CS 585
Homework 2
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1) SELECT USER_ID,NAME
FROM USERS AS U JOIN COMMENTS AS C ON USER_ID = COMMENTER_USER_ID
WHERE C.POST_ID = 5 AND COMMENTER_USER_ID NOT IN (SELECT USER_ID FROM Posts);

From the first JOIN that I made I get the user_id from the users that have commented in post_ID =5. Then, I make sure that the User_id is not in the posts table, so he has not posted something. (I could have use user_id not in (posts table)).

2)SELECT T1.FRIEND_ID
FROM(
(SELECT F.USER_ID ,FRIEND_ID FROM FRIENDSHIP AS F JOIN USERS AS U ON FRIEND_ID = U.USER_ID
WHERE F.USER_ID =1 AND Gender = "F") AS T1
JOIN (SELECT F.USER_ID ,FRIEND_ID FROM FRIENDSHIP AS F JOIN USERS AS U ON FRIEND_ID =
U.USER_ID
WHERE F.USER_ID =2 AND GENDER = "F") AS T2
ON T1.FRIEND_ID = T2.FRIENDS_ID);

In the first table T1, all the female friends of user 1 are listed and in T2 all the female friends of user 2. Using an inner join on the friend id's of each table I can find their common values, in other words the female mutual friends between them.

3)SELECT USER_ID FROM FRIENDSHIP WHERE FRIEND_ID IN (SELECT USER_ID FROM POSTS)
GROUP BY USER_ID HAVING COUNT(FRIEND_ID) > 2.

From the first parentheses , I get all the users that have a post, that posted something. I select User_ID from the friendship table and not from the users table, so I can see if their friends are in the posts table, meaning that if their friends have posted something. Using the HAVING count(*) >2 I make sure that only the users that have more than 2 friends are displayed.

4)SELECT DISTINCT U.USER_ID, COUNT(FRIEND_ID) AS COUNT
FROM USERS AS U JOIN FRIENDSHIP AS F ON U.USER_ID = F.USER_ID WHERE GENDER = "F"
AND DOB > '1990-12-20' AND U.USER_ID IN (Select COMMENTER_USER_ID FROM POSTS JOIN
COMMENTS ON POSTS.POST_ID = COMMENTS.POST_ID WHERE POSTS.USER_ID =10)
GROUP BY USER_ID;

In the parentheses, I get all the users that commented on the posts of user 10. To do this I created a join between the comments table and the posts table. I joined the users table and the friendship table in order to be able to count the number of friends of each user. This way I get the gender and dob from the users table, make sure that the user is in the table(first parentheses), so the user has commented in the posts of user 10. Finally I use the friendship table to count the number of friends of the user.

5)SELECT COMMENTER_USER_ID
FROM FRIENDSHIP AS F JOIN POSTS AS P ON F.USER_ID = P.USER_ID JOIN COMMENTS AS C on P.POST_ID = C.POST_ID WHERE P.POST_ID = 7 AND FRIEND_ID = COMMENTER_USER_ID;

I joined the 3 tables, and by having Posts.Post_ID = 7 I only have the User_ID of the creator of the post, along with all the people that commented(Comments table) and the Friend_ID column that I get from the Friendship table. So since I only have the User_ID of the user that created the Post_ID=7, I set Friend_ID = Commenter_User_ID in order to see if the creator of the post has a friend who commented on the post.

6)SELECT USER_ID, NAME, COUNT(*) AS ACC, COUNT(COMMENT_ID) AS COUNT_COM
FROM
(SELECT USER_ID FROM USERS JOIN COMMENTS AS C ON U.USER_ID = C.COMMENT_ID WHERE GENDER = "F" AND USER_ID IN (SELECT USER_ID FROM Friendship WHERE FRIEND_ID =20)AS T1
JOIN
(SELECT USER_ID, COMMENT_ID,COMMENTER_USER_ID FROM
POSTS AS P JOIN COMMENTS AS C ON P.POST_ID = C.COMMENT_ID WHERE P.USER_ID != 10) AS T2
ON T1.USER_ID = T2.COMMENTER_USER_ID

In Table 1 (T1) it's the female users that are friends with User_ID=20. In Table 2(T2), it's the users that commented apart from the post of the user+id=10. I joined the two tables to be able to find the user that is both friends with user_id =20 but has not commented on the post of user_id =10.