Project description : This project is about Instagram user analytics which is to understand how users effectively use instagram and data collected from them based on their activities such as liking photos,following,comments under photos,usage of hastags while uploading photos etc and based on that data we can make users to spend more time on instagram app by personalized algorithm,ads based on their likes and improving our business

Approach: After going through requirements trying to understand what information i wanted to make report to marketing ,production and development teams.Going through each tables and column and linking common columns associated between tables which gave an outlook of what all the datas given and retrieve so many outcomes to understand about users and their activities

Tech-Stack Used: I have used my sql workbench version 6.3,my sql server version 5.7 to create database and run queries and db-fiddle.com

Insights: I have learned how to use join functions ,how and where to use sorting,aggregate functions ,so in declaring contest winner problem using problem solution video I have learnt how to use more than one joins in a query,learnt to use day function on query,group by function and sorting functions.

Result: After sql learning concepts and practice problems,I could able to apply all concepts asked to solve and able to implement the outcome required for various team which will be helpful in improving business

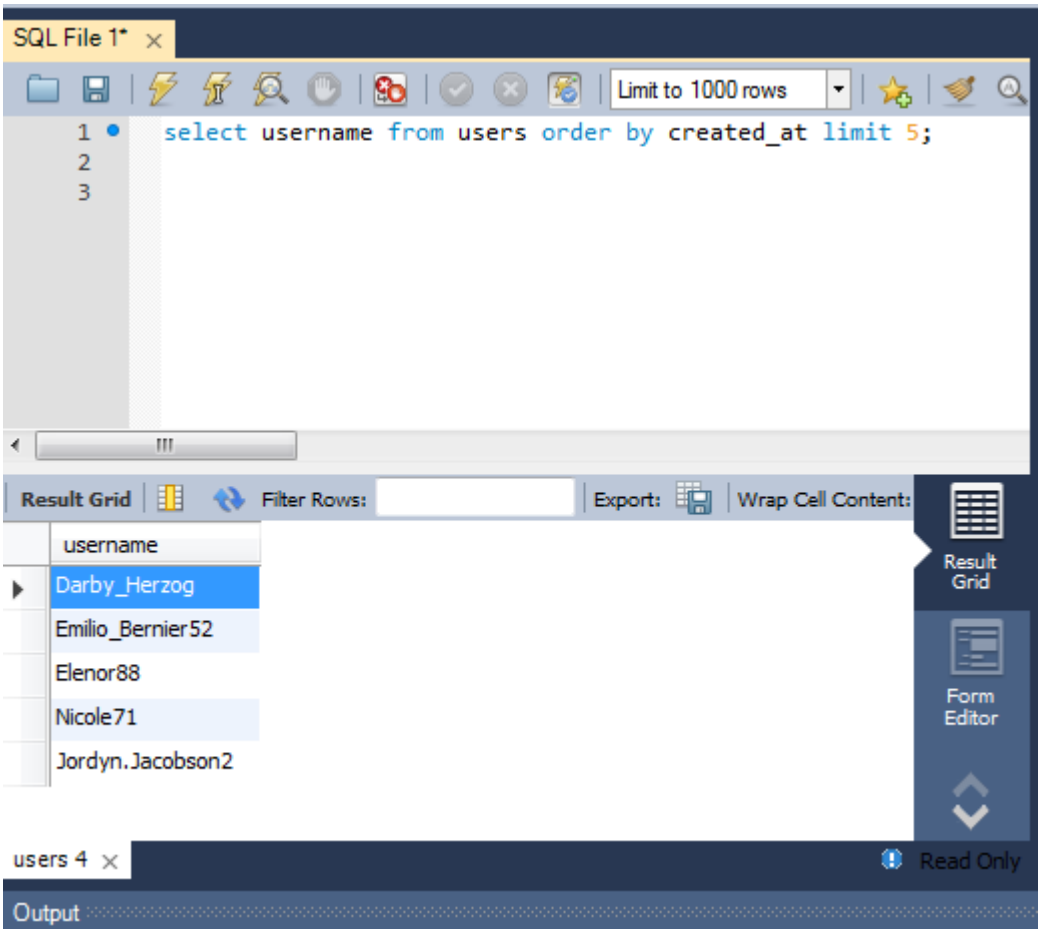
A) Marketing: The marketing team wants to launch some campaigns, and they need your help with the following

- After creating database for Ig_clone and tables,can perform queries and give results

1.**Rewarding Most Loyal Users**

Your Task: Find the 5 oldest users of the Instagram from the database provided

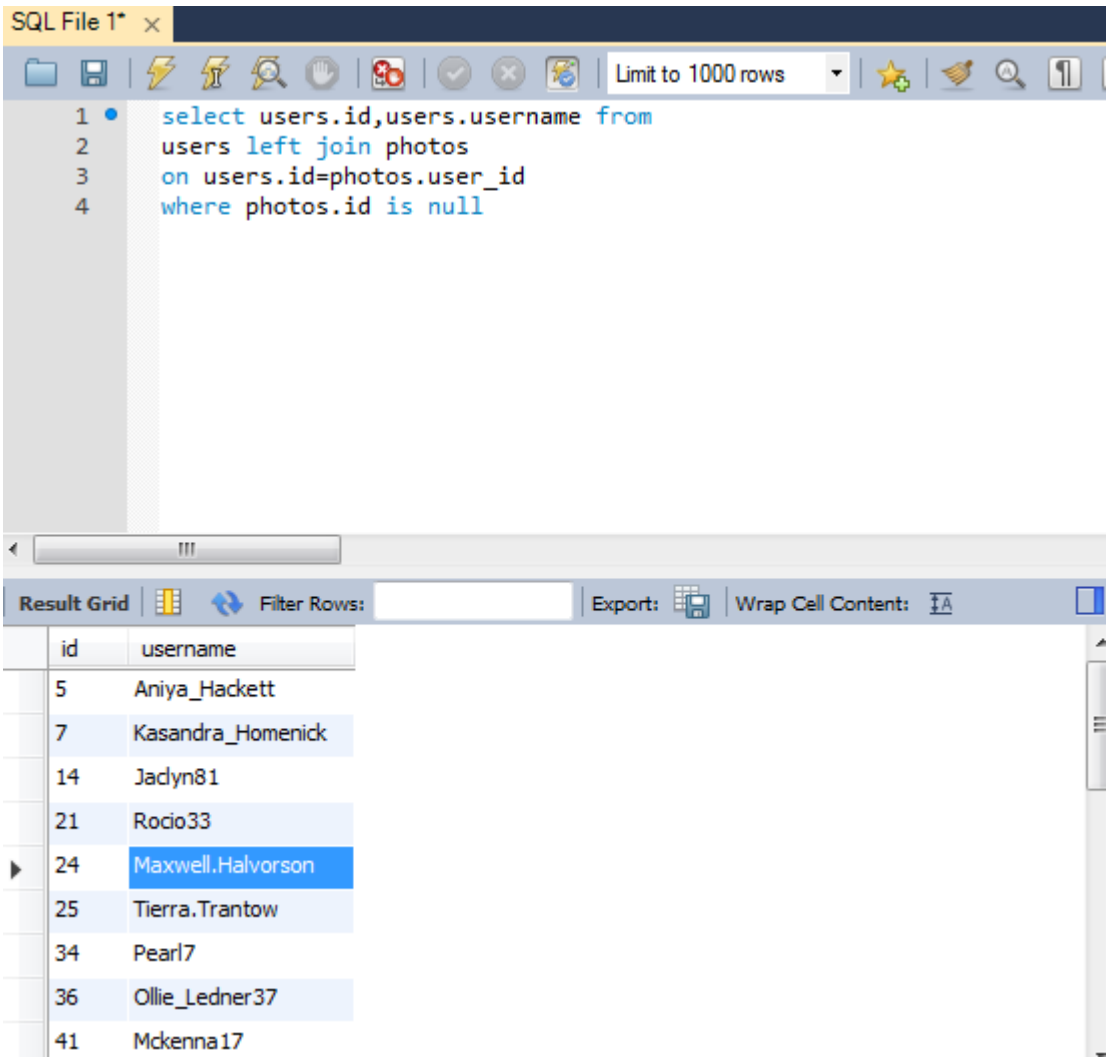
Query and Result:



2. **Remind Inactive Users to Start Posting**

Your Task: Find the users who have never posted a single photo on Instagram

Query and Result:



Output

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

3. **Declaring Contest Winner**

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

Query:

```
select users.username,likes.userid,photos.image_url,count(photo_id) as total_likes from
ig_clone.photos inner join ig_clone.likes
on likes.photo_id=photos.id
inner join ig_clone.users
on photos.user_id=users.id
group by photos.id
order by total_likes desc
limit 1
```

Result:

4. **Hashtag Researching**

Your Task: Identify and suggest the top 5 most commonly used hashtags on the platform

Query:

```
select tags.tag_name,count(tags.tag_name) as popular_tags
from ig_clone.photo_tags inner join ig_clone.tags
on tags.id=photo_tags.tag_id
group by(tags.id)
order by popular_tags desc
limit 5
```

Result:

tag_name	popular_tags
smile	59
beach	42
party	39
fun	38

5. **Launch AD Campaign**

Your Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign:Based on results Sunday can be scheduled for ad campaign

B) Investor Metrics: Our investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds

1. **User Engagement:**

Your Task: Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

Query:

```
select users.id,sum(users.id)as total_users,sum(photos.id) as total_photos,

avg(photos.id)as posts from ig_clone.users join ig_clone.photos

on users.id=photos.user_id

group by(photos.id)

order by total_users
```

Result:

id	total_users	total_photos	posts
1	1	5	5.0000
1	1	2	2.0000
1	1	3	3.0000
1	1	4	4.0000
1	1	1	1.0000
2	2	9	9.0000
2	2	6	6.0000
2	2	7	7.0000
2	2	8	8.0000
3	3	12	12.0000

2.**Bots & Fake Accounts:**

Your Task: Provide data on users (bots) who have liked every single photo on the site (since any normal user would not be able to do this).

Query and Result:

```
select users.username,count(likes.photo_id) as bot
from ig_clone.photos join ig_clone.likes
on photos.id=likes.photo_id
join ig_clone.users
on users.id=likes.user_id
group by users.username
order by bot desc
```

username	bot
Nia_Haag	257
Leslie67	257
Jaclyn81	257
Janelle.Nikolaus81	257
Rocio33	257
Maxwell.Halvorson	257
Bethany20	257
Ollie_Ledner37	257
Mckenna17	257
Duane60	257

Instagram user analytics assignment