERE e.salary<
(SELECT MIN(f.price)
FROM FLIGHTS f
WHERE f.departs_from='Bengaluru'
AND f.arrives_to='Frankfurt');
```

Result Grid	
	ename
▶	Tilak

- 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 c.eid,MAX(cruising_range)
FROM certified c,Aircraft a
WHERE c.aid=a.aid
GROUP BY c.eid
HAVING COUNT(*)>2;
```

Result Grid			Filter Rows:
	eID	MAX(cruising_range)	
▶	102	4500	
	104	2200	
	101	5000	
	103	4500	



- 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 Aircraft a,certified c,EMPLOYEE e
WHERE a.aid=c.aid
AND c.eID=e.eID
AND a.cruising_range>1000
GROUP BY a.aid,a.aname;
```

Result Grid				Filter Rows:	Export:
	aid	aname	AVG(e.salary)		
▶	1	Airbus	71000		
	4	Indigo	50000		
	5	Boeing	60000		
	6	Airbus	67333.3333333333		



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

```
SELECT distinct e.ename
FROM EMPLOYEE e,Aircraft a, certified c
WHERE e.eID=c.eID
AND c.aid=a.aid
AND a.aname='Boeing';
```

Result Grid			 Filter
	ename		
▶	Avinash		
	Rakesh		
	Lokesh		

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

```
SELECT a.aid
FROM Aircraft a
WHERE a.cruising_range>
(SELECT MIN(f.distance)
FROM FLIGHTS f
WHERE f.departs_from='Bengaluru' AND f.arrives_to='new delhi');
```

Result Grid				Filter
	aid			
▶	1			
	2			
	3			
	4			
	5			
	6			
✱	NULL			