Project 2

INSTAGRAM USER ANALYTICS

Project Description:

Instagram User Analytics involves analyzing data related to user's activities on the Instagram platform to gain insights into their behavior, preferences and engagement. The purpose is to understand user iteractions, optimize content strategy and enhance overall performance. The project aims to conduct a comprehensive analysis of Instagram user data for both marketing and investor-related metrics. The focus is on identifying loyal users, encouraging inactive ones, declaring contest winners, suggesting popular hashtags, and providing insights for ad campaign scheduling. Additionally, investor metrics such as user engagement and the presence of bots and fake accounts are evaluated.

Approach:

The approach involves collecting and processing data related to user's interactions including likes, followers, posts, comments, tags using Instagram insights and create a database. Key metrices like engagement rate, follower growth and popular content will be tracked.

1.**Identifying Oldest Users:** Extract user registration dates and identify the five earliest registrations.

2. **Inactive Users:** Filtered users with no posted photos to target for promotional emails.

3. **Contest Winner:** Determined the user with the most likes on a single photo, providing details to the marketing team.

4. **Popular Hashtags:** Analyzed hashtag usage frequency to suggest the top five for the partner brand.

5. **Ad Campaign Timing:** Explored user registration data to determine peak registration day for optimal ad campaign launch.

6. **User Engagement Metrics**: Calculated average posts per user and assessed the overall posting activity.

7. **Bot Detection:** Identified potential bots by flagging users who liked every photo on the platform.

Tech-Stack Used:

MYSQL Workbench 8.0 CE

It is a suitable choice for managing and querying databases, especially if your data is stored in a MYSQL database. MYSQL Workbench is a popular tool for database administration, providing a visual interface for designing, executing SQL queries and managing database connections. Also MYSQL Command Line Client can be used.

Insights:

- Oldest users provide a foundation for loyalty programs.
- Inactive user data informs targeted email campaigns.
- Contest winner data aids in recognizing popular content.
- Top hashtags facilitate effective content strategy.
- Optimal ad campaign timing enhances marketing impact.
- User engagement metrics gauge platform health.
- Bot detection helps maintain platform authenticity.

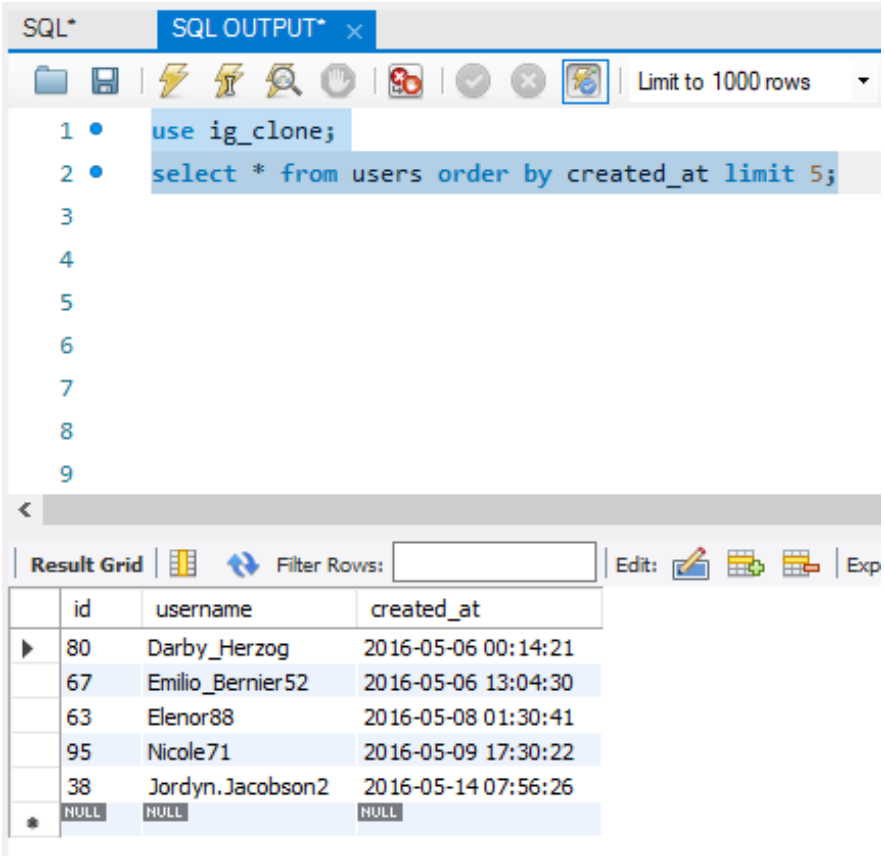
Result:

The project successfully provided actionable insights for both marketing and investor perspectives. It empowered the marketing team to reward loyalty, engage inactive users, and optimize content strategies. For investors, the analysis delivered valuable metrics to assess user engagement and identify potential bot presence, contributing to informed decision-making and platform integrity.

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.

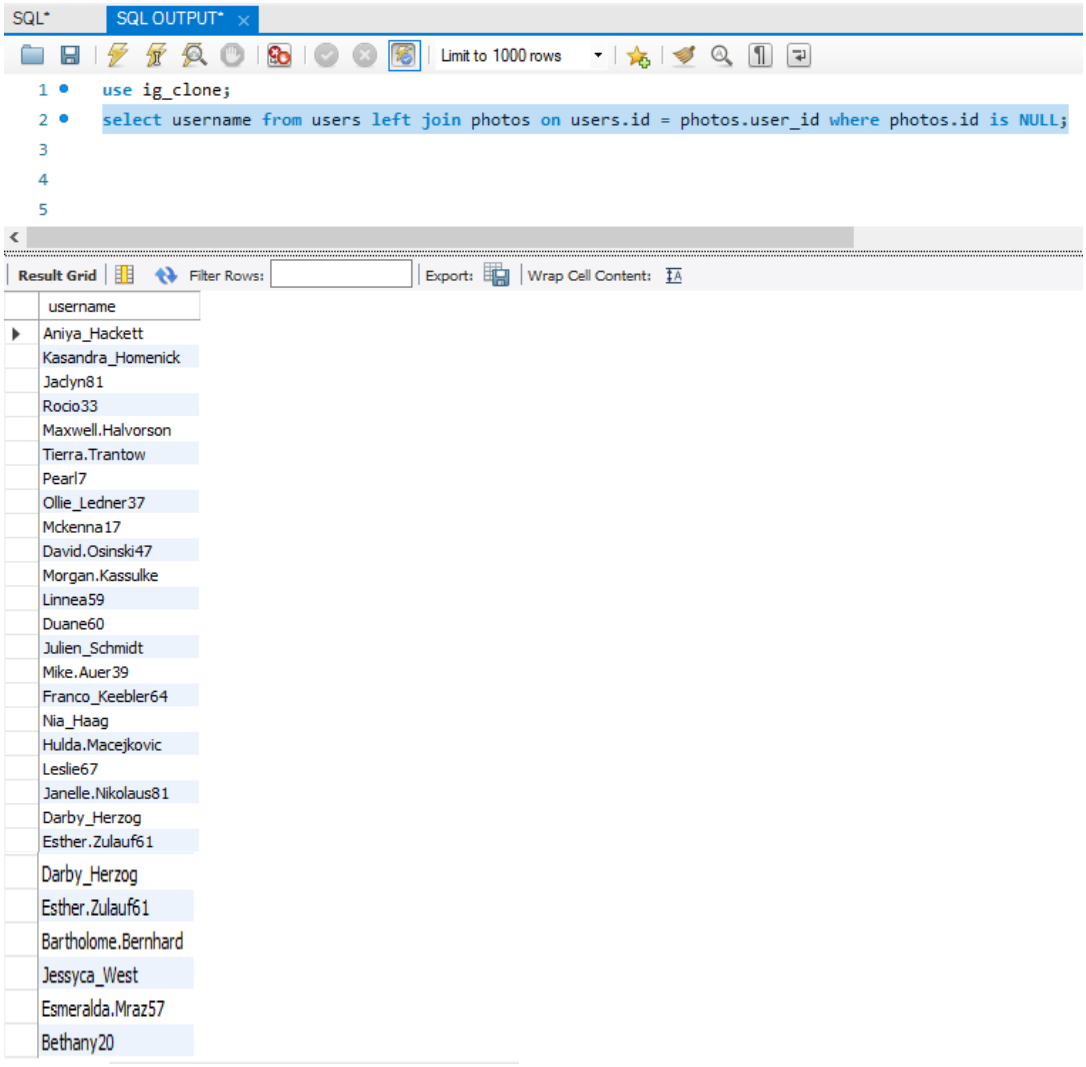
Your Task: Identify the five oldest users on Instagram from the provided database.



id	username	created_at
80	Darby_Herzog	2016-05-06 00:14:21
67	Emilio_Bernier52	2016-05-06 13:04:30
63	Elenor88	2016-05-08 01:30:41
95	Nicole71	2016-05-09 17:30:22
38	Jordyn.Jacobson2	2016-05-14 07:56:26
NULL	NULL	NULL

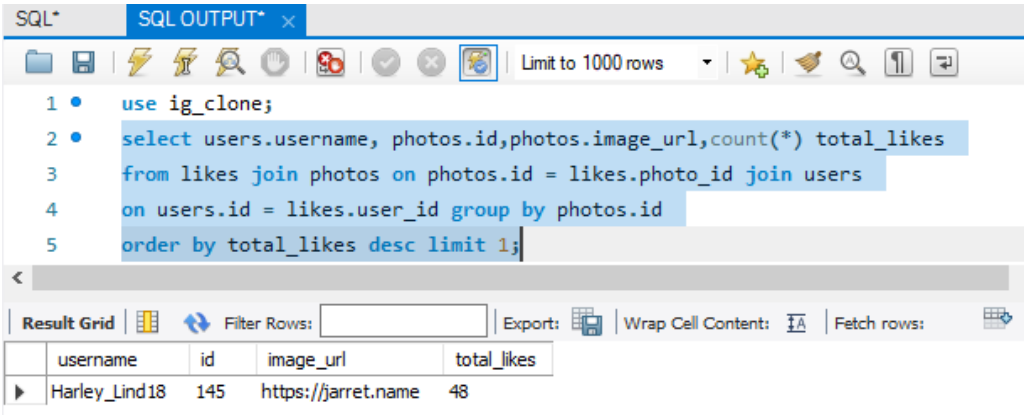
Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails.

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



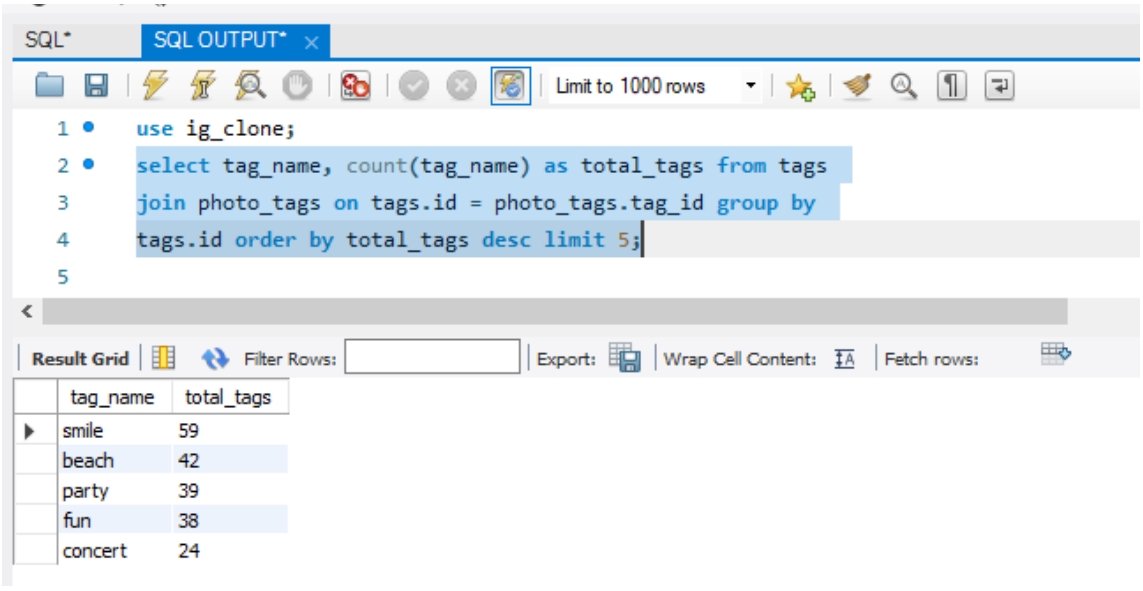
Contest Winner Declaration: The team has organized a contest where the user with the most likes on a single photo wins.

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



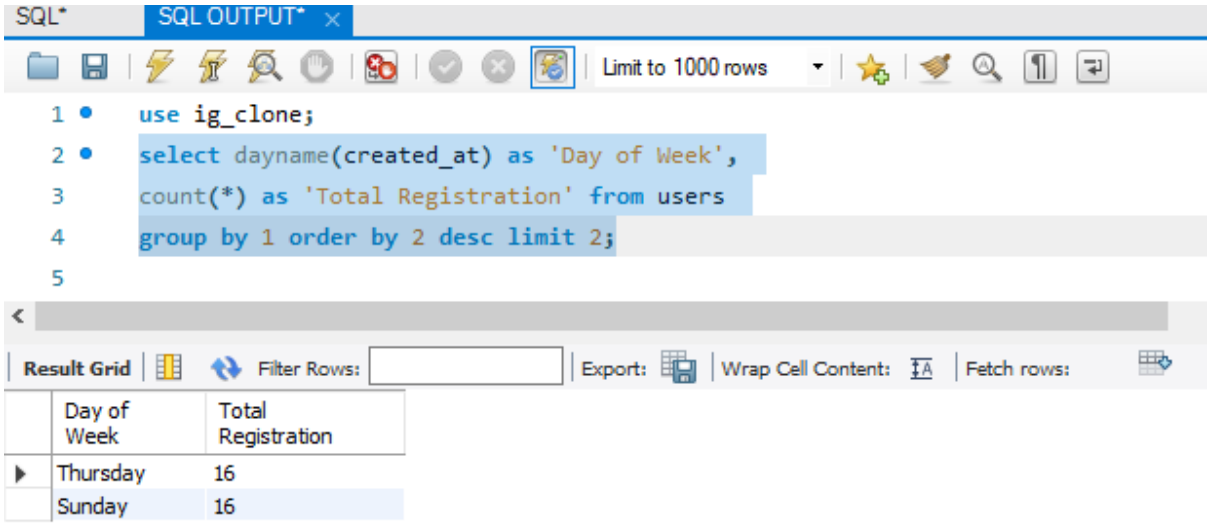
Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

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

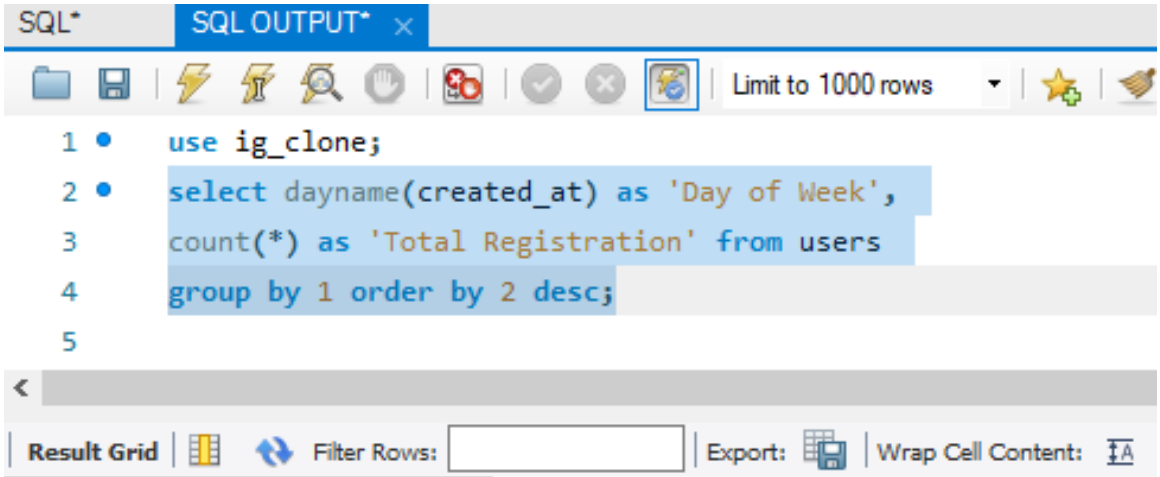


Ad Campaign Launch: The team wants to know the best day of the week to launch ads.

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



Day of Week	Total Registration
Thursday	16
Sunday	16

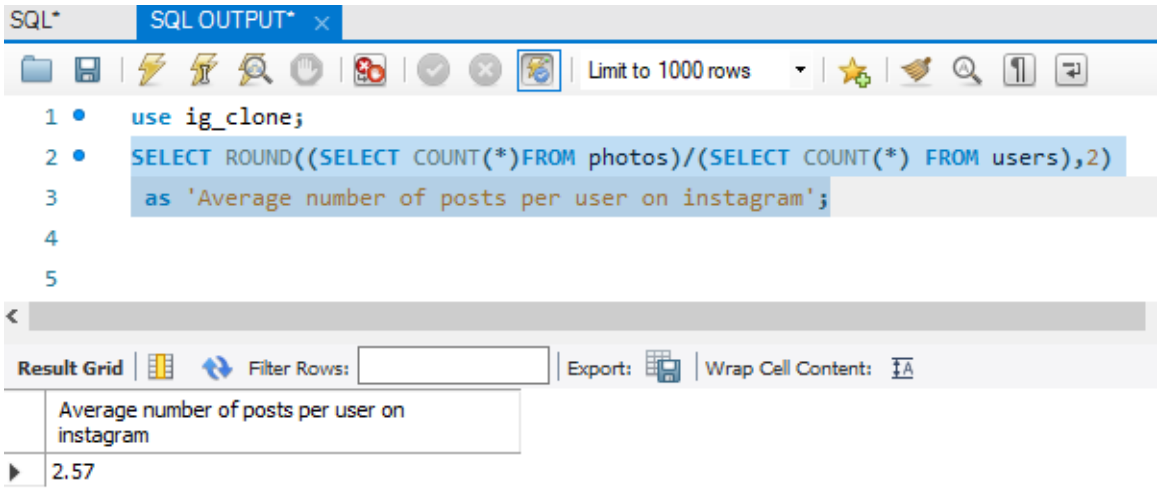


Day of Week	Total Registration
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B) Investor Metrics:

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.

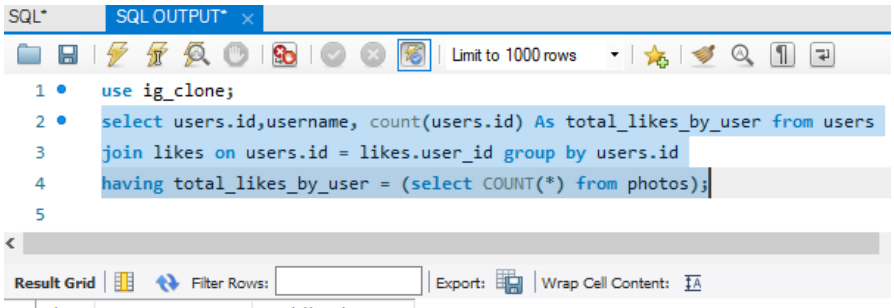


```
use ig_clone;
SELECT ROUND((SELECT COUNT(*)FROM photos)/(SELECT COUNT(*) FROM users),2)
 as 'Average number of posts per user on instagram';
```

Average number of posts per user on instagram
2.57

Bots and 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.



```
use ig_clone;
select users.id,username, count(users.id) As total_likes_by_user from users
join likes on users.id = likes.user_id group by users.id
having total_likes_by_user = (select COUNT(*) from photos);
```

id	username	total_likes_by_user
5	Aniya_Hackett	257
14	Jadyn81	257
21	Rocio33	257
24	Maxwell.Halvorson	257
36	Ollie_Ledner37	257
41	Mckenna17	257
54	Duane60	257
57	Julien_Schmidt	257
66	Mike.Auer39	257
71	Nia_Haag	257
75	Leslie67	257
76	Janelle.Nikolaus81	257
91	Bethany20	257