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Instagram User Analytics

Project Description

The project at hand is to carry out a user analysis for Instagram, a well-known social media site. My responsibility as a member of the product team is to offer the management team insights and useful information to aid in decision-making. We look for business insights that can be applied by numerous teams across the organisation, including marketing, product development, and customer experience, by tracking and analysing user engagement and interactions with the Instagram platform.

Approach :

A data set pertaining to users is provided in the project. Copy the data set into MySQL Workbench after taking the data set. by building a MySQL database. Creating the necessary tables and adding the necessary values to those tables. addressing the project-related challenges with the help of SQL bases.

Tech-Stack Used

MYSQL WORKBENCH 8.0 CE

MYSQL database has been used throughout this project. Writing the queries and configuring the query to get the desired output as per questions mentioned in the project. And the purpose of using this tool is because only MySQL is required for me to figure out the problems related to this project.

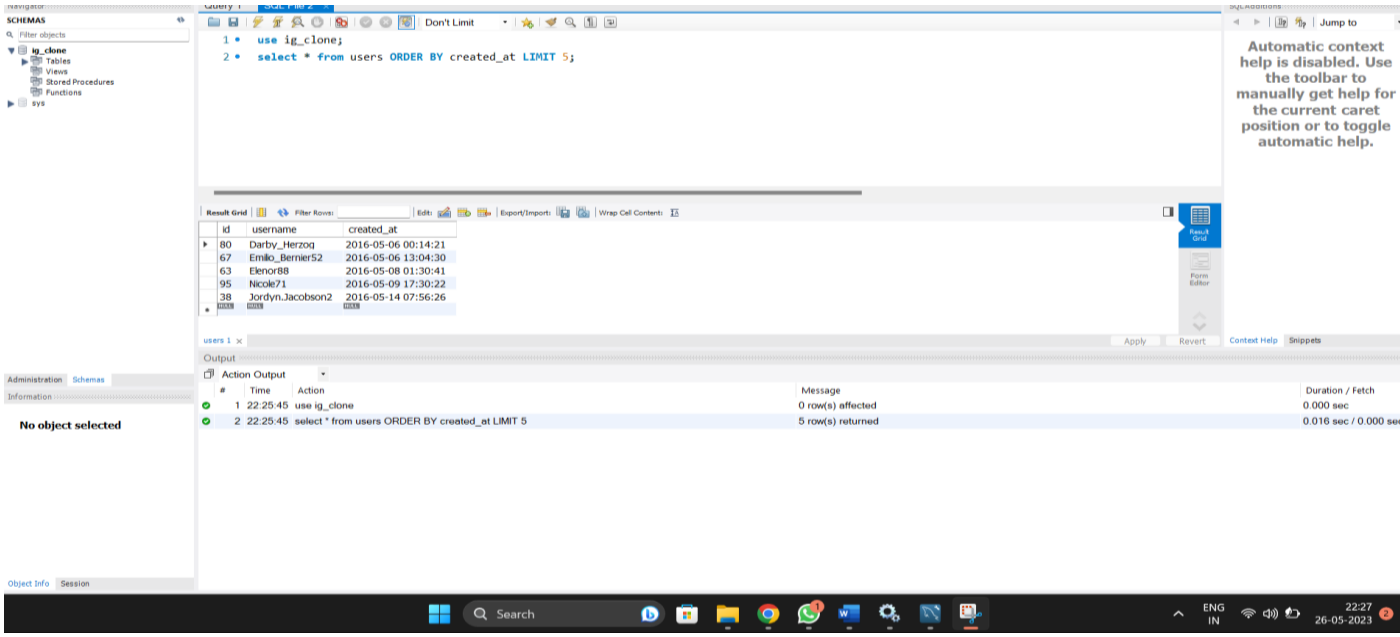
Answers

A) **Marketing:** The marketing team wants to launch some campaigns, and they need your help with the following

1. **Rewarding Most Loyal Users:** People who have been using the platform for the longest time.
   Your Task: Find the 5 oldest users of the Instagram from the database provided

   use ig_clone;

   select * from users ORDER BY created_at LIMIT 5;



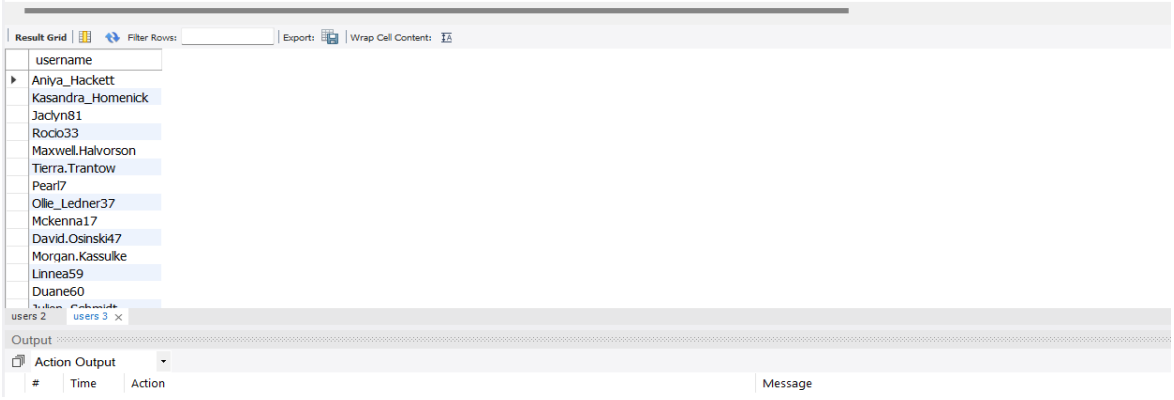
2. **Remind Inactive Users to Start Posting:** By sending them promotional emails to post their 1st photo.
   Your Task: Find the users who have never posted a single photo on Instagram

SELECT username

FROM users

WHERE id NOT IN (SELECT user_id FROM photos);

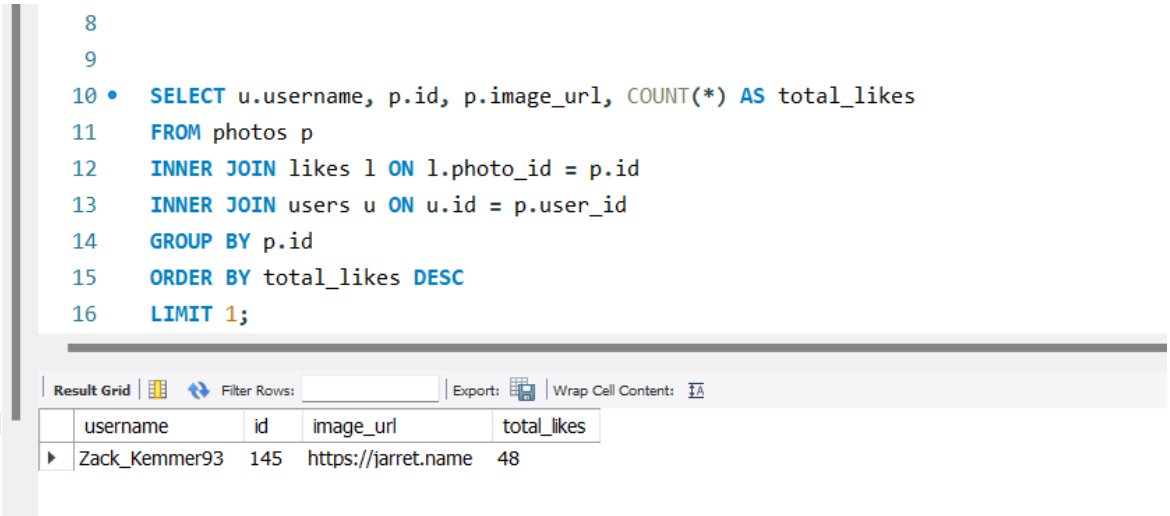
```
use ig_clone;
select * from users ORDER BY created_at LIMIT 5;

SELECT username
FROM users
WHERE id NOT IN (SELECT user_id FROM photos);
```



username
Aniya_Hackett
Kasandra_Homenick
Jaclyn81
Rocio33
Maxwell.Halvorson
Tierra.Trantow
Pearl7
Ollie_Ledner37
Mckenna17
David.Osinski47
Morgan.Kassulke
Linnea59
Duane60

3. **Declaring Contest Winner:** The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner. Your Task: Identify the winner of the contest and provide their details to the team

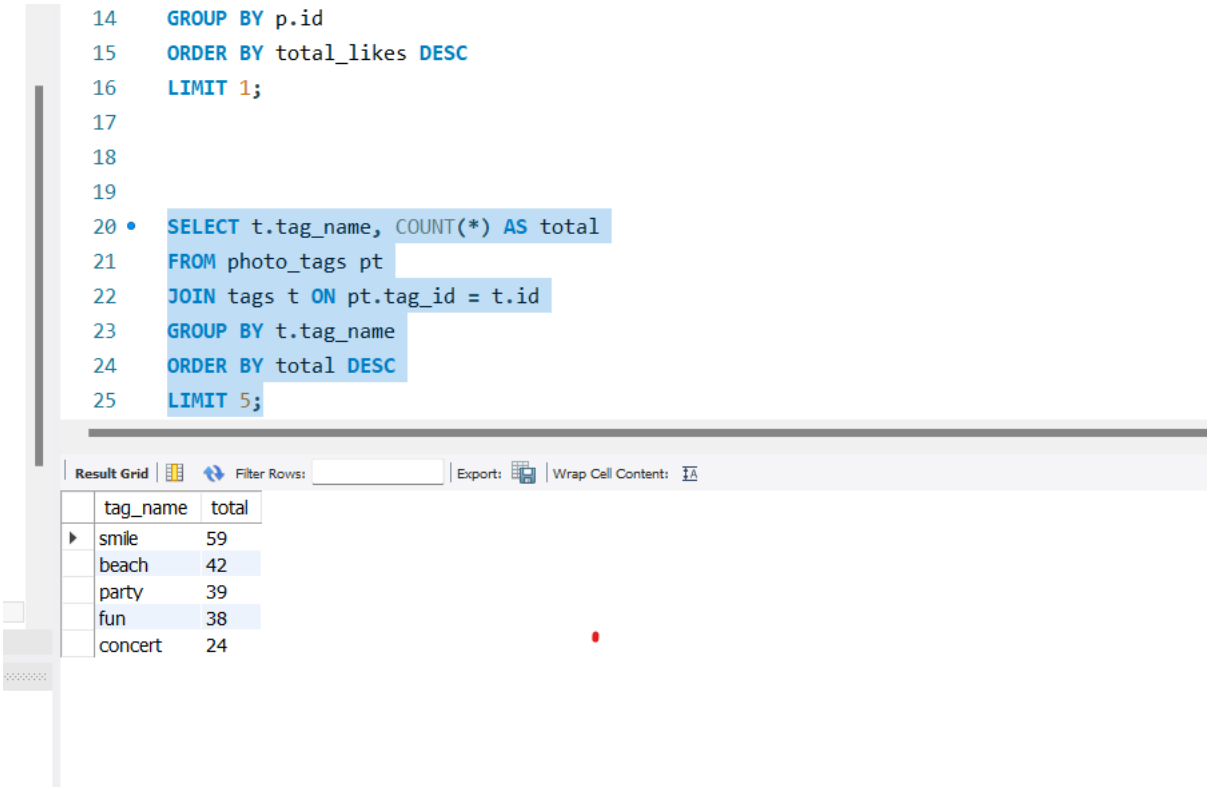
```
SELECT u.username, p.id, p.image_url, COUNT(*) AS total_likes
FROM photos p
INNER JOIN likes l ON l.photo_id = p.id
INNER JOIN users u ON u.id = p.user_id
GROUP BY p.id
ORDER BY total_likes DESC
LIMIT 1;
```



username	id	image_url	total_likes
Zack_Kemmer93	145	https://jarret.name	48

4. **Hashtag Researching:** A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.
   Your Task: Identify and suggest the top 5 most commonly used hashtags on the platform

```
SELECT t.tag_name, COUNT(*) AS total
FROM photo_tags pt
JOIN tags t ON pt.tag_id = t.id
GROUP BY t.tag_name
ORDER BY total DESC
LIMIT 5;
```



5. **Launch AD Campaign:** The team wants to know, which day would be the best day to launch ADs.
   Your Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

```
SELECT DAYNAME(created_at) AS day, COUNT(*) AS total
FROM users
GROUP BY day
ORDER BY total DESC
LIMIT 2;
```

```
11    FROM photos p
12    INNER JOIN likes l ON l.photo_id = p.id
13    INNER JOIN users u ON u.id = p.user_id
14    GROUP BY p.id
15    ORDER BY total_likes DESC
16    LIMIT 1;
17
18 •  SELECT DAYNAME(created_at) AS day, COUNT(*) AS total
19    FROM users
20    GROUP BY day
21    ORDER BY total DESC
22    LIMIT 2;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

day	total
Thursday	16
Sunday	16

B) Investor Metrics: Our investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds

1. **User Engagement:** Are users still as active and post on Instagram or they are making fewer posts
   Your Task: Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

   SELECT COUNT(*) / (SELECT COUNT(*) FROM users) AS avg

   FROM photos;

```
17
18 •  SELECT DAYNAME(created_at) AS day, COUNT(*) AS total
19    FROM users
20    GROUP BY day
21    ORDER BY total DESC
22    LIMIT 2;
23
24 •  SELECT COUNT(*) / (SELECT COUNT(*) FROM users) AS avg
25    FROM photos;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

avg
2.5700

2. **Bots & Fake Accounts:** The investors want to know if the platform is crowded with fake and dummy accounts
   Your Task: Provide data on users (bots) who have liked every single photo on the site (since any normal user would not be able to do this).

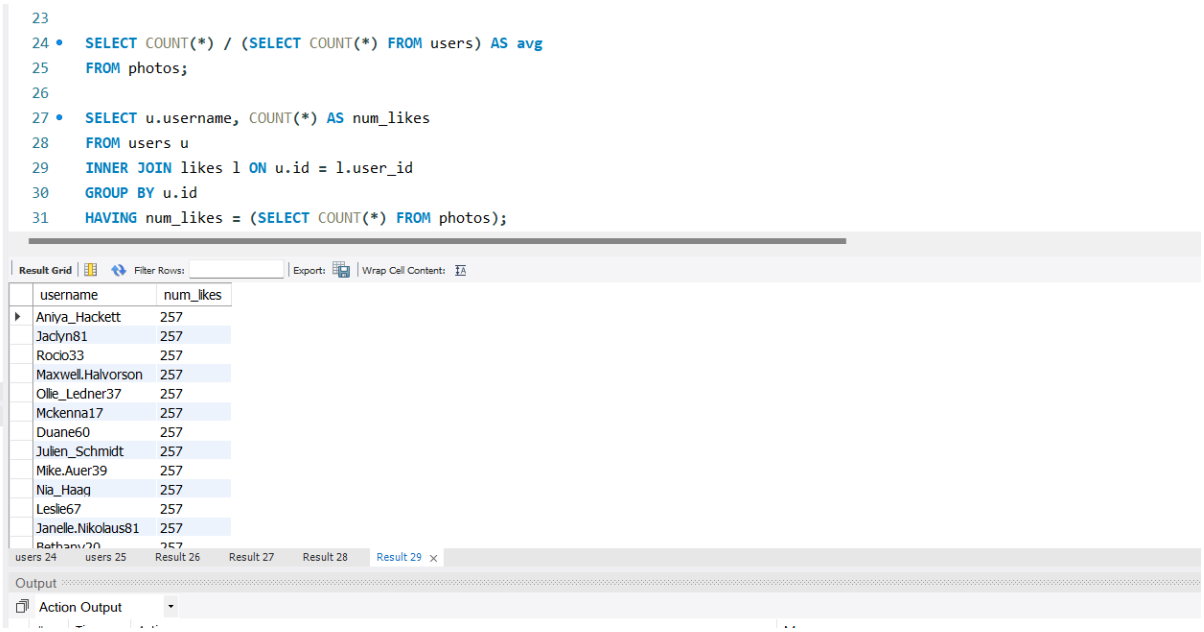
   SELECT u.username, COUNT(*) AS num_likes

   FROM users u

   INNER JOIN likes l ON u.id = l.user_id

   GROUP BY u.id

   HAVING num_likes = (SELECT COUNT(*) FROM photos);



INSIGHTS:

We discover more about how users interact with the Instagram platform by monitoring their actions and interactions. Understanding the most used features, the preferred content kinds, and the frequency of user interactions like likes, comments, and shares are all part of this. User behaviour analysis can be used to identify which features users value most and use most frequently.

RESULT:

Through this project, I was able to achieve my objectives and learn how to clean data using MySQL. Additionally, how to connect with database and adjust queries to get the necessary results.