WEEK 8

VIBHA HUGAR CS255

CREATION

```
create database airline;
use airline;
create table flights(
flno int,
from_varchar(20),
to_varchar(20),
distance int,
departs time,
arrives time,
price int,
PRIMARY KEY(flno)
);
create table aircraft(
aid int,
aname varchar(20),
cruisingRange int,
PRIMARY KEY(aid)
);
create table employee(
eid int,
ename varchar(20),
salary int,
PRIMARY KEY(eid)
);
```

```
create table certified(
eid int,
aid int,
FOREIGN KEY(eid) REFERENCES employee(eid) on update
cascade on delete cascade,
FOREIGN KEY(aid) REFERENCES aircraft(aid) on update cascade
on delete cascade
);
INSERTION
insert into flights
values(1,'Bengaluru','NewDelhi',500,'06:00','09:00',5000),(2,'Bengaluru','Chennai',300,'07:00','08:30'
,3000),(3,'Trivandrum','NewDelhi',800,'08:00','11:30',6000),
(4, 'Bengaluru', 'Frankfurt', 10000, '06:00', '23:30', 50000), (5, 'Kolkata', 'NewDelhi', 2400, '11:00', '03:30', 90
00),(6,'Bengaluru','Frankfurt',8000,'09:00','23:00',40000);
insert into employee
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,'JetAirways',550),(4,'Indigo',5000),(5,'Boeing',4500),(6,'Air
bus',2200);
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),(1
04,1),(104,3),(105,3);
select * from employee;
```



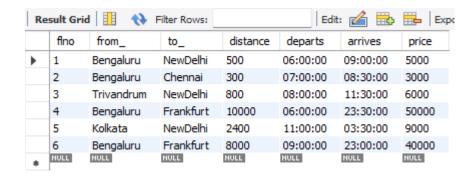
select * from aircraft;

	aid	aname	cruisingRange
•	1	Airbus	2000
	2	Boeing	700
	3	JetAirways	550
	4	Indigo	5000
	5	Boeing	4500
	6	Airbus	2200
	NULL	NULL	NULL

select * from certified;

Re	sult Grid	
	eid	aid
•	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

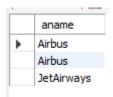
select * from flights;



QUERY i

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

select (a.aname) from employee e inner join certified c on e.eid=c.eid and e.salary>80000 inner join aircraft a on a.aid=c.aid;



QUERY ii

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 c.eid, max(a.cruisingRange) as maxrange

from aircraft a, certified c

where c.aid=a.aid group by c.eid having count(*)>=3;

		. — -
	eid	maxrange
•	102	4500
	104	2200
	101	5000
	103	4500

QUERY iii

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

select ename from employee where salary<any(select price

from flights where from _= 'Bengaluru' and to _= 'Frankfurt');



QUERY iv

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.

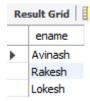
select c.aid,a.aname, AVG(e.salary) from certified c, aircraft a, employee e where a.cruisingRange>1000 and e.eid=c.eid and a.aid=c.aid group by c.aid;

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

QUERY v

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

select distinct e.ename from employee e, certified c, aircraft a where a.aid=c.aid and e.eid=c.eid and a.aname='Boeing';



QUERY vi

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

New Delhi.

select a.aid from flights f, aircraft a where (f.from_='Bengaluru' and f.to_='NewDelhi') and f.distance<=a.cruisingRange;

	aid	
١	1	
	2	
	3	
	4	
	5	
	6	