Instagram user analytics

Agenda

- Project Description
- Approach
- Tech-Stack Used
- Insights
- Result

PROJECT DESCRIPTION

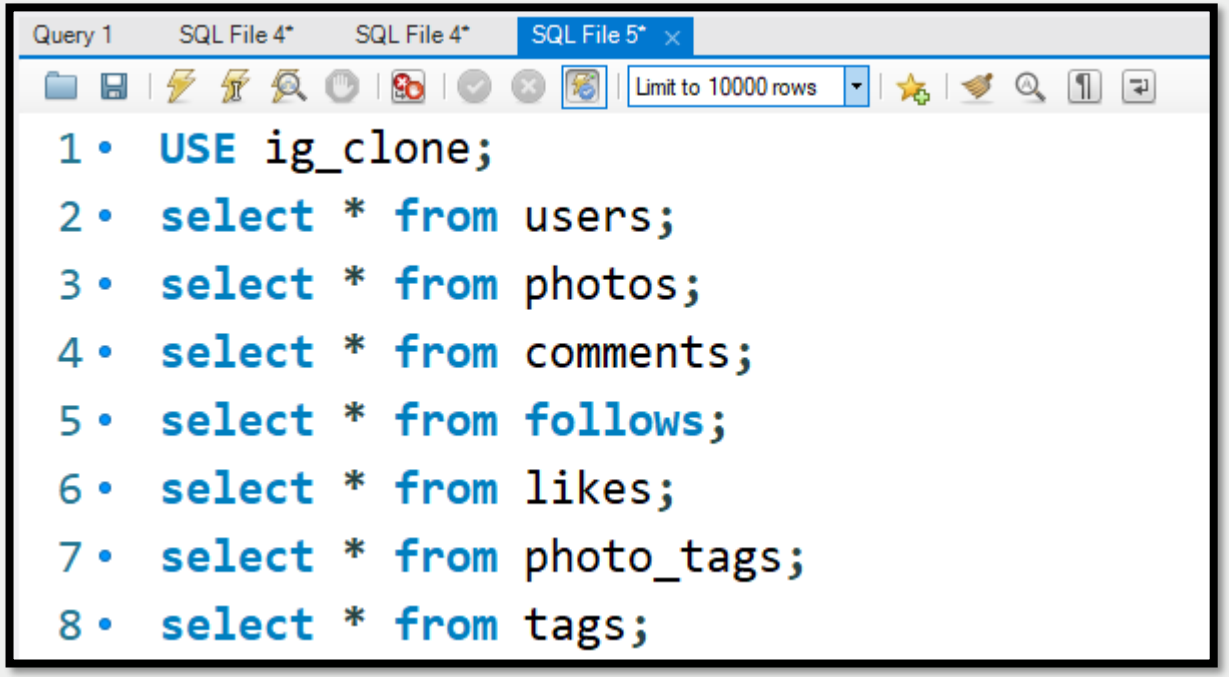
- This project focuses on analyzing user interactions and engagement with the Instagram platform to provide valuable insights to the marketing and investor teams. By leveraging data stored in the database, the goal is to uncover patterns, trends, and anomalies that can inform business decisions, improve user experience, and drive platform growth.
- **Purpose**

1. **Marketing Team**: To identify loyal users, engage inactive users, and determine optimal strategies for campaigns, contests, and partnerships.
2. **Investor Metrics**: To evaluate user engagement, detect potential fake accounts, and assess overall platform health.

APPROACH

1.Set Up the Database:

1. Load the provided database in MySQL Workbench and check the tables to understand the data by using the following queries.



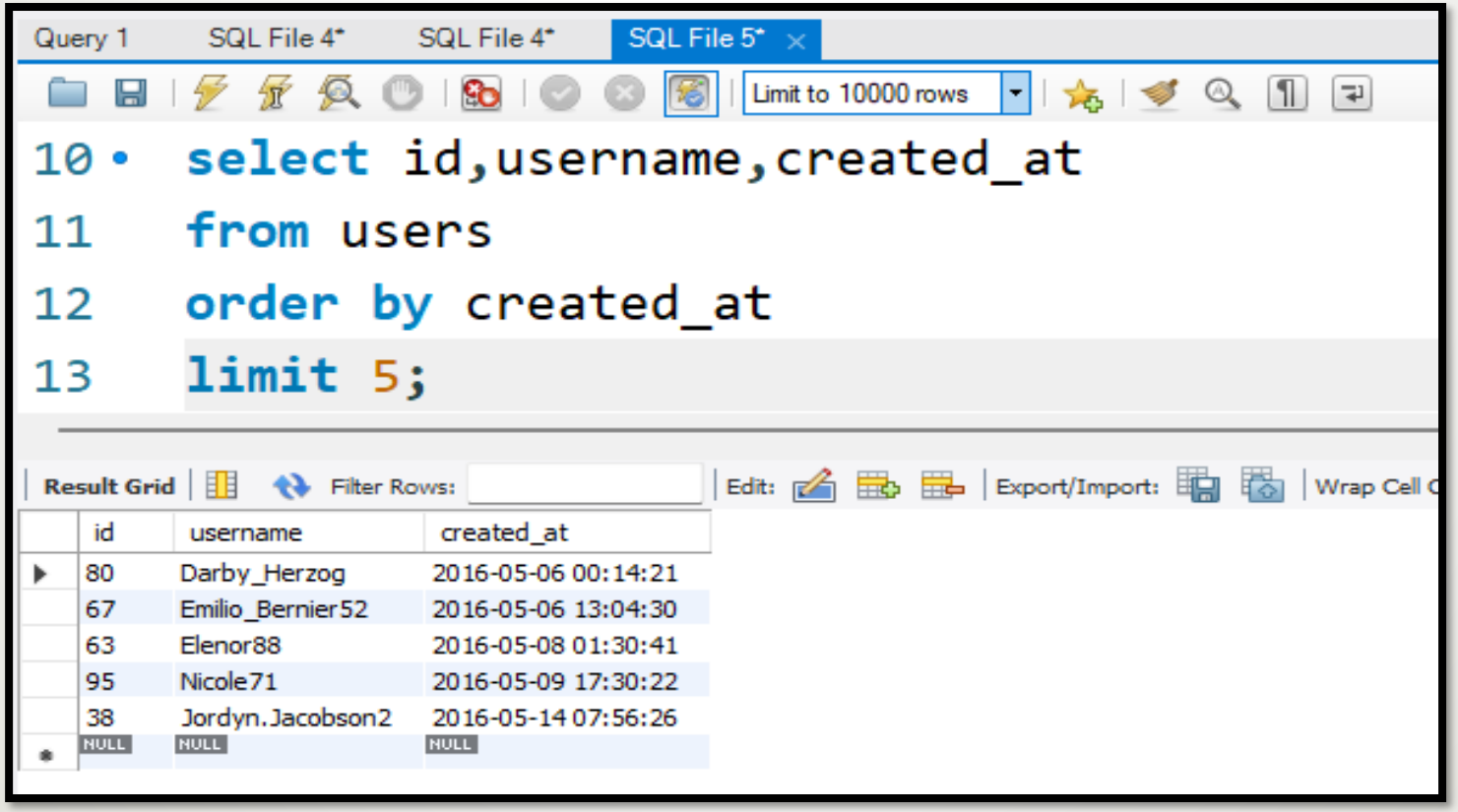
1. Write SQL Queries for the given Questions:

A) Marketing Analysis:

1. 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.

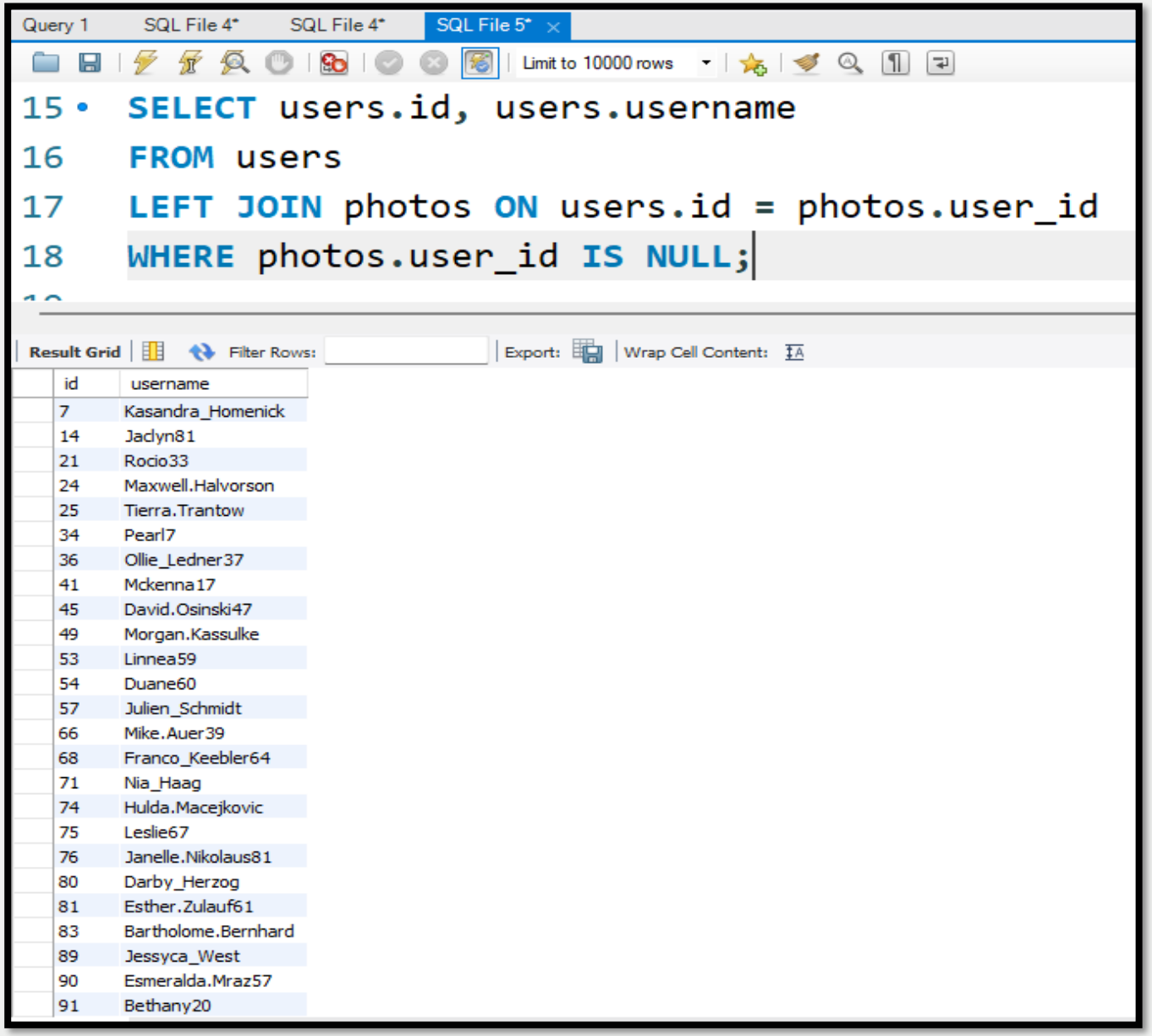
. Your Task: Identify the five oldest users on Instagram from the provided database.

ANS:



2.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.

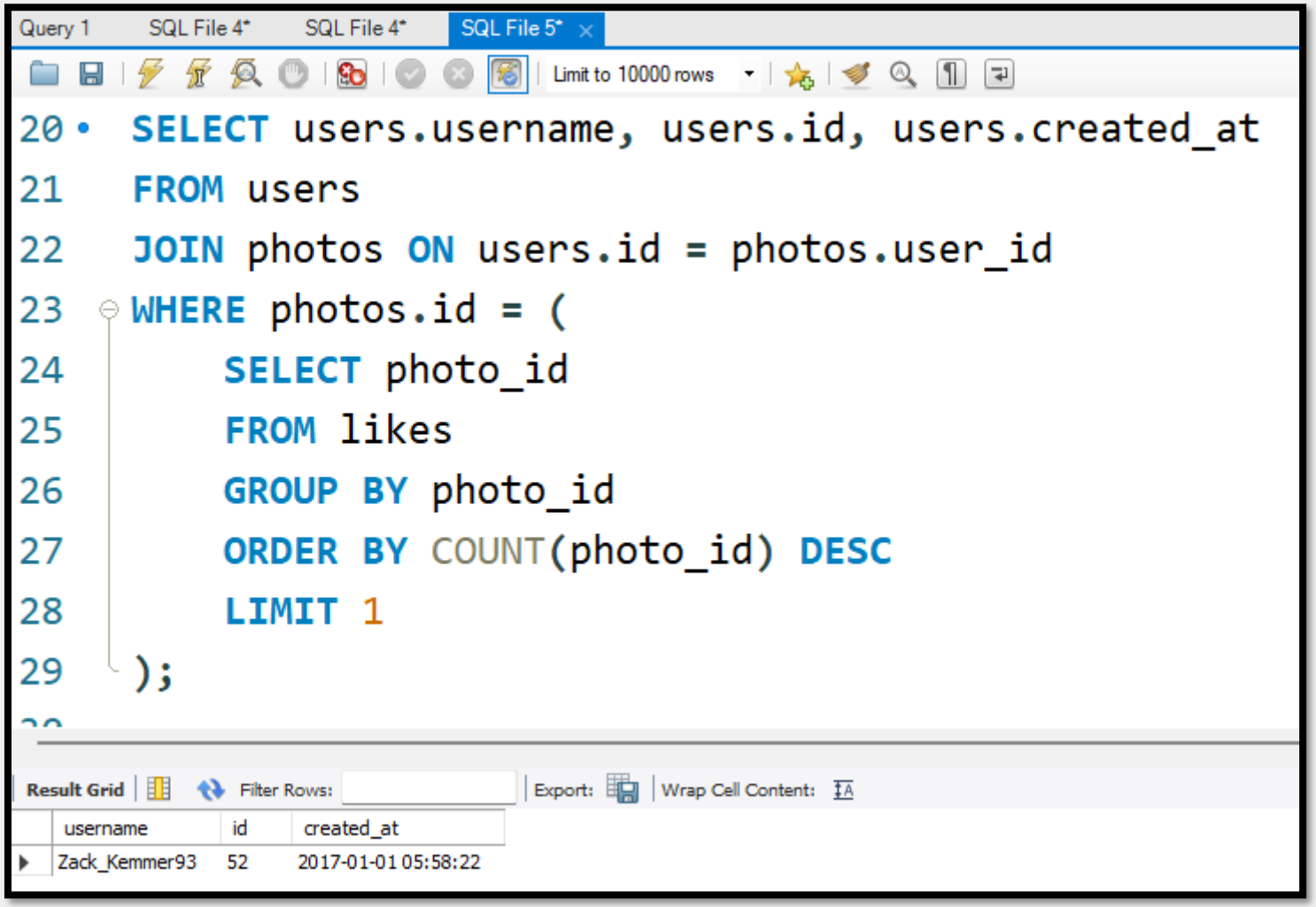


id	username
7	Kasandra_Homenick
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
25	Tierra.Trantow
34	Pearl7
36	Ollie_Ledner37
41	Mckenna17
45	David.Osinski47
49	Morgan.Kassulke
53	Linnea59
54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
68	Franco_Keebler64
71	Nia_Haag
74	Hulda.Macejkovic
75	Leslie67
76	Janelle.Nikolaus81
80	Darby_Herzog
81	Esther.Zulauf61
83	Bartholome.Bernhard
89	Jessyca_West
90	Esmeralda.Mraz57
91	Bethany20

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

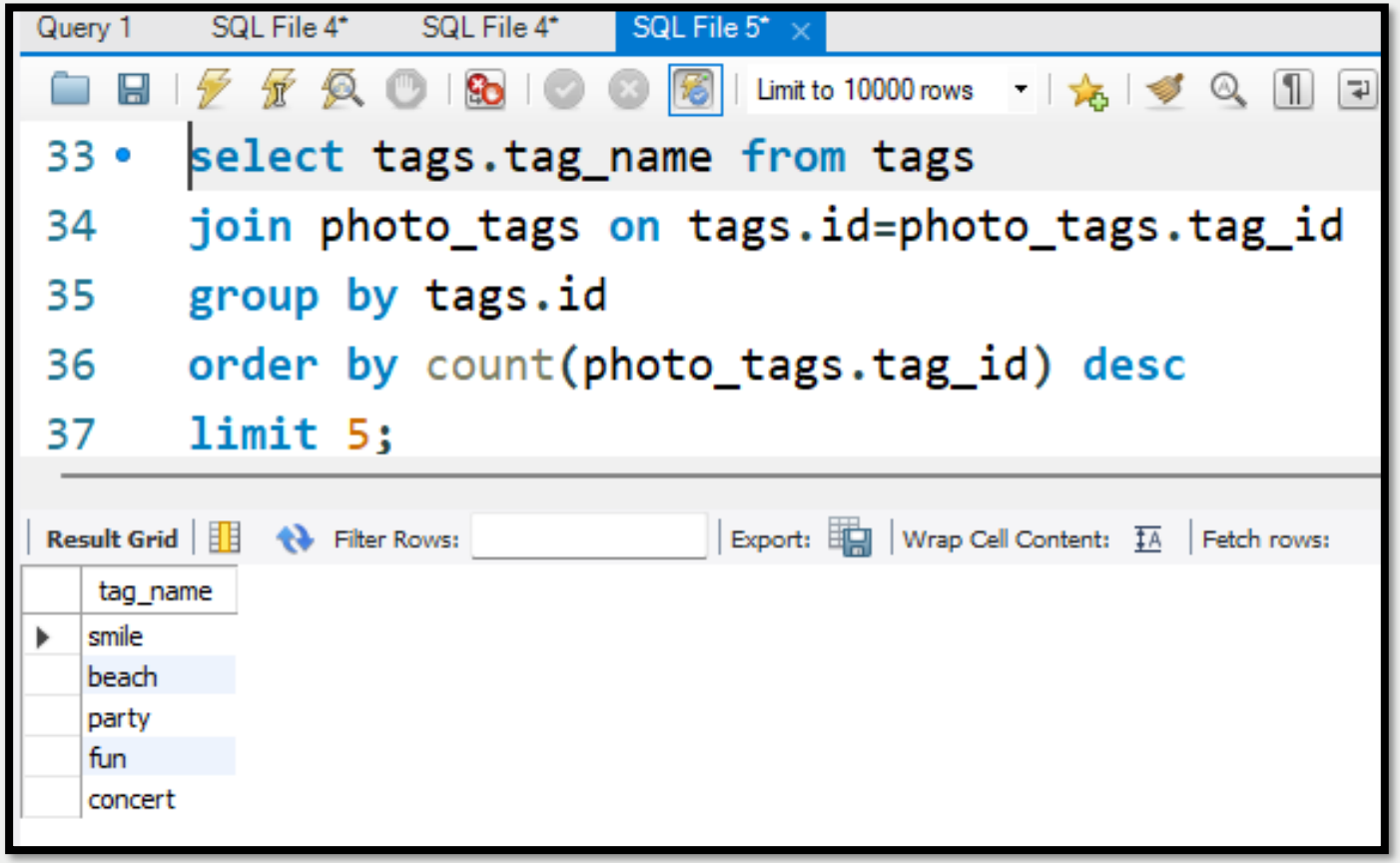
ANS:



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

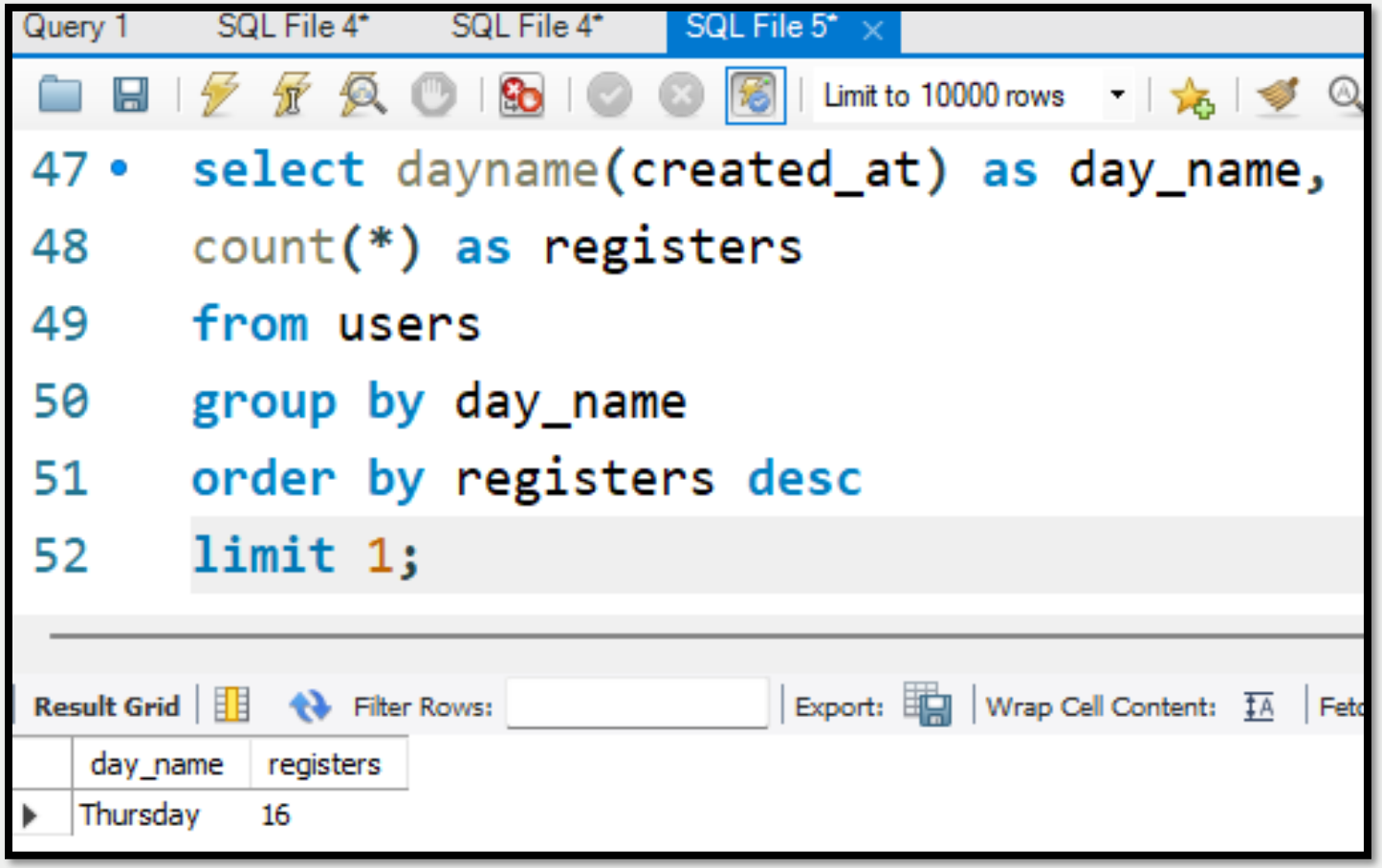
Your Task: Identify and suggest the top five most commonly used hashtags on the platform.

ANS:



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.

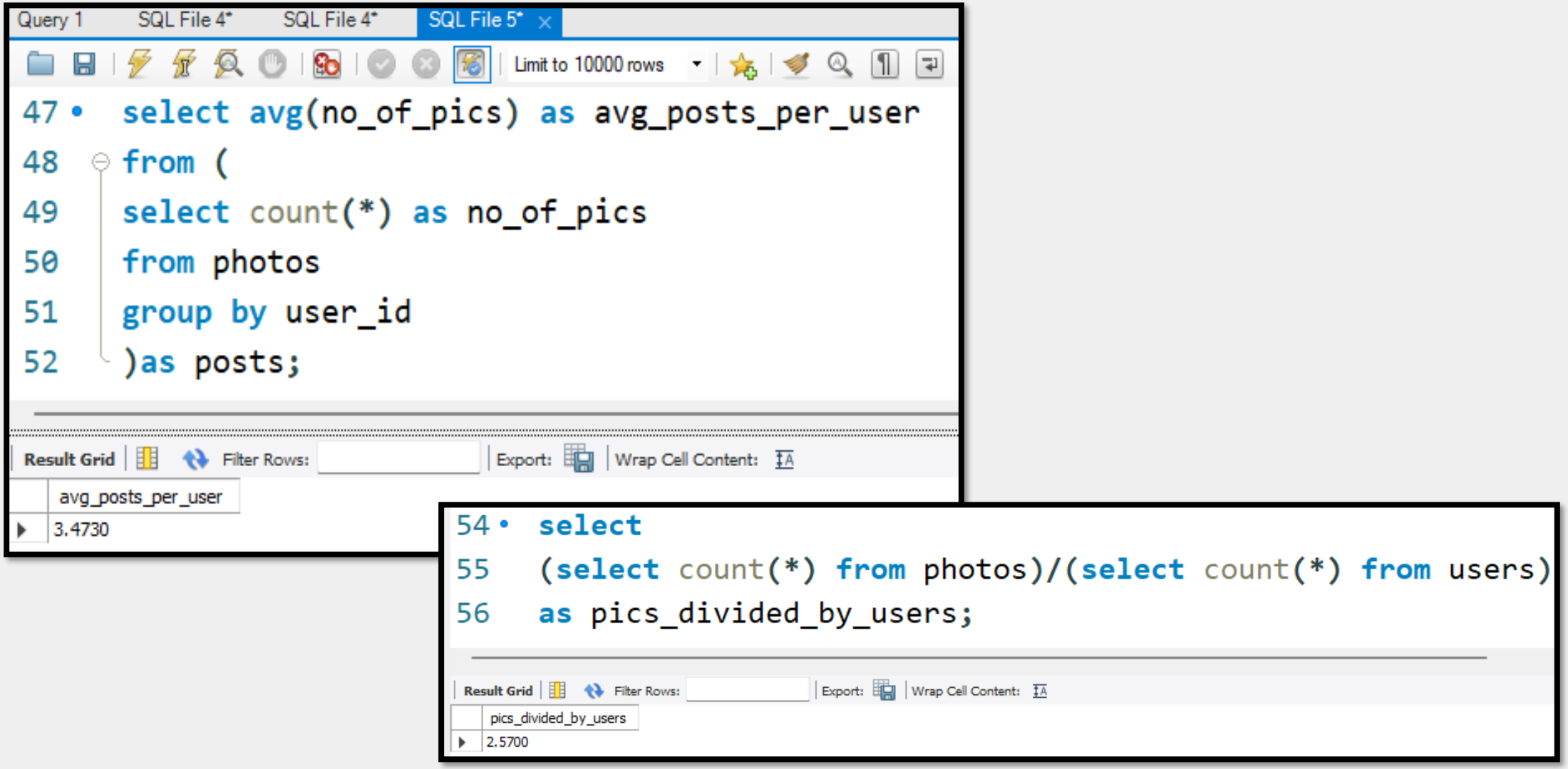
ANS :



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.



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.

```
58 •  select user_id,count(*) as Tot_likes from likes
59    group by user_id
60    having Tot_likes= (select count(*) from photos);
```

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

user_id	Tot_likes
5	257
14	257
21	257
24	257
36	257
41	257
54	257
57	257
66	257
71	257
75	257
76	257
91	257

TECH STACK USED

1.MySQL Workbench

1. **Version**: 8.0
2. **Why I Used It**:
   MySQL Workbench made it super easy to manage the database and run SQL queries. Its simple interface and visual tools helped me analyze the data quickly and efficiently.

2.MySQL Server

1. **Version**: 8.0
2. **Why I Used It**:
   MySQL Server is reliable and works smoothly with MySQL Workbench. It handled all the data without any issues, making the whole process hassle-free.

3.Operating System

1. **Used**: Windows 11
2. **Why I Used It**:
   I worked on Windows 11 because it’s easy to set up and works well with the tools I needed for the project.

INSIGHTS

While working on the project, I gained valuable insights about user interactions and engagement on the platform. Here are the key findings:

1.Loyal Users

1. The five oldest users were identified, showing who has been using the platform the longest. These users could be rewarded to boost loyalty.

2.Inactive Users

1. A significant number of users have never posted a single photo. This highlights an opportunity to engage these users through targeted campaigns.

3.Contest Winner

1. The photo with the highest likes was identified, along with the user who posted it. This user could be recognized to promote engagement.

4.Popular Hashtags

1. The top five hashtags were determined, providing insights for brands and users to increase their reach on the platform.

5.Best Day for Ad Campaigns

Most users registered on a specific day of the week, suggesting the best time to launch ad campaigns for maximum visibility.

6.User Engagement Metrics

The average number of posts per user was calculated, helping to understand overall engagement levels on the platform.

7.Bots and Fake Accounts

A few suspicious users who liked every photo were flagged as potential bots, indicating the need for better monitoring of user activity.

RESULT

Through this project, I was able to achieve the following:

1.Valuable Insights for Marketing and Product Teams

- •Identified the most loyal users who can be rewarded to build stronger relationships.
- •Found inactive users, providing an opportunity to re-engage them with targeted campaigns.

2.Investor-Friendly Metrics

- •Delivered key engagement metrics like average posts per user and flagged potential bot accounts, which can help improve platform credibility and user experience.

3.Clear Analytical Process

- •Gained hands-on experience writing SQL queries, analyzing data, and presenting results in an easy-to-understand manner.
- •Learned how to approach data analysis projects systematically and derive meaningful conclusions.

Impact of the Analysis

The insights derived from this project can significantly benefit the platform. Marketing teams can launch better campaigns, product teams can focus on enhancing user activity, and investors can rely on meaningful engagement metrics to assess platform health. Personally, this project enhanced my analytical and SQL skills, providing me with a deeper understanding of data-driven decision-making.


thank
you!