```
set echo on;
rem --1.Display the flight number,departure date and time of a flight,its route details and its
aircraft name for an
rem aircraft of type either Schweizer or Piper that departs during 8.00 PM and 9.00 PM.

select fl.flno flno,fl.departs departs,fl.dtime dtime,r.routeid routeid,
        r.orig_airport ORIG_AIRPORT,r.dest_airport DEST_AIRPORT,r.distance DISTANCE,
        a.aname ANAME from Fl_schedule fl,Routes r,Aircraft a,Flights f
        where a.aid=f.aid and fl.flno=f.flightno and f.rid=r.routeid and
        (a.type in('Schweizer','Piper')) and (fl.dtime between 2000 and 2100);

rem --2.For all the routes, display the flight number, origin and destination airport
rem if a flight is assigned for that route.

select r.routeid,f.flightno,r.orig_airport,r.dest_airport from Flights f,Routes r
        where r.routeid=f.rid;


rem --3.For all aircraft with cruisingrange over 5,000 miles, find the name of the
rem aircraft and the average salary of all pilots certified for this aircraft.


select a.aname NAME,avg(e.salary) SALARY from Aircraft a,Employee e,certified c
        where a.cruisingrange>5000 and e.eid=c.eid and c.aid=a.aid
        group by a.aname;

rem --4.Show the employee id,name and salary of employees who are not pilots
rem and their salary is more than the average salary of pilots.

select e.eid,e.ename,e.salary from Employee e
        where e.eid not in (select eid from certified)
        and e.salary>(select avg(e.salary) from employee e,certified c where e.eid=c.eid);

rem --5.Find the id and name of pilots who were certified to operate some
rem aircrafts but at least one of that aircraft is not scheduled from any routes.


select distinct(e.eid),e.ename from Employee e,Certified c,Routes r,Aircraft a
        where c.eid=e.eid and c.aid not in (select c.aid from certified c,flights f,routes r
        where f.aid=c.aid and f.rid!=r.routeid);


rem --6.Display the origin and destination of the flights having atleast three departures
```

```
rem with maximum distance covered.

select r.orig_airport,r.dest_airport from routes r
        where r.distance=(select max(distance) from routes) and
                (select count(flno) from fl_schedule fl,Flights f
                where f.rid=r.routeid and f.flightno=fl.flno)>=3;


rem --7.Display name and salary of pilot whose salary is more than the average salary
rem of any pilots for each route other than flights originating from Madison airport.

select distinct(e.ename),e.salary
from employee e,certified c
where c.eid=e.eid and e.salary>ANY(select avg(e.salary)
                from employee e,certified c,flights f,routes r
                where e.eid=c.eid and c.aid=f.aid and f.rid=r.routeid and r.orig_airport!='Madison'
group by r.routeid);


rem --9.Display the pilot(s) who are certified to pilot all aircraft in a type.

select distinct(c.eid),a.type,count(*) from certified c,aircraft a
        where c.eid in (select ce.eid from certified ce,aircraft ai where ce.aid=ai.aid
        having count(distinct ai.type)=1 group by ce.eid) and c.aid=a.aid group by c.eid,a.type
        having count(*)=(select count(air.aid) from aircraft air where air.type=a.type);


rem --10. Name the employee(s) who is earning the maximum salary among the airport having
maximum number of departures.

SELECT eid,ename,salary FROM employee e WHERE salary = (SELECT max(salary) FROM
employee JOIN certified c USING (eid)
JOIN flights f USING (aid) JOIN routes r ON (rid=routeid) WHERE orig_airport = (SELECT
orig_airport FROM routes r
JOIN flights f ON (routeid=rid) GROUP BY orig_airport HAVING count(*) = (SELECT
max(count(*))
FROM routes r JOIN flights f ON (routeid=rid) GROUP BY orig_airport)));

rem --11. Display the departure chart as follows:
flight number, departure(date,airport,time), destination airport, arrival time, aircraft name
for the flights from New York airport during 15 to 19th April 2005. Make sure that the route
contains at least two flights in the above specified condition.
```

```
SELECT flightno, departs, orig_airport, dtime, dest_airport, atime, aname FROM fl_schedule
JOIN flights ON(flightno=flno)
JOIN routes ON(routeid=rid) JOIN aircraft USING(aid) WHERE orig_airport='New York'
AND ( departs BETWEEN '15-APR-05' AND '19-APR-05') AND rid=(SELECT rid FROM
fl_schedule JOIN flights ON(flightno=flno) JOIN routes ON(routeid=rid)
WHERE orig_airport='New York' AND ( departs BETWEEN '15-APR-05' AND '19-APR-05')
GROUP BY rid HAVING count(*) > =2);

rem --12. A customer wants to travel from Madison to New York with no more than two changes
of
flight. List the flight numbers from Madison if the customer wants to arrive in New York by
6.50 p.m.

( SELECT distinct f.flightNo FROM routes r JOIN flights f ON(r.routeid = f.rid) JOIN fl_schedule fl
ON(f.flightNo = fl.flno)
WHERE r.orig_airport = 'Madison' AND r.dest_airport = 'New York' AND fl.atime <=1850 )
UNION
( SELECT distinct f.flightNo FROM (routes r JOIN flights f ON (r.routeid = f.rid) JOIN fl_schedule
fl ON(f.flightNo = fl.flno))
JOIN (routes rm JOIN flights fm ON (rm.routeid = fm.rid) JOIN fl_schedule flm ON(fm.flightNo =
flm.flno) )
ON (r.dest_airport = rm.orig_airport) WHERE r.orig_airport = 'Madison' AND rm.dest_airport =
'New York' AND
fl.atime <= flm.dtime AND flm.atime <=1850 ) UNION (
SELECT distinct f.flightNo FROM ( (routes r join flights f ON (r.routeid = f.rid) JOIN fl_schedule fl
ON(f.flightNo = fl.flno)
) JOIN (routes rm join flights fm ON (rm.routeid = fm.rid) JOIN fl_schedule flm ON(fm.flightNo =
flm.flno) ) ON (r.dest_airport = rm.orig_airport)
) JOIN ( routes rm1 JOIN flights fm1 ON (rm1.routeid = fm1.rid) JOIN fl_schedule flm1
ON(fm1.flightNo = flm1.flno)
) ON (rm.dest_airport = rm1.orig_airport) WHERE r.orig_airport = 'Madison' AND
rm1.dest_airport = 'New York' AND (fl.atime<=flm.dtime AND flm.atime<=flm1.dtime) AND
flm1.atime <=1850);

rem --13.Display the id and name of employee(s) who are not pilots.

select eid,ename from employee where eid in (select eid from employee minus select distinct
eid from certified);

rem --14.Display the id and name of pilot(s) who pilot the aircrafts from
rem Los Angels and Detroit airport.

select distinct e.eid,e.ename from employee e,certified c,flights f,routes r
```

```
        where e.eid=c.eid and c.aid=f.aid and f.rID=r.routeID and r.orig_airport='Los Angeles'
intersect
select distinct e1.eid,e1.ename from employee e1,certified c1,flights f1,routes r1
        where e1.eid=c1.eid and c1.aid=f1.aid and f1.rID=r1.routeID and r1.orig_airport='Detroit';
```