**MySQL**

SELECT Rating.rID, Rating.mID, Rating.stars, Rating.ratingDate

FROM Rating

JOIN

(SELECT rID, mID

FROM Rating

GROUP BY rID, mID

HAVING COUNT(mID) = 2) cand

ON cand.rID = Rating.rID

AND cand.mID = Rating.mID

WHERE cand.RID = Rating.rID AND cand.mID = Rating.mID

AND rating.ratingDate >

rID, mID, stars1,stars2, date1, date2

--------------

SELECT Reviewer.name,Movie.title

FROM rating r1

JOIN Movie ON (movie.mID = r1.mID)

JOIN Reviewer ON (Reviewer.rID = r1.rID)

JOIN rating r2 ON (r1.mID = r2.mID and r1.rID = r2.rID)

WHERE r2.ratingDate > r1.ratingDate AND r2.stars > r1.stars

*tbl1*

*aa, bb , 2010*

*aa, bb, 2009*

aa, dd,2013

cc, dd, 2008

self join:

aa,bb,

**MySQL Day 2**

https://lagunita.stanford.edu/courses/DB/SQL/SelfPaced/courseware/ch-sql/seq-exercise-sql\_movie\_query\_extra/

**Question 2:**

SELECT name, title, stars

FROM rating

JOIN

(

SELECT DISTINCT name, rID, title

FROM movie

INNER JOIN reviewer ON director = name) ON rID

SELECT DISTINCT name, title, stars

FROM rating

JOIN (

SELECT DISTINCT name, mID, title, rID

FROM movie

INNER JOIN reviewer ON director = name) s ON s.mID = rating.mID AND s.rID = rating.rID

SELECT name,title,stars

FROM Rating JOIN Movie USING(mID)

JOIN Reviewer USING(rID)

WHERE Reviewer.name = Movie.director

SELECT Reviewer.name, Movie.title, Rating.stars

FROM Movie

JOIN Rating

ON Movie.mID = Rating.mID

JOIN Reviewer

ON Reviewer.rID = Rating.rID

WHERE Reviewer.name = Movie.director

**Question 3:**

SELECT DISTINCT Reviewer.name

FROM Reviewer

UNION

SELECT DISTINCT Movie.title

FROM Movie

ORDER BY Reviewer.name, Movie.title

SELECT list

FROM

(SELECT name AS list FROM Reviewer

UNION ALL

SELECT title AS list FROM Movie)

ORDER BY list

**Question 4**

SELECT distinct title

FROM Rating JOIN Movie USING(mID)

WHERE mID not in (

SELECT mID

FROM Reviewer

WHERE name == 'Chris Jackson'

)

SELECT DISTINCT Movie.title

FROM Movie

WHERE mID NOT IN

(SELECT Rating.mID

FROM Rating

JOIN Reviewer

USING(rID)

WHERE Reviewer.name = 'Chris Jackson'

)

SELECT title FROM movie

WHERE mID NOT IN

(SELECT mID FROM rating WHERE rID IN

(SELECT rID FROM reviewer

WHERE name = 'Chris Jackson'))

**Q5:**

SELECT DISTINCT re1.name, re2.name

FROM Rating r1

JOIN Rating r2

ON r1.mID = r2.mID

JOIN Reviewer re1

ON re1.rID = r1.rID

JOIN Reviewer re2

ON re2.rID = r2.rID

WHERE re1.name < re2.name

ORDER BY re1.name, re2.name

SELECT DISTINCT rating.rID as r1, r.rID as r2

FROM rating JOIN (

SELECT rID, mID FROM rating

WHERE (SELECT COUNT(\*) FROM rating GROUP BY mID > 1)) r

USING(mID)

JOIN Reviewer rw1 ON rw1.rID = rating.rID

JOIN Reviewer rw2 ON rw2.rID = r.rID

SELECT mID, COUNT(\*) FROM rating GROUP BY mID

WHERE mID in (SELECT mID FROM rating GROUP BY mID HAVING COUNT(mID) > 1)

SELECT DISTINCT rw1.name, rw2.name

FROM Rating r1

JOIN Rating r2 ON r1.mID = r2.mID and r1.rID < r2.rID

JOIN Reviewer rw1 ON rw1.rID = r1.rID

JOIN Reviewer rw2 ON rw2.rID = r2.rID

Second method:

SELECT DISTINCT name1, name2

FROM

(

SELECT r1.name AS name1, r2.name AS name2

FROM

(Rating JOIN Reviewer using(rID)) AS r1,

(Rating JOIN Reviewer using(rID)) AS r2

WHERE r1.mID = r2.mID AND r1.rID != r2.rID

)

WHERE name1 < name2;

**Question 8**

SELECT name

FROM Reviewer JOIN

(SELECT Rating.rID, COUNT(rID) as reviewCnt FROM Rating

GROUP BY rID) ON (Rating.rID=Reviewer.rID)

WHERE reviewCnt >= 3

ON (Rating.rID,Reviewer.rID)

USING(rID)

**Question 9**

SELECT title,director FROM movie WHERE director IN(

SELECT director FROM(

SELECT COUNT(\*)as num, director FROM movie

GROUP BY director)

WHERE num>1)

ORDER BY director,title

SELECT title,director

FROM movie,

WHERE director IN

(SELECT director FROM movie GROUP BY director HAVING COUNT(\*)>1)

ORDER BY director, title

SELECT Movie.title, Movie.director

FROM Movie

WHERE Movie.director IN

(SELECT Movie.director

FROM Movie

GROUP BY Movie.director

HAVING COUNT(Movie.mID) > 1)

ORDER BY Movie.director, Movie.title

**Question 10**

SELECT title, MAX(avgStars)

FROM Movie JOIN

(SELECT mID,AVG(stars) AS avgStars

FROM Rating

GROUP BY mID) USING(mID)

SELECT title, av FROM movie JOIN(

SELECT mID, AVG(stars) av FROM rating GROUP BY mID)

USING(mID)

WHERE av = 4.5

WHERE av =

(SELECT AVG(stars) av FROM rating GROUP BY mID ORDER BY av LIMIT 1)

SELECT Movie.title, maxRate.maxStar

FROM Rating,

(SELECT MAX(avgRating.avgStar) as maxStar

FROM (

SELECT AVG(stars) avgStar

FROM Rating GROUP BY mID) avgRating) maxRate

JOIN Movie

ON Movie.mID = Rating.mID

GROUP BY Rating.mID

HAVING AVG (Rating.stars) = maxRate.maxStar

--

SELECT title, maxAvgStars

FROM Movie JOIN

(SELECT mID, MAX(avgStars) AS maxAvgStars

FROM

(SELECT mID,AVG(stars) AS avgStars

FROM Rating

GROUP BY mID))

USING(mID)

**Question 12**

SELECT director, title, MAX(av) FROM movie JOIN(

SELECT mID, MAX(stars) av FROM rating GROUP BY mID)

USING(mID)

WHERE director != '<NULL>'

GROUP BY director

SELECT DISTINCT director,title,stars

FROM (movie JOIN rating USING (mID)) m

WHERE stars.... (

SELECT MAX(stars)

FROM rating JOIN movie USING (mID)

WHERE director = m.director)

SELECT b.a1, b.a2

FROM

(SELECT Movie.director a1, MAX(Rating.stars) a2

FROM Rating

JOIN Movie

ON Movie.mID = Rating.mID

GROUP BY Movie.director) b

WHERE b.a1 IS NOT NULL

SELECT MAX(stars)

FROM rating JOIN movie USING (mID)

WHERE director = 'Steven Spielberg'

**SQL Practice: Social Network Problem set 1**

Problem 1

SELECT name FROM highschooler

WHERE ID IN (

SELECT ID2 FROM friend JOIN (

SELECT ID FROM highschooler WHERE name = 'Gabriel')

ON friend.ID1 = ID)

SELECT DISTINCT Highschooler.name

FROM Friend

JOIN Highschooler

ON Highschooler.ID = Friend.ID1

WHERE Friend.ID2 in

(SELECT high.ID

FROM Highschooler as high

WHERE high.name = 'Gabriel')

SELECT h1.name

FROM Friend

JOIN Highschooler h1

ON (Friend.ID1 = h1.ID)

JOIN Highschooler h2

ON (Friend.ID2 = h2.ID)

WHERE h2.name = 'Gabriel';

Problem 2

SELECT LL.name, LL.grade, H2.name, H2.grade

FROM

(SELECT \*

FROM highschooler

JOIN

likes ON ID=ID1) LL

JOIN

highschooler H2

ON H2.ID = LL.ID2

WHERE LL.grade >= H2.grade + 2

SELECT table1.name, table1.grade, table2.name, table2.grade

FROM

(Likes l1 JOIN Highschooler hs1

ON (l1.ID1 = hs1.ID)) AS table1

JOIN

(Likes l2 JOIN Highschooler hs2

ON (l2.ID2 = hs2.ID)) AS table2

ON (table1.ID = table2.ID1 AND table2.ID2 = table1.ID2)

WHERE (table1.grade - table2.grade) > 1

SELECT h1.name,h1.grade, h2.name,h2.grade

FROM Likes JOIN Highschooler h1

ON ID1 = h1.ID

JOIN Highschooler h2

ON ID2 = h2.ID

WHERE h1.grade >= h2.grade + 2;

Problem 3

SELECT H1.name, H1.grade, H2.name, H2.grade

FROM highschooler H1

JOIN

(SELECT L1.ID1, L1.ID2 FROM

likes L1

JOIN

likes L2

ON L1.ID1 = L2.ID2 AND L1.ID2 = L2.ID1) matchIDs

ON H1.ID = matchIDs.ID1

JOIN

highschooler H2

ON H2.ID = matchIDs.ID2

WHERE H1.name < H2.name

=================================================

SELECT m.name,m.grade,n.name,n.grade

FROM Highschooler m JOIN Highschooler n

WHERE (m.ID,n.ID) IN(

SELECT l1.ID1,l1.ID2

FROM Likes l1 inner JOIN Likes l2

WHERE l1.ID1 = l2.ID2

AND l1.ID2 = l2.ID1)

AND m.name < n.name;

=================================================

SELECT h1.name, h1.grade, h2.name, h2.grade

FROM Likes L1, Likes L2

JOIN Highschooler h1

ON h1.ID = L1.ID1

JOIN Highschooler h2

ON h2.ID = L2.ID1

WHERE L1.ID1 = L2.ID2

AND L1.ID2 = L2.ID1

AND h1.name < h2.name

===============================================================================

Problem 4

SELECT name,grade FROM highschooler

WHERE ID NOT IN (

SELECT ID1 FROM likes

UNION

SELECT ID2 FROM likes)

ORDER BY grade, name

SELECT name, grade

FROM Highschooler

WHERE ID NOT IN

(SELECT DISTINCT ID2 FROM Likes

UNION

SELECT DISTINCT ID1 FROM Likes)

ORDER BY grade, name

==================================

SELECT name,grade

FROM Highschooler

WHERE ID NOT IN

(SELECT ID1 AS ID FROM Likes)

AND ID NOT IN

(SELECT ID2 AS ID FROM Likes)

ORDER BY grade,name;

---

-----hjhjhjhjhjhjj

SELECT DISTINCT name, grade

FROM Highschooler AS h

LEFT JOIN LIKES AS l

ON h.ID = l.ID1

AND h.ID = l.ID1

OR h.ID = l.ID2

WHERE l.ID1 IS NULL

AND l.ID2 IS NULL

ORDER BY grade, name;

Problem 5

SELECT H1.name, H1.grade, H2.name, H2.grade

FROM highschooler H1 JOIN highschooler H2

JOIN

(SELECT ID1,ID2 FROM likes

WHERE ID2 NOT IN

(SELECT ID1 FROM likes))

ON H1.ID = ID1

AND H2.ID = ID2

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

SELECT h1.name, h1.grade, h2.name, h2.grade

FROM Likes

JOIN Highschooler h1

ON h1.ID = Likes.ID1

JOIN Highschooler h2

ON h2.ID = Likes.ID2

WHERE Likes.ID2 NOT IN

(SELECT ID1

FROM Likes)

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Problem 6

SELECT H0.name,H0.grade FROM highschooler H0

WHERE H0.ID NOT IN

(SELECT D1 FROM

(SELECT H1.ID AS D1, H1.grade, H2.ID AS D2, H2.grade

FROM highschooler H1 JOIN highschooler H2

JOIN

friend

ON H1.ID = ID1

AND H2.ID = ID2

AND H1.grade != H2.grade)

)

ORDER BY grade,name

=========================================================

SELECT DISTINCT h1.name,h1.grade

FROM Highschooler h1

WHERE h1.ID NOT IN

(SELECT h2.ID

FROM Friend JOIN Highschooler h2

ON ID1 = h2.ID

JOIN Highschooler h3

ON ID2 = h3.ID

WHERE h2.grade <>h3.grade)

ORDER BY grade,name;

~~~~~~~~~~~~~~~~~~~~

SELECT DISTINCT h1.name, h1.grade

FROM Friend

JOIN Highschooler h1

ON ID1 = h1.ID

WHERE ID1 NOT IN

(SELECT DISTINCT fh1.ID1

FROM

(SELECT f1.ID1 as ID1, f1.ID2 as ID2, grade

FROM Friend f1

JOIN Highschooler h1

ON h1.ID = f1.ID1) fh1

JOIN

(SELECT f1.ID1 as ID1, f1.ID2 as ID2, grade

FROM Friend f1

JOIN Highschooler h1

ON h1.ID = f1.ID2) fh2

ON fh1.ID2 = fh2.ID2

AND fh1.ID1 = fh2.ID1

AND fh1.grade != fh2.grade)

ORDER BY grade, name

-----

SELECT name,grade

FROM Highschooler

WHERE ID not in (

SELECT HS1.ID

FROM Friend F1, Highschooler HS1, Highschooler HS2

WHERE F1.ID1 = HS1.ID AND F1.ID2 = HS2.ID AND HS1.grade != HS2.grade

)

ORDER BY grade, name

==========================================================

Problem 7

SELECT h1.name,h1.grade, h2.name,h2.grade, h3.name,h3.grade

FROM Highschooler h1 JOIN Highschooler h2 JOIN Highschooler h3

WHERE (h1.ID, h2.ID, h3.ID) IN (

SELECT nf.ID1 AS IDA, nf.ID2 AS IDB, f1.ID2 AS IDC

FROM Friend f1 JOIN

(SELECT ID1,ID2

FROM Likes

WHERE (ID1,ID2) NOT IN

(SELECT ID1,ID2

FROM Friend)) AS nf

ON f1.ID1 = nf.ID1

JOIN Friend f2

ON f2.ID1 = nf.ID2

WHERE f2.ID2 = f1.ID2);

SELECT \*

--SELECT H1.name, H1.grade, H2.name, H2.grade

FROM highschooler H1 JOIN highschooler H2

JOIN likes

ON H1.ID = likes.ID1

AND H2.ID = likes.ID2

WHERE H1.ID IN

(SELECT ID1 FROM likes)

AND H1.ID NOT IN (

SELECT friend.ID1 FROM

friend JOIN likes

ON friend.ID1 = likes.ID1

AND friend.ID2 = likes.ID2)

~~~~~~~~~~~~~~~~~~~~~~~~  
SELECT h1.name, h1.grade, h2.name, h2.grade, h3.name, h3.grade

FROM

(SELECT DISTINCT L2.ID1 ID1, L2.ID2 ID2, F1.ID2 Fid2

FROM Likes L2

JOIN Friend F1

WHERE L2.ID1 NOT IN

(SELECT L1.ID1

FROM Likes L1, Friend F1

WHERE L1.ID1 = F1.ID1

AND L1.ID2 = F1.ID2)

AND F1.ID1 = L2.ID1) friends\_ID1

JOIN

(SELECT DISTINCT L2.ID1 ID1, L2.ID2 ID2, F1.ID2 Fid2

FROM Likes L2

JOIN Friend F1

WHERE L2.ID1 NOT IN

(SELECT L1.ID1

FROM Likes L1, Friend F1

WHERE L1.ID1 = F1.ID1

AND L1.ID2 = F1.ID2)

AND F1.ID1 = L2.ID2) friends\_ID2

JOIN Highschooler h1

JOIN Highschooler h2

JOIN Highschooler h3

ON h1.ID = friends\_ID1.ID1

AND h2.ID = friends\_ID2.ID2

AND h3.ID = friends\_ID2.Fid2

AND friends\_ID1.ID1 = friends\_ID2.ID1

AND friends\_ID1.ID2 = friends\_ID2.ID2

AND friends\_ID1.Fid2 = friends\_ID2.Fid2