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CS-4163

10/08/2020

1.List all attributes of comments containing the ‘word’ lol, ordered by decreasing Poster and increasing Recipient.

SELECT \*  
FROM comments  
WHERE Text LIKE '%lol%'  
ORDER BY Poster DESC, Recipient ASC;

**RESULTS:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3 | P0TU5 | CPMGB | lol How could I miss it? Anyways listen to this Soviet joke my Secretary of Defense just told me... | 1982-05-03 |
| 2 | CPMGB | P0TU5 | Yo did you hear about this Free Wales Army nonsense? What a riot lol | 1982-05-02 |
|  |  |  |  |  |

2. Display, without duplicates, the Posters of one gender who posted to Recipients of a different gender (display Poster and Recipient Ids and Genders).

SELECT DISTINCT Poster, P.Gender, Recipient, R.Gender  
FROM comments AS C   
 JOIN users AS R ON(R.Id = C.Recipient)   
 JOIN users AS P ON(P.Id = C.Poster)  
WHERE R.Gender != P.Gender;

**RESULTS:**

|  |  |  |  |
| --- | --- | --- | --- |
| MobyD | M | CPMGB | F |
| CPMGB | F | P0TU5 | M |
| P0TU5 | M | CPMGB | F |
| et101 | F | physd | M |
| physd | M | et101 | F |
| rush3 | M | ATLAS | F |
| ATLAS | F | rush3 | M |
| iRobt | M | compE | F |
| oilEr | M | Y111Y | V |
| oilEr | M | X111X | V |
| X111X | V | physd | M |

3. List all attributes of comments posted this year either by Poster with name X or to Recipient with name Y.

SELECT CommentId, Poster, Recipient, Text, PostDate  
FROM comments   
 JOIN users AS postUsers ON (comments.Poster = postUsers.Id)   
 JOIN users AS recipUsers ON (comments.Recipient = recipUsers.Id)  
WHERE PostDate >= 2020-01-01 AND (postUsers.Name = 'X' OR recipUsers.Name = 'Y');

**RESULTS:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 | X111X | Y111Y | Y are you like this? | 2020-10-07 |
| 18 | oilEr | Y111Y | I prefer f(x) | 2020-10-01 |
| 20 | X111X | physd | I dont know what to say... | 2020-09-08 |

4. For each user, find the number of friends of each gender (output should have 3 columns: Id, Gender, Count).

SELECT U.Id, F.Gender, COUNT(F.Gender)  
FROM users AS U   
 JOIN friends FT ON(U.Id = FT.Id1)   
 JOIN users AS F ON(F.Id = FT.Id2)  
GROUP BY U.Id, F.Gender;

**RESULTS:**

|  | Id | Gender | COUNT(F.Gender) |
| --- | --- | --- | --- |
|  | rush3 | F | 3 |
|  | physd | F | 1 |
|  | physd | M | 3 |
|  | P0TU5 | F | 2 |
|  | oilEr | M | 2 |
|  | iRobt | F | 1 |
|  | iRobt | M | 1 |
|  | hstrm | M | 1 |
|  | hardi | M | 2 |
|  | et101 | F | 1 |
|  | et101 | M | 1 |
|  | DPP16 | F | 1 |
|  | DPP16 | M | 1 |
|  | CPMGB | F | 2 |
|  | CPMGB | M | 2 |
|  | compE | F | 1 |
|  | compE | M | 1 |
|  | ATLAS | F | 1 |
|  | ATLAS | M | 1 |

5. List all attributes of Users who do not have any friends of the same gender.

SELECT Id  
FROM users  
WHERE Id NOT IN (SELECT DISTINCT U1.Id  
 FROM friends   
 JOIN users AS U1 ON (friends.Id1 = U1.Id)   
 JOIN users AS U2 ON (friends.Id2 = U2.Id)  
 WHERE U1.Gender = U2.Gender);

**RESULTS:**

|  |  |  |
| --- | --- | --- |
| hstrm | Elizabeth Hale | F |
| MobyD | Julian Cayo-Evans | M |
| P0TU5 | Ronald Reagan | M |
| rush3 | Neil Peart | M |
| X111X | X | V |
| Y111Y | Y | V |
|  |  |  |

6. List all attributes of Users who have started at least two friendships on the same date.

SELECT U.Id, U.Name, U.Gender  
FROM friends AS F   
 JOIN (SELECT Startdate  
 FROM friends  
 GROUP BY Startdate  
 HAVING COUNT(\*)>2) AS DT ON (F.Startdate = DT.Startdate)  
 JOIN users AS U ON (F.Id1 = U.Id)  
GROUP BY F.Id1  
HAVING (COUNT(\*) >= 2);

**RESULTS:**

|  |  |  |
| --- | --- | --- |
| DPP16 | Tsai Ing-wen | F |
| hardi | Srinivasa Ramanujan | M |

7. List all User attributes and the number of friends of users who have commented to at least two different users.

SELECT Id, Name, Gender, FNum.FNumber  
FROM users   
 JOIN (SELECT Poster, Recipient  
 FROM comments   
 GROUP BY Poster, Recipient) AS SubQ ON (Id = SubQ.Poster)  
 JOIN (SELECT Id1, COUNT(\*) AS FNumber  
 FROM friends  
 GROUP BY Id1) AS FNum ON (Id = FNum.Id1)  
GROUP BY Poster  
HAVING COUNT(\*) >= 2;

**RESULTS:**

|  |  |  |  |
| --- | --- | --- | --- |
| CPMGB | Margaret Thatcher | F | 4 |
| et101 | Sophie Germain | F | 2 |
| physd | Carl Gauss | M | 4 |
| oilEr | Leonhard Euler | M | 2 |

8. List all attributes of Users who have posted comments to all users of a specific gender (gender chosen from your defined set; no aggregate operations allowed)

SELECT Id, Name, Gender  
FROM users as U1  
WHERE NOT EXISTS((SELECT com.Recipient   
 FROM comments AS com   
 JOIN users AS U2 ON (com. Recipient = U2.Id)  
 WHERE U2.Gender = 'V'   
 AND NOT EXISTS(SELECT \*   
 FROM comments AS C   
 WHERE U1.Id = C.Poster   
 AND com.Recipient = C.Recipient)));  
**RESULTS:**

|  |  |  |
| --- | --- | --- |
| oilEr | Leonhard Euler | M |
|  |  |  |

9. List all attributes of User(s) who are friends with the most number of Users.

SELECT U1.Id, U1.Name, U1.Gender  
FROM friends  
 JOIN users as U1 ON (U1.Id = Id1)  
 JOIN (SELECT Id, COUNT(Id) AS FriendCount  
 FROM friends  
 JOIN users ON (Id = Id1)  
 GROUP BY Id) AS FCT ON (U1.Id = FCT.Id)  
 JOIN (SELECT MAX(FCount) AS mfc  
 FROM (SELECT Id1, COUNT(Id1) FCount  
 FROM friends  
 JOIN users ON (Id = Id1)  
 GROUP BY Id1)AS MFC) AS FINAL ON (FriendCount = mfc)  
GROUP BY U1.Id, FriendCount DESC;

**RESULTS:**

|  |  |  |
| --- | --- | --- |
| CPMGB | Margaret Thatcher | F |
| physd | Carl Gauss | M |