create database airline;

use airline;

create table FLIGHTS(

flno int primary key,

intial varchar(20),

destination varchar(20),

distance int,

departs time,

arrives time,

price int

);

create table AIRCRAFT(

aid int primary key,

aname varchar(20),

cruising\_range int

);

create table CERTIFIED(

eid int,

aid int,

primary key(eid,aid),

foreign key (eid) references EMPLOYEES(eid) on delete cascade on update cascade,

foreign key (aid) references AIRCRAFT(aid) on delete cascade on update cascade

);

create table EMPLOYEES(

eid int primary key,

ename varchar(20),

salary int

);

-- Employes has pilots who fly the airplane

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 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 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);

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',1000,'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);

-- **Queries**

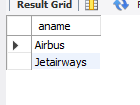
-- 1)Find the names of aircraft such that all pilots certified to operate them have salaries more than Rs.80,000

.

select distinct a.aname

from AIRCRAFT a , CERTIFIED c , EMPLOYEES e

where a.aid = c.aid and c.eid = e.eid and e.salary > 80000;



-- 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

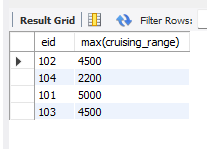
select c.eid , max(cruising\_range)

from AIRCRAFT a , CERTIFIED c

where a.aid = c.aid

group by(c.eid)

having(count(c.aid)>=3);

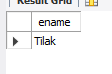


-- 3)Find the names of pilots whose salary is less than the price of the cheapest route from Bengaluru to Frankfurt.

select e.ename

from AIRCRAFT a,CERTIFIED c , EMPLOYEES e

where a.aid = c.aid and c.eid = e.eid and e.salary < (select min(price) from FLIGHTS f where intial="Bengaluru" and destination="Frankfurt");



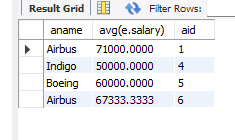
-- 4)For all aircraft with cruising range over 1000 Kms, find the name of the aircraft and the average salary of all pilots certified for this aircraft.

select a.aname , avg(e.salary) , a.aid

from AIRCRAFT a,CERTIFIED c , EMPLOYEES e

where a.aid = c.aid and c.eid = e.eid and a.cruising\_range >=1000

group by a.aname,a.aid;

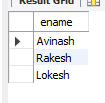


-- 5) Find the names of pilots certified for some Boeing aircraft

select distinct e.ename

from AIRCRAFT a,CERTIFIED c , EMPLOYEES e

where a.aid = c.aid and c.eid = e.eid and a.aname="Boeing";



-- 6)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 >any (select f.distance from FLIGHTS f where f.intial="Bengaluru" and f.destination="New Delhi");

-- A flight with a cruising range more than the distance between two cities can only be selected

