Instagram User Analytics

Project Description: This project uses several database management technologies to extract valuable insights from the raw data, which will be then visualised to enhance platform functionality.

Approach: SQL was used to carry out this project, and queries were used to turn the given raw data into a database. The necessary data and insights were then obtained by applying sorting and data extraction queries.

Tech-Stack Used: The tech stack contains Mysql Workbench 8.0.37, a great tool for database querying because of its user-friendly interface, straightforward setup process, and support for troubleshooting.

Project insights:

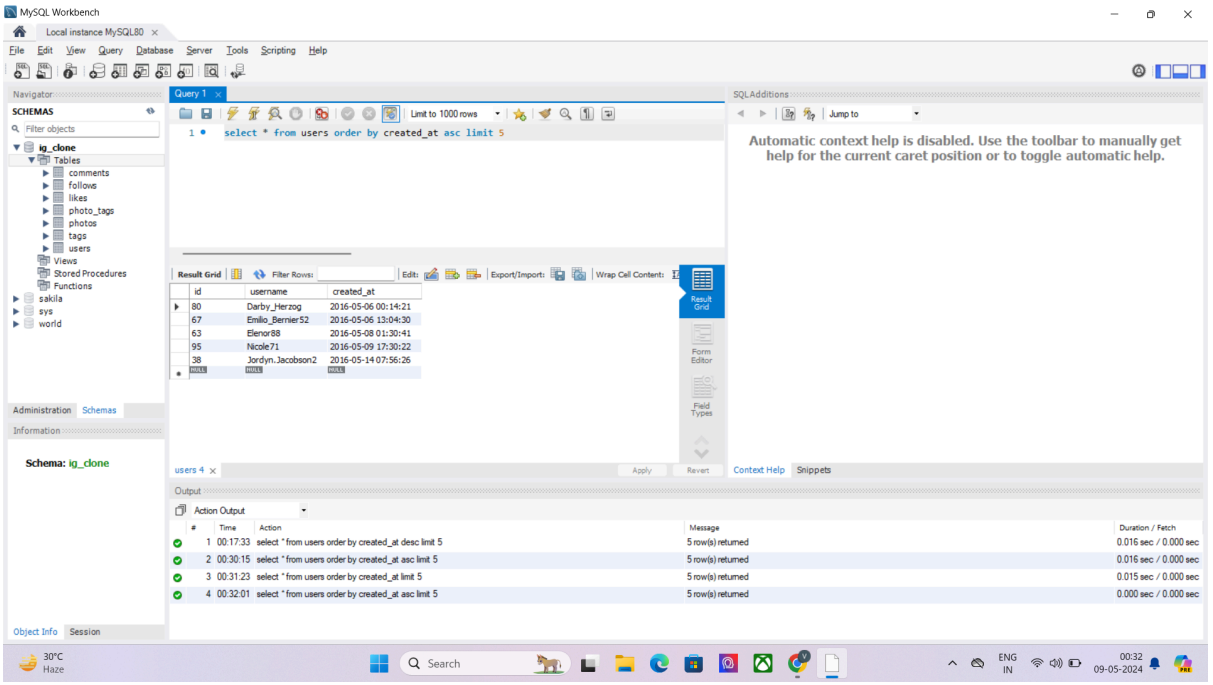
A) Marketing:

1. Reward Most Loyal Users: People who have been using Instagram for the longest time.

Result: The Five oldest users of Instagram.

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

Output Screenshot:



Code:

```
select * from users order by created_at asc limit 5
```

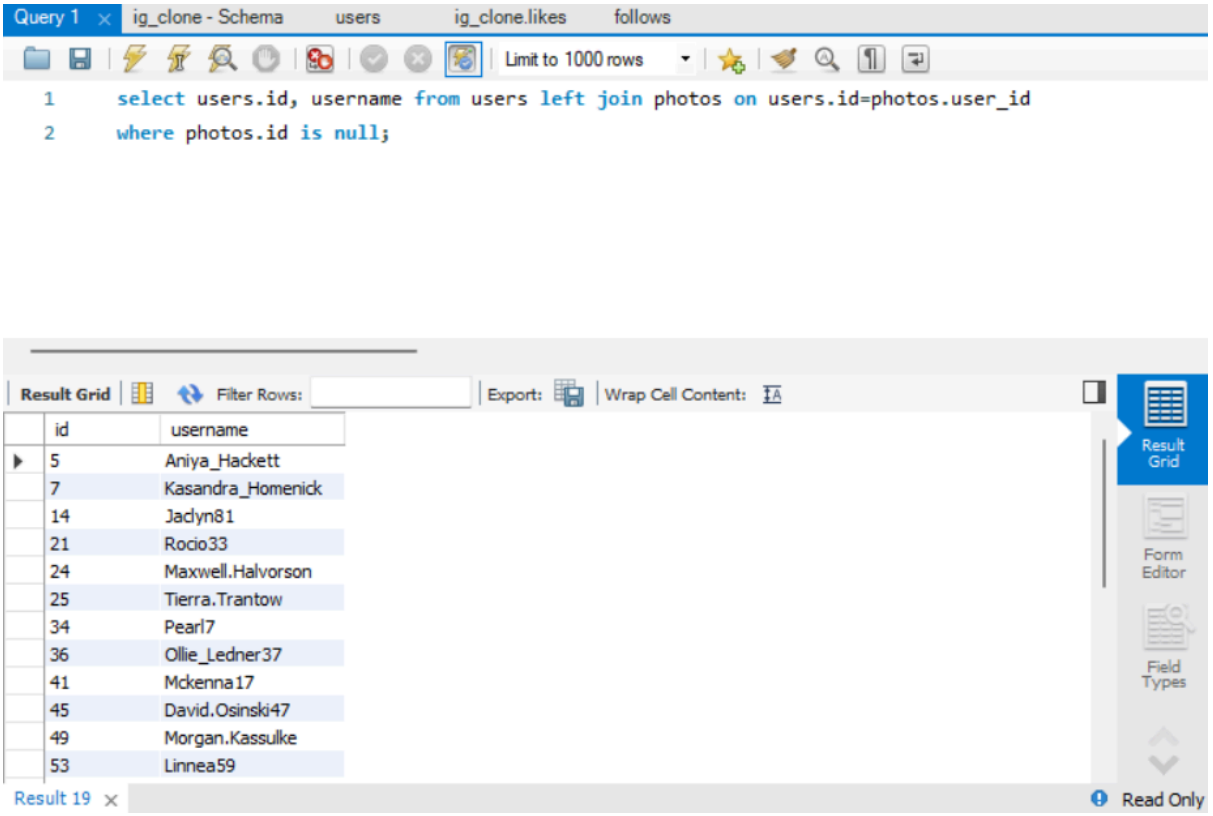
2. Inactive user Engagement: Remind inactive users to start posting by sending them promotional emails to post their first picture on the platform.

Result: The users who are inactive.

5	Aniya_Hackett
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

Output Screenshot:



Code:

select users.id, username from users left join photos on users.id=photos.user_id

where photos.id is null;

3. Contest Winner Declaration: The team started a contest and the user who gets the most likes on a single photo will be the winner and the team now wants to announce the winner.

Result: The user with most likes on their one photo.

Username	**image_url**	**used_id**	**likes**
Zack_Kemmer93	https://jarret.name	52	48

Code:

Select users.username,photos.image_url,photos.user_id,count(likes.photo_id)likes from photos

join likes on likes.photo_id = photos.id

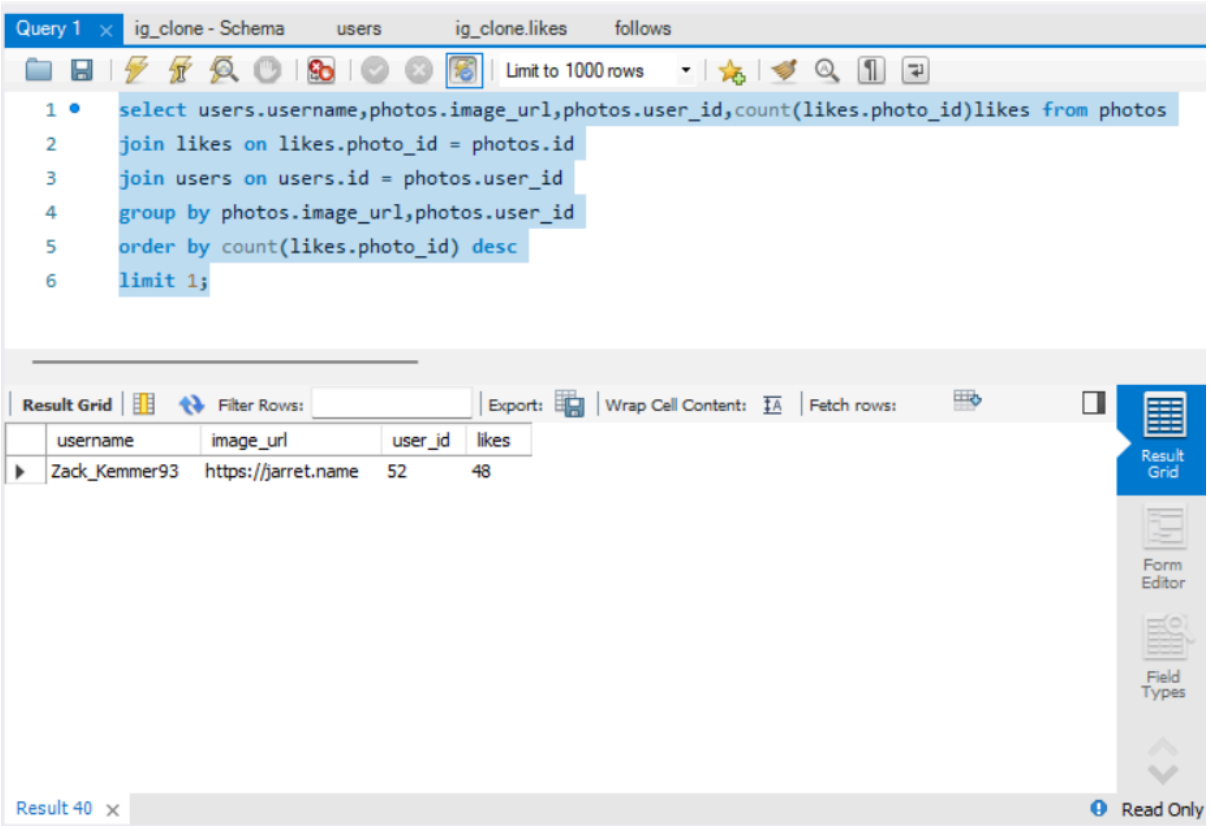
join users on users.id = photos.user_id

group by photos.image_url,photos.user_id

order by count(likes.photo_id) desc

limit 1;

Output Screenshot:



4. Hashtag Research: A brand partner is interested in finding the most widely used hashtags to incorporate into their postings in order to maximise their audience reach.

Result: Here are the most Five trending hashtags which partner brand can use.

smile 59

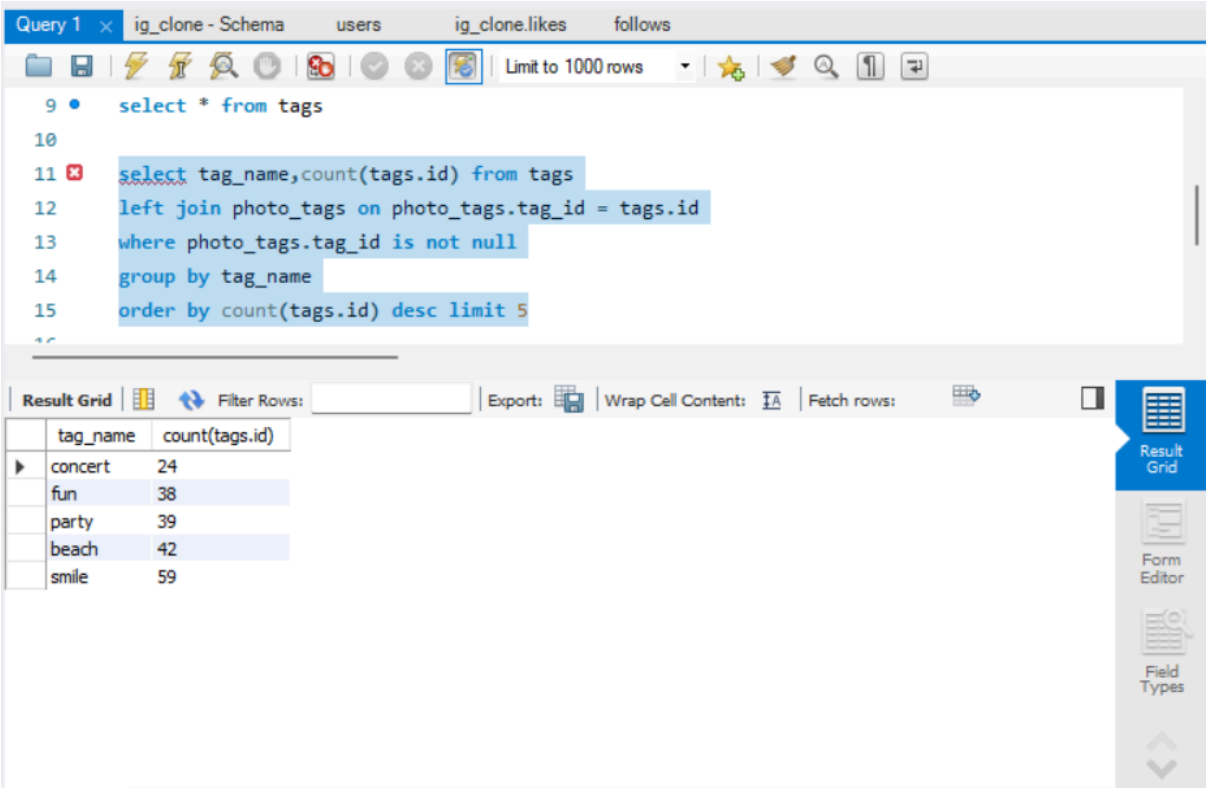
beach 42

party 39

fun 38

concert 24

Output Screenshot:



Code:

```
select tag_name,count(tags.id) from tags
left join photo_tags on photo_tags.tag_id = tags.id
where photo_tags.tag_id is not null
group by tag_name
order by count(tags.id) desc
limit 5
```

5. Ad Campaign Launch: The team wants to know which days would be the best days to launch the Campaign Ads.

Result: These are the best days to launch the Campaign Ads.

16 Thursday

16 Sunday

15 Friday

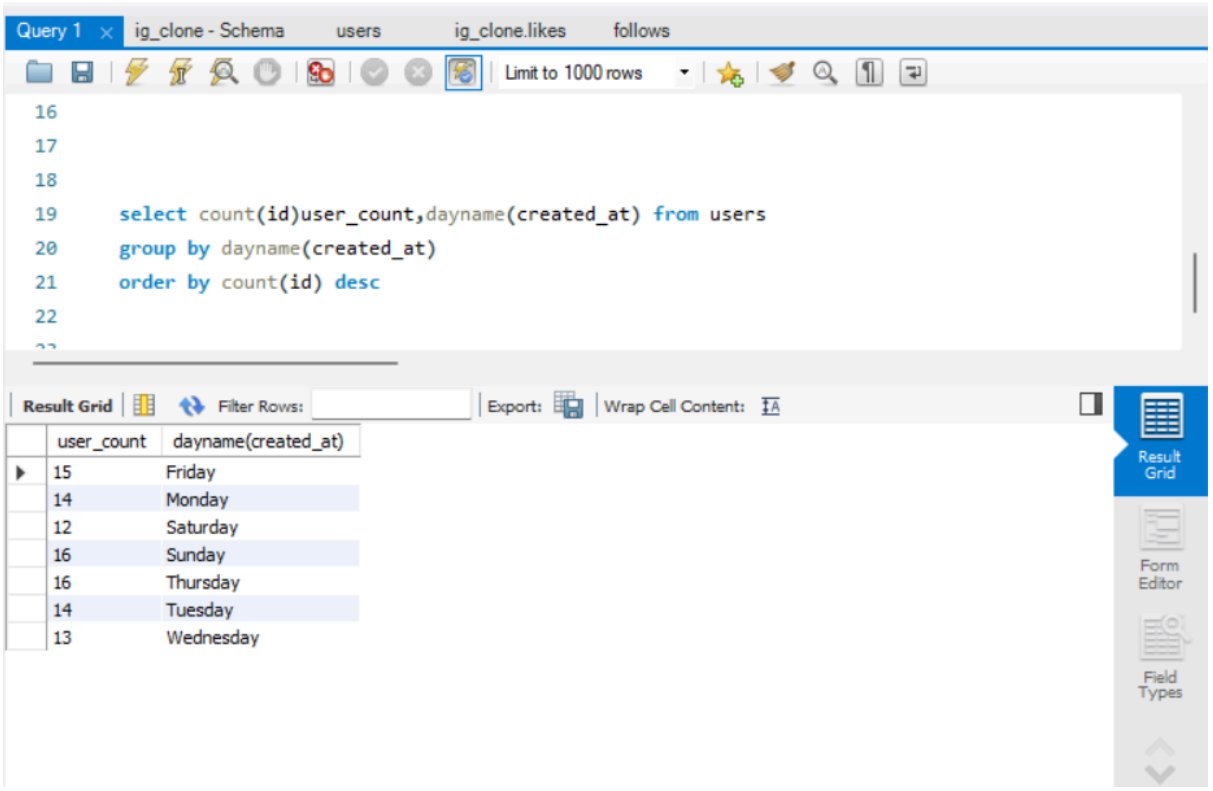
14 Tuesday

14 Monday

13 Wednesday

12 Saturday

Output Screenshot:



Code:

```
select count(id)user_count,dayname(created_at) from users

group by dayname(created_at)

order by count(id) desc
```

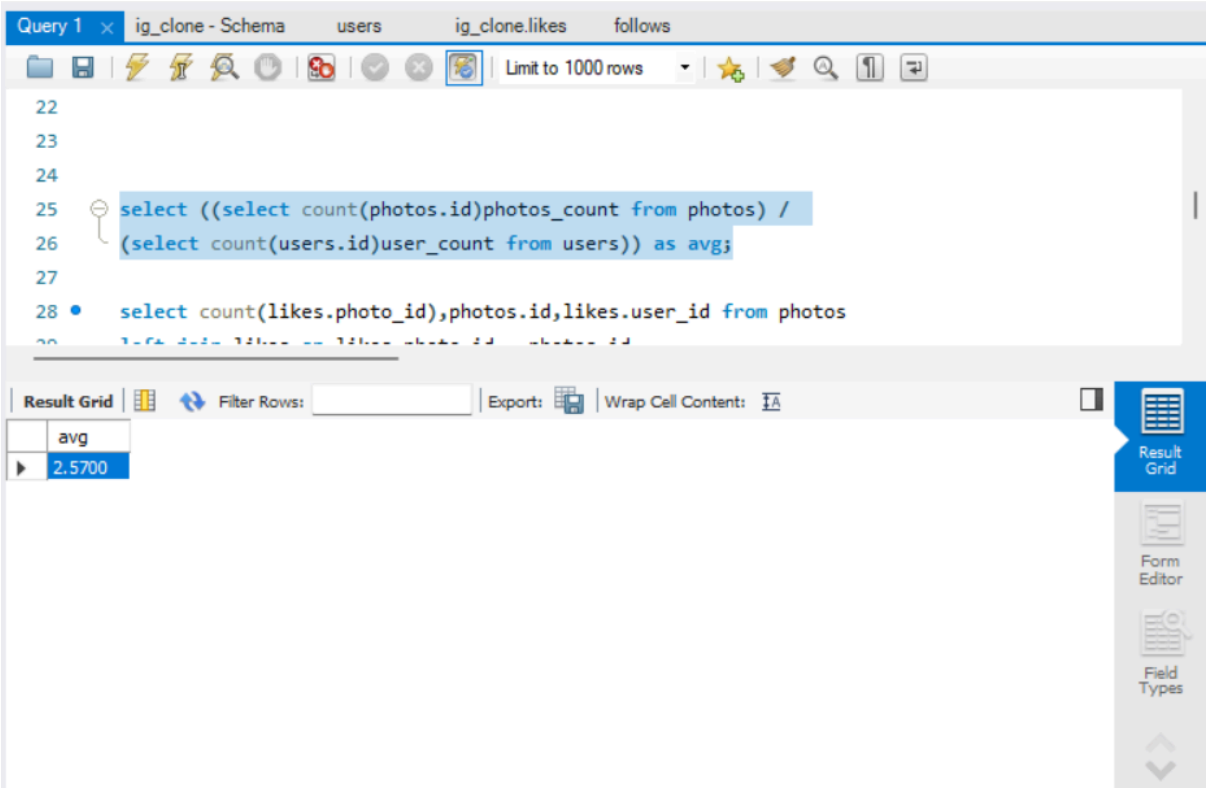
B) Investor Metrics

1. User Engagement: Investors are interested in knowing whether Instagram users are still posting regularly or if they are using it less frequently.

Result: A user average post is more than 2.

2.5700

Output Screenshot:



Code:

```
select ((select count(photos.id)photos_count from photos) /

(select count(users.id)user_count from users)) as avg;
```

7. Bots & Fake Accounts: The investors want to know if the platform is crowded with fake and dummy accounts.

Result: These are the users who can be bots and have fake accounts.

username	photo_likes	user_id
Aniya_Hackett	257	5
Jaclyn81	257	14
Rocio33	257	21
Maxwell.Halvorson	257	24
Ollie_Ledner37	257	36

Mckenna17	257	41
Duane60	257	54
Julien_Schmidt	257	57
Mike.Auer39	257	66
Nia_Haag	257	71
Leslie67	257	75
Janelle.Nikolaus81	257	76
Bethany20	257	91

Output Screenshot: