Project Description:- This project was all about making the use of data set that has been provided and incorporate the knowledge that I have gained from Mysql module, to test my sql skills and get the useful insights from the data to help different departments to make use of that useful data, I have somewhere got the idea of how data analysis in Instagram works.

Approach:- I tried to firstly understand the problem that is to be solved and to perform my task I made use of Mysql WorkBench, which gave me a great experience of running sql queries, and saving it for further analysis, while performing my task, I tried to the minimum optimal query to get the result, even if I got stuck getting desired result, I tried to debug and get the result.

Tech-Stack Used :- MySQL Workbench 8.0.36 and MySQL Community Server 8.4.0 LTS is being used , I chose workbench to efficiently run all the queries on the single page , and easily debug ,undo and save that.

Insights:- Studying something or actually implementing it are two different thing, so I learned a lot about actual syntax and actual use of big concepts of sql like JOIN, GROUP BY, ORDER BY etc.

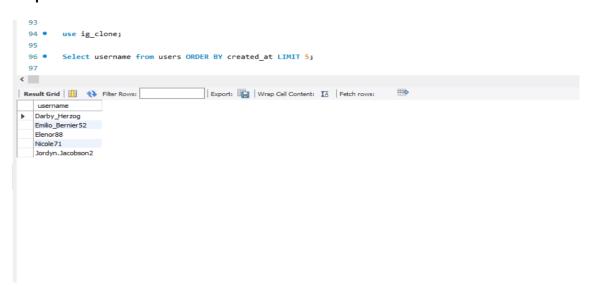
Results:-

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.

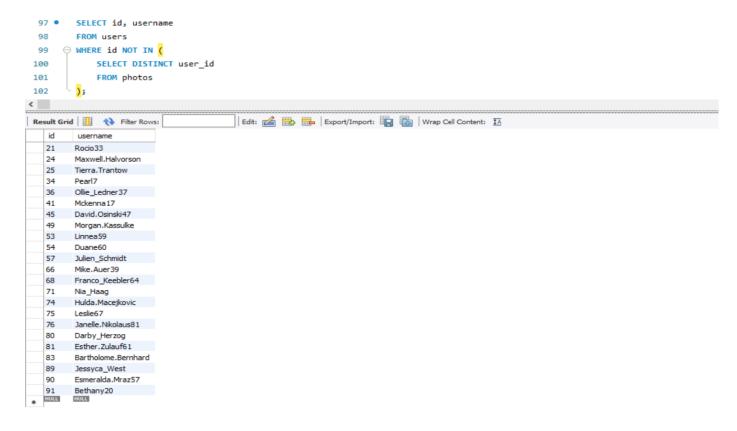
Output:-



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.

Output:-



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.

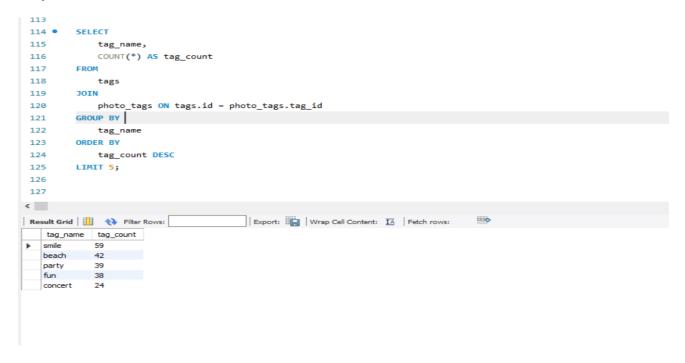
Output:-

```
98 • SELECT
       u.username,
 99
100
         p.image_url,
         COUNT(1.user_id) AS total_likes
102
103
       photos p
     JOIN
104
105
        users u ON p.user_id = u.id
     JOIN
107
         likes 1 ON p.id = 1.photo_id
     GROUP BY
108
109
        p.id
     ORDER BY
110
111
        total_likes DESC
      LIMIT 1;
112
<
| Export: | Wrap Cell Content: 🖽 | Fetch rows:
```

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.

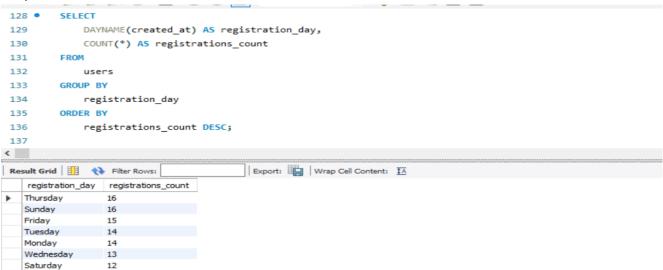
Output:-



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

Output:--



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.

Output:-



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.

Output:

```
152 •
153
              user_id,
              COUNT(*) AS total likes.
154
              (SELECT COUNT(*) FROM photos) AS total_photos,
                 WHEN (SELECT COUNT(*) FROM photos) = COUNT(*) THEN 'Potential Bot
158
                  ELSE 'Normal User
       END AS account_type
159
       FROM
161
             likes
       GROUP BY
162
163
             user id
              total_likes = (SELECT COUNT(*) FROM photos);
166
<
Result Grid | 🚻 	 🛟 Filter Rows:
                                           | Export: Wrap Cell Content: IA
   user_id total_likes total_photos
                                  account_type
   5 257 257 Potential Bot
14 257 257 Potential Bot
                                 Potential Bot
                     257
                          Potential Bot
           257
                     257
                                 Potential Bot
                     257 Potential Bot
                                 Potential Bot
   54 257 257 Potential Bot
57 257 257 Potential Bot
   66
71
                             Potential Bot
                     257
           257
                     257
                                 Potential Bot
                                 Potential Bot
Result 11 ×
```