2. Schema description
movies (mid, title, year, num ratings, rating)
play in (mid, name, cast position)

2.1 Return the total number of active actors in the dataset
(done a movie after 2005)

select count(distinct name) from movies natural join play_in where movies.year >=2005;

2.2 Return all the actors who have done at least one movie
with Rani Mukherjee (in alphabetic order of their names)

select distinct name from play_in where mid in (select mid from play_in where name = 'Rani Mukherji') and name not in (select name from play_in where name = 'Rani Mukherji') order by name asc;

2.3 Rate the actors according to the gross ratings their
movies received. A tie is resolved alphabetically. For
example, if Amir Khan worked in five movies with rating
7, 4, 10, 16 and 9, then his gros rating is 36. Output the
actors based on the decreasing orer of raitngs.

select name , sum(rating) as gross_rating from (movies natural join play_in) group by name order by gross_rating desc, name asc;

2.4 Find the actor who has acted in more movies in 2005
than un any other year in his career

select distinct name , count(*) as number_of_movies from movies natural join play_in where year = 2005 group by name having number_of_movies > all(select count(*) as number_of_movies from movies natural join play_in where year != 2005 group by name) order by number_of_movies desc, name asc;

2.5 Find the actors whose three consecutive movies have got
the same raitng. Hence find the actor(s) whose movies
have received the same rating maximum number of
times.

a) create view tab as select * from movies natural join play_in;

select distinct x.name from tab as x,tab as y,tab as z where x.name = y.name and y.name = z.name and x.mid != y.mid and y.mid != z.mid and z.mid != x.mid and x.year <= y.year and y.year <= z.year and x.rating = y.rating and y.rating = z.rating and not exists(select * from tab as w where w.year < x.year and w.year < y.year and w.name = x.name) and not exists(select * from tab as w where y.year < w.year and w.year < z.year);

b) select distinct(name) from movies natural join play_in group by name,rating having count(*) in(select max(count) from (select name,rating,count(*) as count from movies natural join play_in group by name,rating) as a);

3. Schema description
aircraft (aid, aname, year, cruisingrange)
pilot (pid, pname, salary)

certified (aid, pid)

3.1 Find the names of aircraft such that all pilots certified to operate them earn more than 20 lacs

select distinct aname from aircraft natural join certified natural join pilot where aid not in (select aid from aircraft natural join certified natural join pilot where salary <= 20);

3.2 For all aircraft with cruisingrange over 15000 km, find the name of the aircraft and the average salary of all pilots certified for this aircraft.

select aname, avg(salary) as average_salary from aircraft natural join certified natural join pilot where cruisingrange >15000 group by aname;

3.3 Print the enames of pilots who can operate planes with cruisingrange greater than 15000 km but are not certified on any Boeing aircraft.

select distinct pname from aircraft natural join certified natural join pilot where pid not in (select pid from aircraft natural join certified natural join pilot where aname like 'BOEING%') and cruisingrange > 15000;