**SQL MANDATORY PROJECT 2**

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**Batch- DS37**

1. **How many times does the average user post?**

SELECT AVG (post\_count) AS average\_posts FROM (  
 SELECT user\_id, COUNT(\*) AS post\_count  
 FROM photos  
 GROUP BY user\_id)  
 AS user\_posts;

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1. **Find the top 5 most used hashtags.**

SELECT tag\_name, COUNT(\*) AS tag\_count  
FROM tags  
JOIN photo\_tags ON [tags.id](http://tags.id/) = photo\_tags.tag\_id  
GROUP BY tag\_name  
ORDER BY tag\_count DESC  
LIMIT 5;

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**3) Find users who have liked every single photo on the site.**

SELECT u.Username  
FROM users u  
JOIN (  
    SELECT user\_id  
    FROM likes  
    GROUP BY user\_id  
    HAVING COUNT(DISTINCT photo\_id) = (  
        SELECT COUNT(DISTINCT photo\_id)  
        FROM likes  
    )  
) subquery ON [u.id](http://u.id/) = subquery.user\_id;

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**4) Retrieve a list of users along with their usernames and the rank of their account creation, ordered by the creation date in ascending order.**

SELECT username, RANK() OVER (ORDER BY created\_at ASC) AS account\_creation\_rank  
FROM users  
ORDER BY created\_at ASC;

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**5) List the comments made on photos with their comment texts, photo URLs, and usernames of users who posted the comments. Include the comment count for each photo**

SELECT p.image\_url, c.comment\_text, u.username, pc.comment\_count  
FROM photos p  
JOIN comments c ON [p.id](http://p.id/) = c.photo\_id  
JOIN users u ON c.user\_id = [u.id](http://u.id/)  
JOIN (  
    SELECT photo\_id, COUNT(\*) AS comment\_count  
    FROM comments  
    GROUP BY photo\_id  
) pc ON [p.id](http://p.id/) = pc.photo\_id;

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**6) For each tag, show the tag name and the number of photos associated with that tag. Rank the tags by the number of photos in descending order.**

SELECT t.tag\_name, COUNT(pt.photo\_id) AS photo\_count  
FROM tags t  
LEFT JOIN photo\_tags pt ON [t.id](http://t.id/) = pt.tag\_id  
GROUP BY t.tag\_name  
ORDER BY photo\_count DESC;

**7) List the usernames of users who have posted photos along with the count of photos they have posted. Rank them by the number of photos in descending order.**

SELECT u.username, COUNT([p.id](http://p.id/)) AS photo\_count  
FROM users u  
LEFT JOIN photos p ON [u.id](http://u.id/) = p.user\_id  
GROUP BY u.username  
ORDER BY photo\_count DESC;

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**8) Display the username of each user along with the creation date of their first posted photo and the creation date of their next posted photo.**

SELECT u.username, MIN(p.created\_at) AS first\_posted, LEAD(p.created\_at) OVER (PARTITION BY p.user\_id ORDER BY p.created\_at) AS next\_posted  
FROM users u  
LEFT JOIN photos p ON [u.id](http://u.id/) = p.user\_id  
GROUP BY u.username;

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**9) For each comment, show the comment text, the username of the commenter, and the comment text of the previous comment made on the same photo.**

SELECT c1.comment\_text AS comment, u.username AS commenter, c2.comment\_text AS previous\_comment  
FROM comments c1  
JOIN users u ON c1.user\_id = [u.id](http://u.id/)  
LEFT JOIN comments c2 ON c1.photo\_id = c2.photo\_id AND c1.created\_at > c2.created\_at  
ORDER BY c1.photo\_id, c1.created\_at;

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**10) Show the username of each user along with the number of photos they have posted and the number of photos posted by the user before them and after them, based on the creation date.**

Not able to answer.

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