INSTAGRAM USER ANALYSIS

○ PROJECT DESCRIPTION

As a data analyst, my main goal is to analyze user interactions and engagement with the Instagram app to provide valuable insights. This involves SQL and MySQL workbench to extract meaningful insights from the data. In this project, I'll be using SQL to analyze Instagram user data and answer questions posed by the management team. My insights will help the product manager and the rest of the team make informed decisions about the future direction of the Instagram app.

○ Approach

To handle the tasks and derive insights, I will use SQL queries to retrieve relevant information from the provided database.

○ Tech-stack used

I am using MySQL Workbench for this project. Choosing MySQL Workbench for this project aligns well with database requirements, my expertise, and the need for efficient data analysis, making it a reliable and suitable tool for extracting valuable insights from the Instagram user database.

A) MARKETING ANALYSIS :

1] loyal user award-

The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time. My task is to identify 5 oldest users on Instagram from provided database.

The query used-

```
select username,created_at from users order by created_at ASC limit 5;
```

output-

Result Grid | Filter Rows:

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

So, we can say that above 5 users been most loyal.

2] Inactive user engagement-

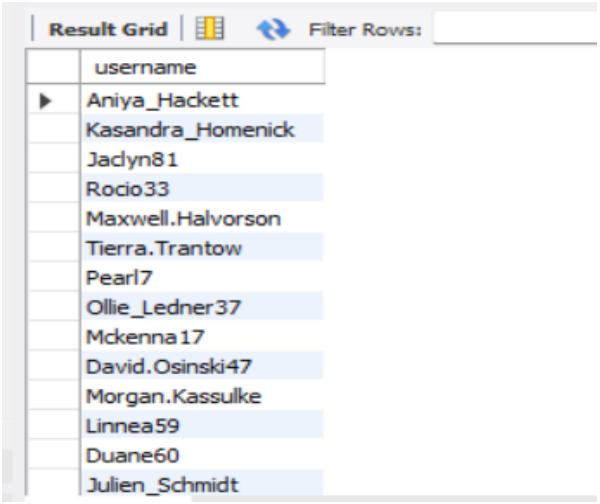
The team wants to encourage inactive users to start posting by sending them promotional emails. My task is to identify users who have never posted a single photo on Instagram.

The query used-

```
select username from users left join photos on users.id=photos.user_id where photos.id is null;
```

output-

The names are :



username
Aniya_Hackett
Kasandra_Homenick
Jaclyn81
Rocio33
Maxwell.Halvorson
Tierra.Trantow
Pearl7
Ollie_Ledner37
Mckenna17
David.Osinski47
Morgan.Kassulke
Linnea59
Duane60
Julien_Schmidt
Mike.Auer39
Franco_Keebler64
Nia_Haag
Hulda.Macejkovic
Leslie67
Janelle.Nikolaus81
Darby_Herzog
Esther.Zulauf61
Bartholome.Bernhard
Jessyca_West
Esmeralda.Mraz57
Bethany20

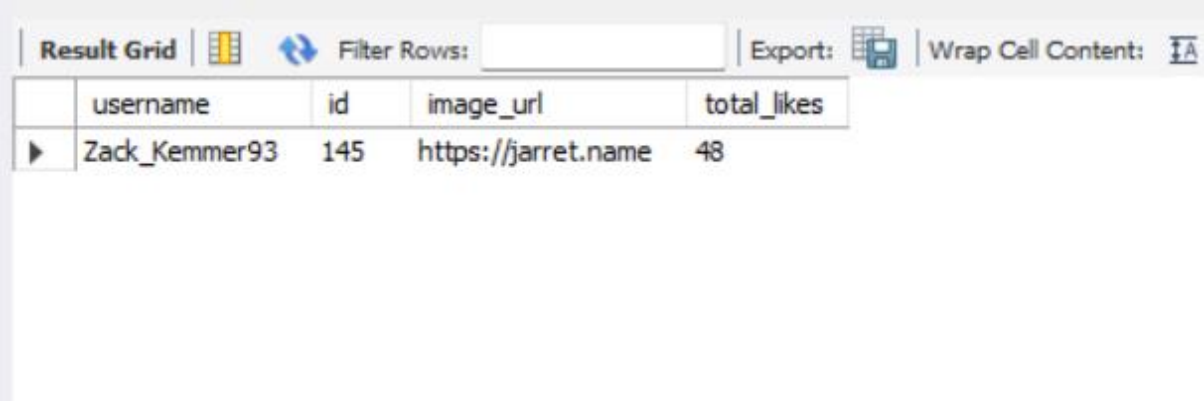
3] Contest winner declaration-

The team has organised a contest where the user with most likes on single photo wins. We have to determine winner.

The query used-

```
select username,photos.id,photos.image_url ,count(*) AS total_likes
from photos
inner join likes on photos.id=likes.photo_id
inner join users on users.id=photos.user_id
group by photos.id
order by total_likes DESC limit 1;
```

Output-



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

So, user_id 145 will be winner.

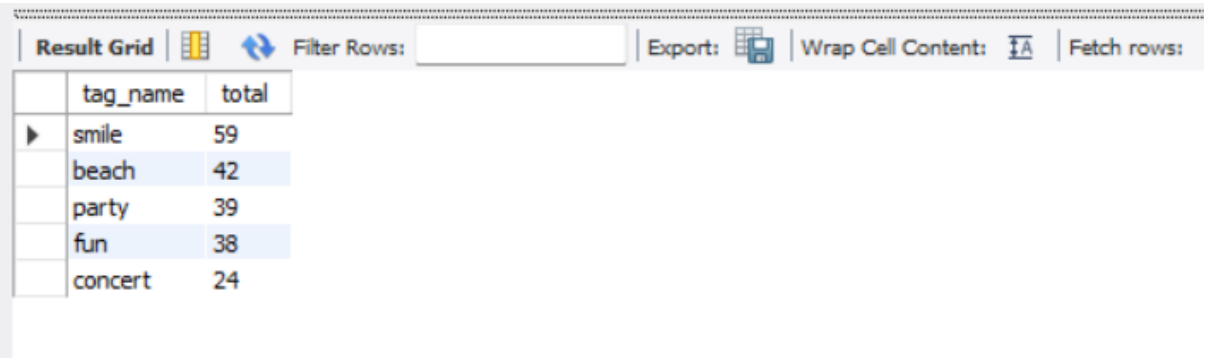
4] hashtag research-

A partner brand wants to know the most popular hashtags to use in their posts to reach the most people. We have to identify top 5 most commonly used hashtags on the platform.

The query used-

```
select tag_name, count(tag_name) as total from tags
join photo_tags on tags.id=photo_tags.tag_id group by tags.id order by total DESC;
```

Output-



tag_name	total
smile	59
beach	42
party	39
fun	38
food	24

5] Ad campaign launch-

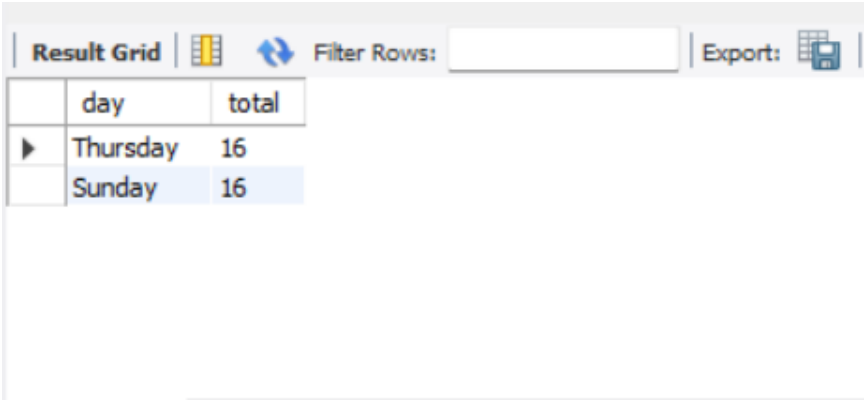
The team wants to know the best day of week to launch ads.

We have to determine day of the week where most users register on Instagram.

The query used-

```
select dayname(created_at) as day,count(*) as total
from users group by day order by total DESC limit 2;
```

Output-



Thursday and Sunday seems days of the week where most of users register on Instagram.

A) INVESTOR METRICS :

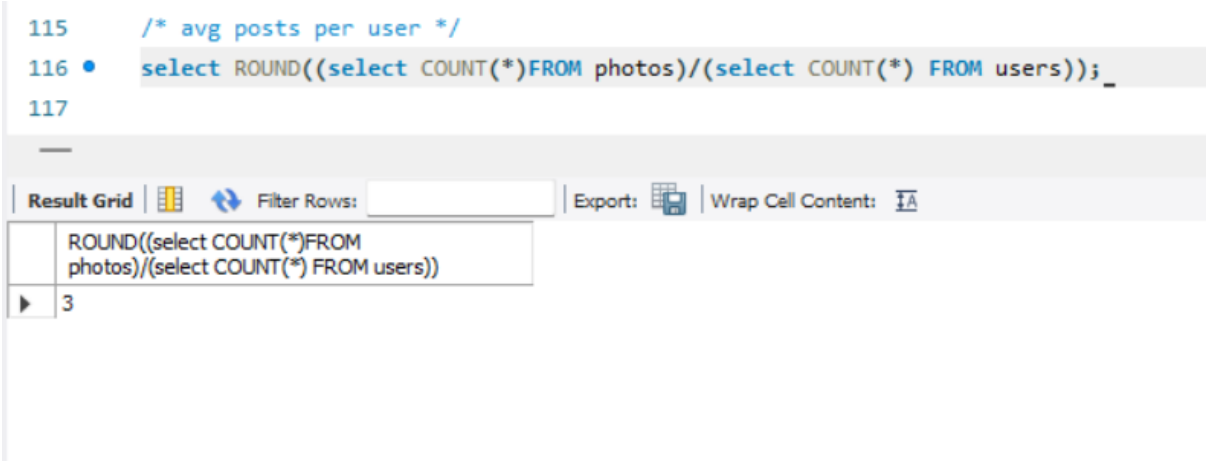
1]user engagement-

Investors want to know if users are still active and posting on Instagram or if they are making fewer posts. We have to calculate average number of posts per user on Instagram. i.e. total no. of photos divided by total no. of users.

The query used-

select round((select count(*)from photos)/(select count(*) FROM users));

Output-



So, the average number of posts per user on Instagram is 3.

2] bots and fake accounts-

Investors want to know if the platform is crowded with fake and dummy accounts. We have to identify fake accounts who have liked every single photo on the site, as this is not typically possible for a normal user.

The query used-

select users.id,username,count(users.id)As total_likes from users join likes on users.id = likes.user_id

group by users.id having total_likes = (select count(*) from photos);

Output-

```
118     /* select users who have liked each post */
119 •   select users.id,username,count(users.id)As total_likes from users join likes on users.id = likes.user_id
120     group by users.id having total_likes = (select count(*) from photos);
```

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

id	username	total_likes
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

○ Result/conclusion:

The project has provided meaningful insights that can influence the future development of the Instagram app. As a data analyst, I can contribute to the business's growth and success by leveraging SQL skills to extract actionable insights from user data. The data-driven decisions made as a result of this analysis have the potential to enhance user experience, increase

engagement, and drive business success on one of the world's most popular social media platforms.