Instagram User Analytics

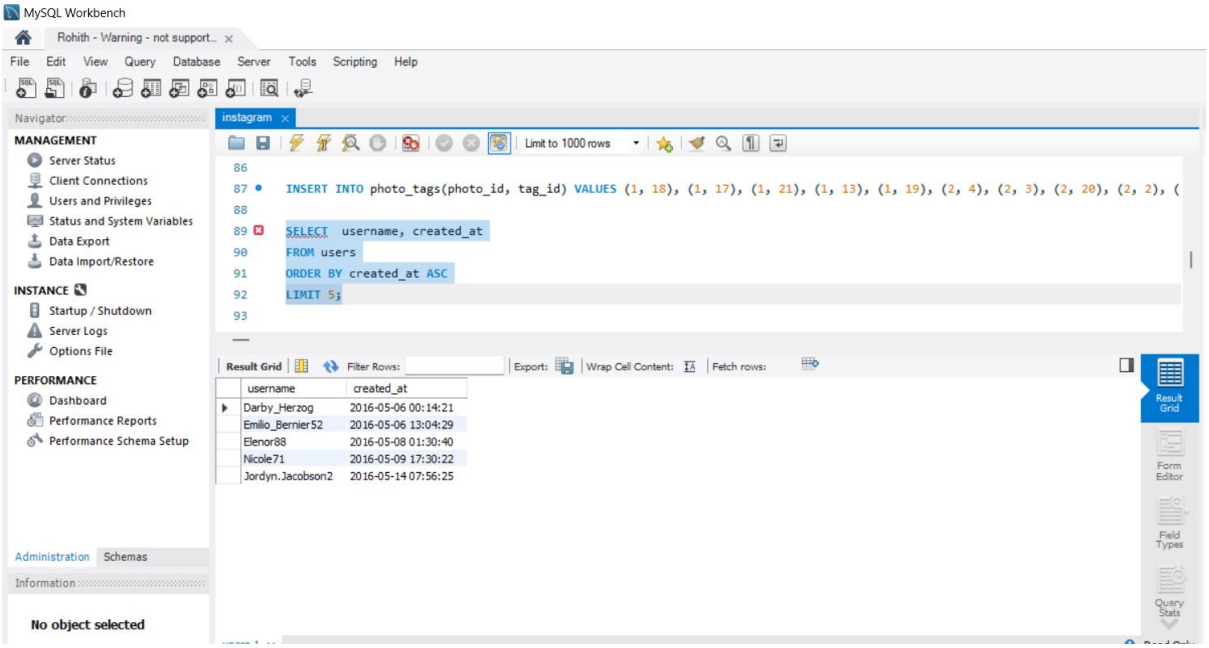
Install MySQL workbench and then import the Given Database.

SQL Tasks :

A) Marketing Analysis:

Loyal User Reward: The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.

Your Task: Identify the five oldest users on Instagram from the provided database.



SELECT username, created_at

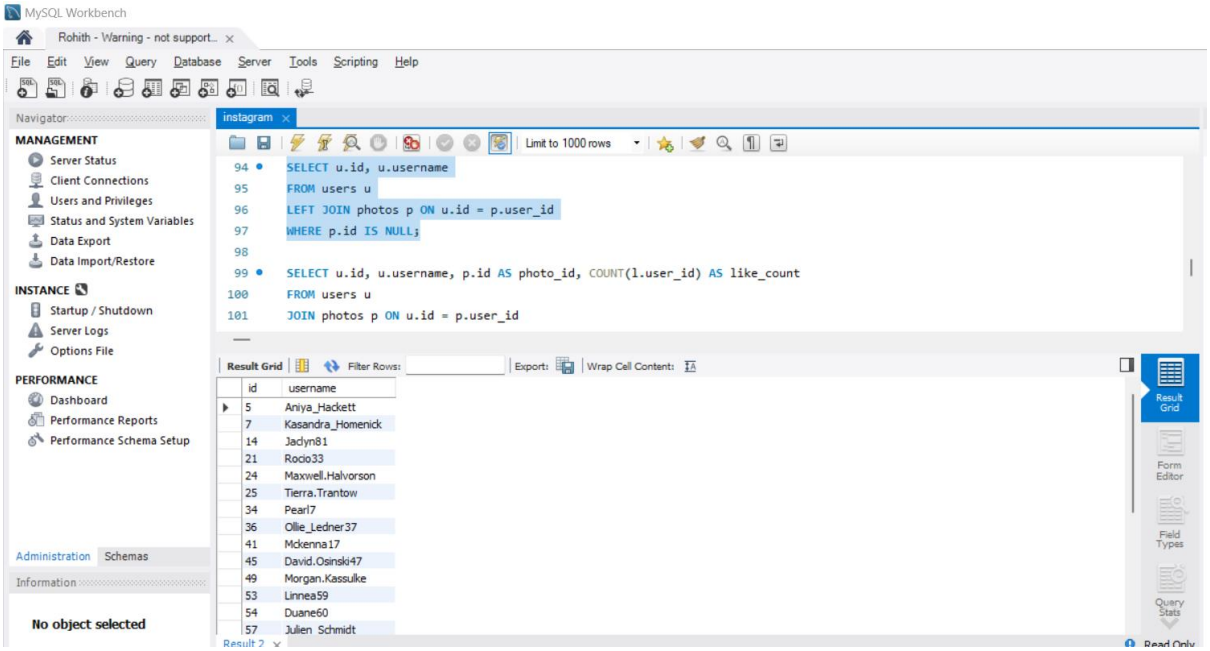
FROM users

ORDER BY created_at ASC

LIMIT 5;

B) Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails.

Your Task: Identify users who have never posted a single photo on Instagram.



SELECT u.id, u.username

FROM users u

LEFT JOIN photos p ON u.id = p.user_id

WHERE p.id IS NULL;

3) Contest Winner Declaration: The team has organized a contest where the user with the most likes on a single photo wins.

Your Task: Determine the winner of the contest and provide their details to the team.

SELECT u.id, u.username, p.id AS photo_id, COUNT(l.user_id) AS like_count

FROM users u

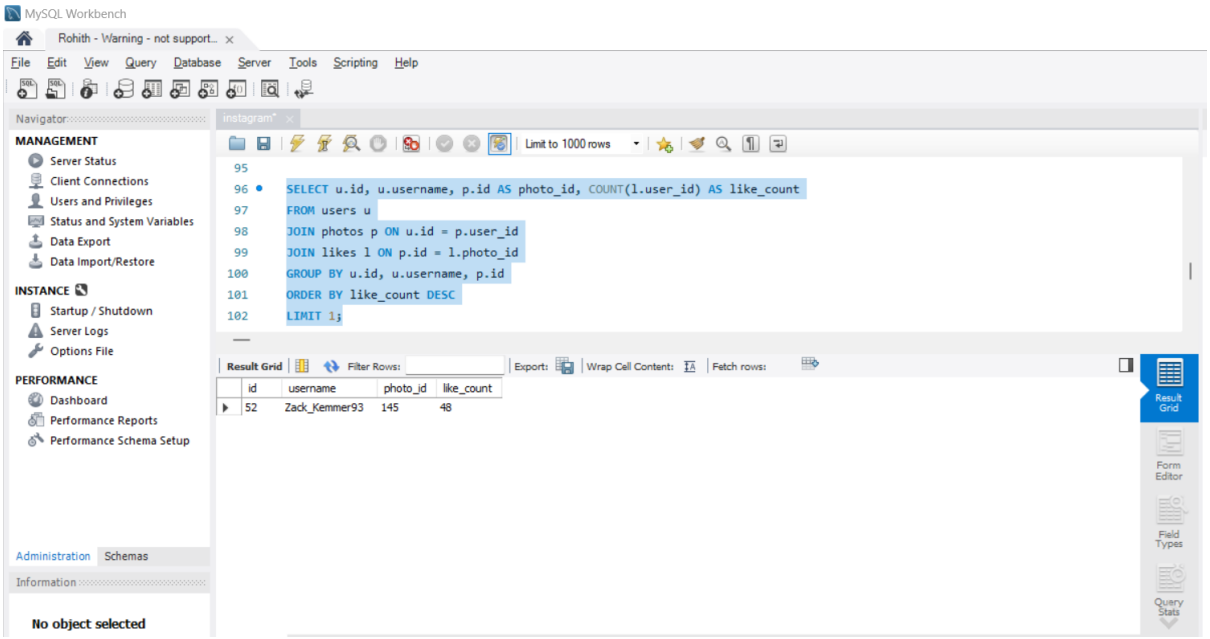
JOIN photos p ON u.id = p.user_id

JOIN likes l ON p.id = l.photo_id

GROUP BY u.id, u.username, p.id

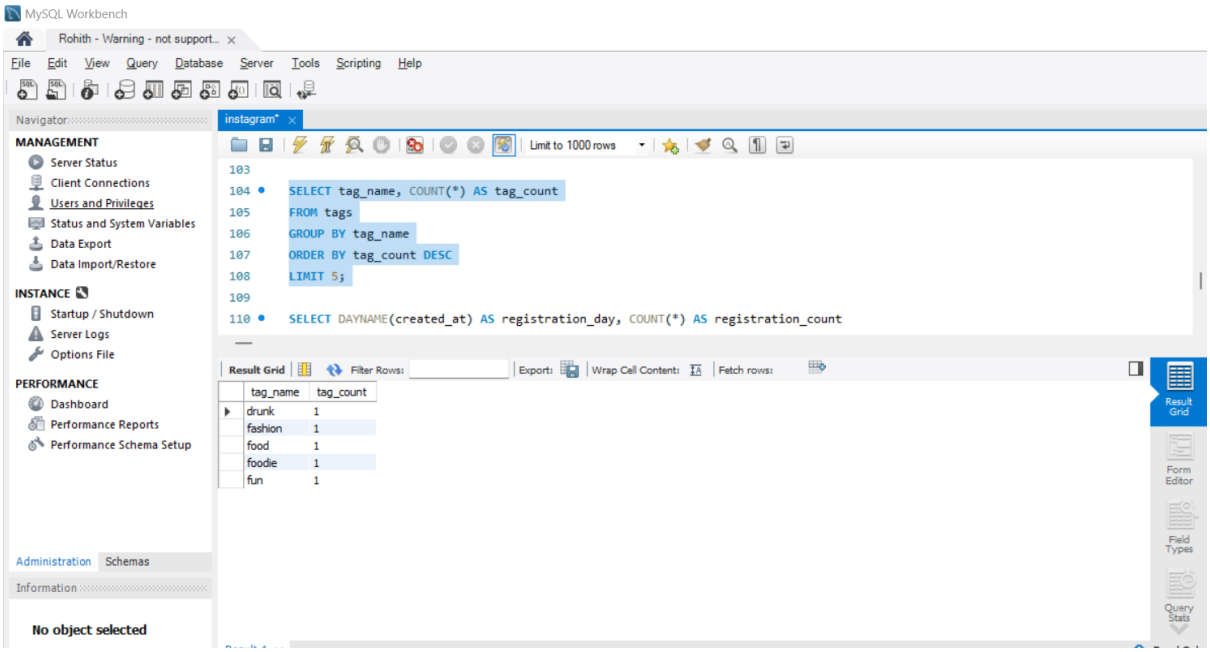
ORDER BY like_count DESC

LIMIT 1;



4) Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

Your Task: Identify and suggest the top five most commonly used hashtags on the platform.



SELECT tag_name, COUNT(*) AS tag_count

FROM tags

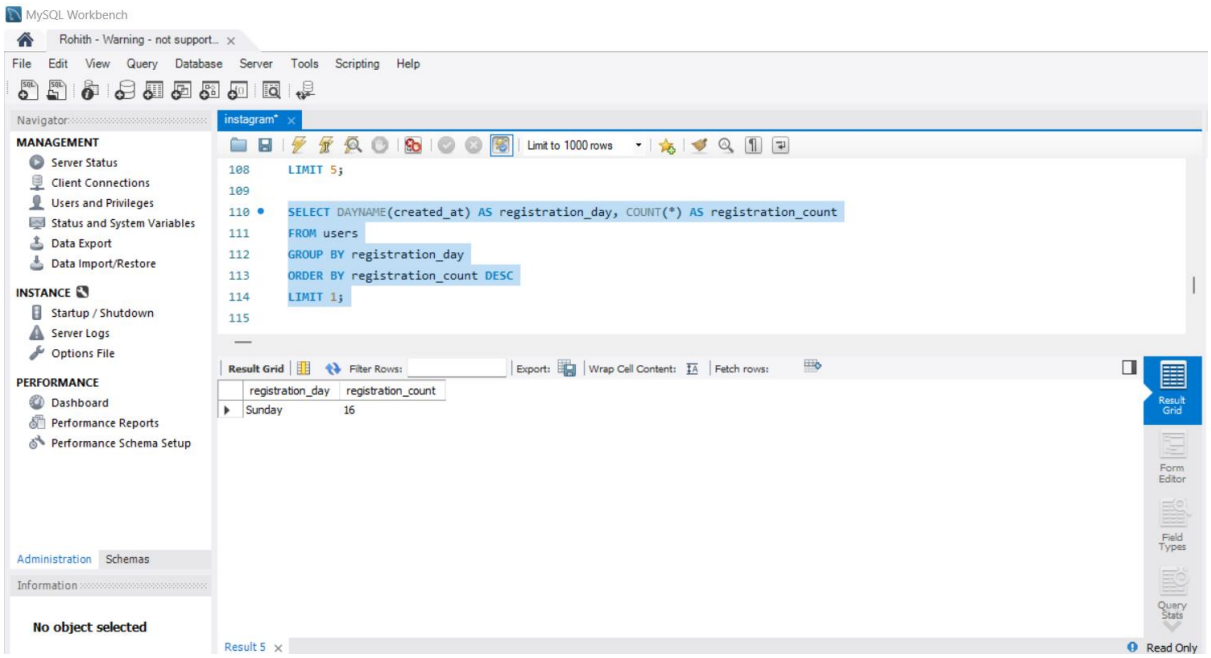
GROUP BY tag_name

ORDER BY tag_count DESC

LIMIT 5;

5) Ad Campaign Launch: The team wants to know the best day of the week to launch ads.

Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.



SELECT DAYNAME(created_at) AS registration_day, COUNT(*) AS registration_count

FROM users

GROUP BY registration_day

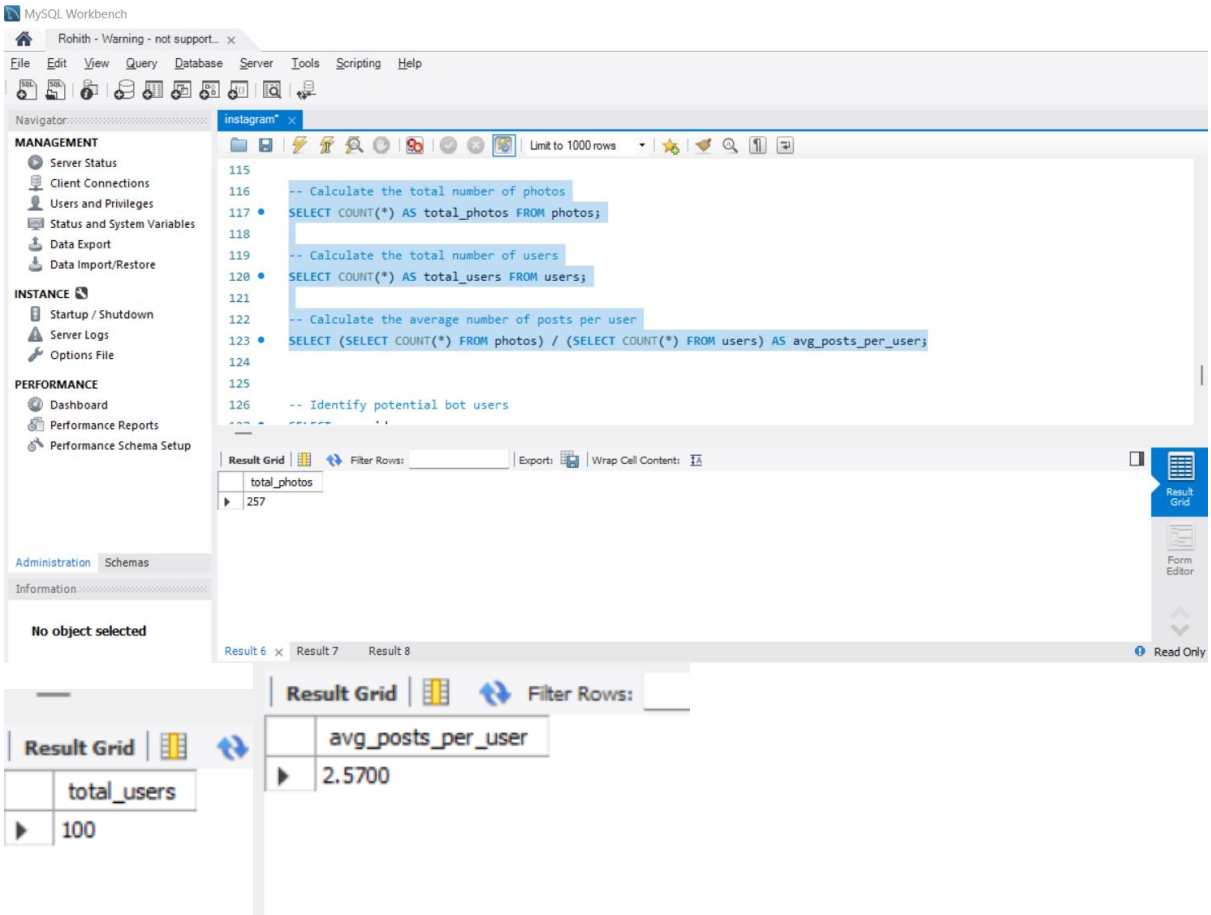
ORDER BY registration_count DESC

LIMIT 1;

B) Investor Metrics:

1.User Engagement: Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.

Your Task: Calculate the average number of posts per user on Instagram. Also, provide the total number of photos on Instagram divided by the total number of users.



-- Calculate the total number of photos

SELECT COUNT(*) AS total_photos FROM photos;

-- Calculate the total number of users

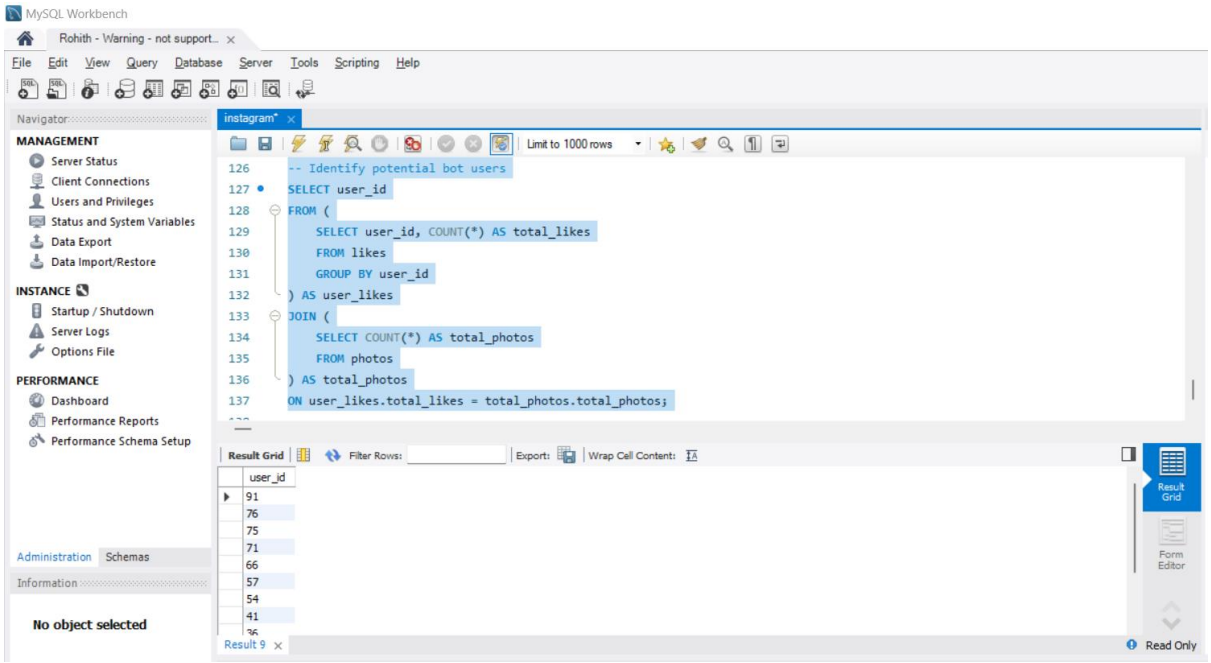
SELECT COUNT(*) AS total_users FROM users;

-- Calculate the average number of posts per user

SELECT (SELECT COUNT(*) FROM photos) / (SELECT COUNT(*) FROM users) AS avg_posts_per_user;

2.Bots & Fake Accounts: Investors want to know if the platform is crowded with fake and dummy accounts.

Your Task: Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.




```
-- Identify potential bot users
SELECT user_id
FROM (
    SELECT user_id, COUNT(*) AS total_likes
    FROM likes
    GROUP BY user_id
) AS user_likes
JOIN (
    SELECT COUNT(*) AS total_photos
    FROM photos
) AS total_photos
ON user_likes.total_likes = total_photos.total_photos;
```