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Instagram User Analytics

Project Description:

The project is about the user analytics of Instagram. The project is to analyse the best possible outcomes to some known problems related to marketing and the performance of the Instagram. The data tables given for the project is users, photos, comments, tags, likes, follow, photo_tags. MySQL is used to solve the problems.

Approach:

To start with the project first I understood all the problem statement. Tried to find out what tables will be required to find the best possible result and marked it to use while actual query writing. The queries should be easy understand. I have written each of the primary and foreign key for the tables. So, at the time of writing query I have not to check again and again to get that columns.

Tech-Stack Used:

To solve these problems, I have used MySQL Workbench 8.0 CE. Which is an open software and can be downloaded from https://www.mysql.com/.

Insights:

The project is extremely helpful to understand basics of MySQL. It helped me to learn the structure. It also helped me to learn new keywords like dayofweek etc. I have also learned the concept of JOIN, HAVING, WHERE, IN, NOT IN, GROUP BY, ORDER BY, etc. This project gave me the confidence to work in SQL.

Result:

A) Marketing: The marketing team wants to launch some campaigns. Help them.

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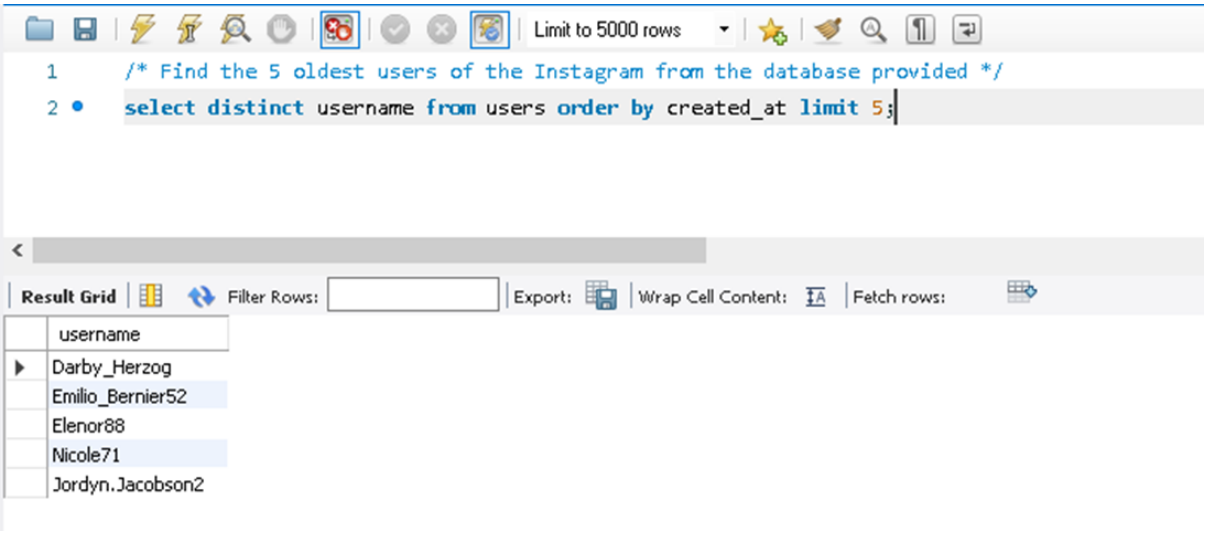
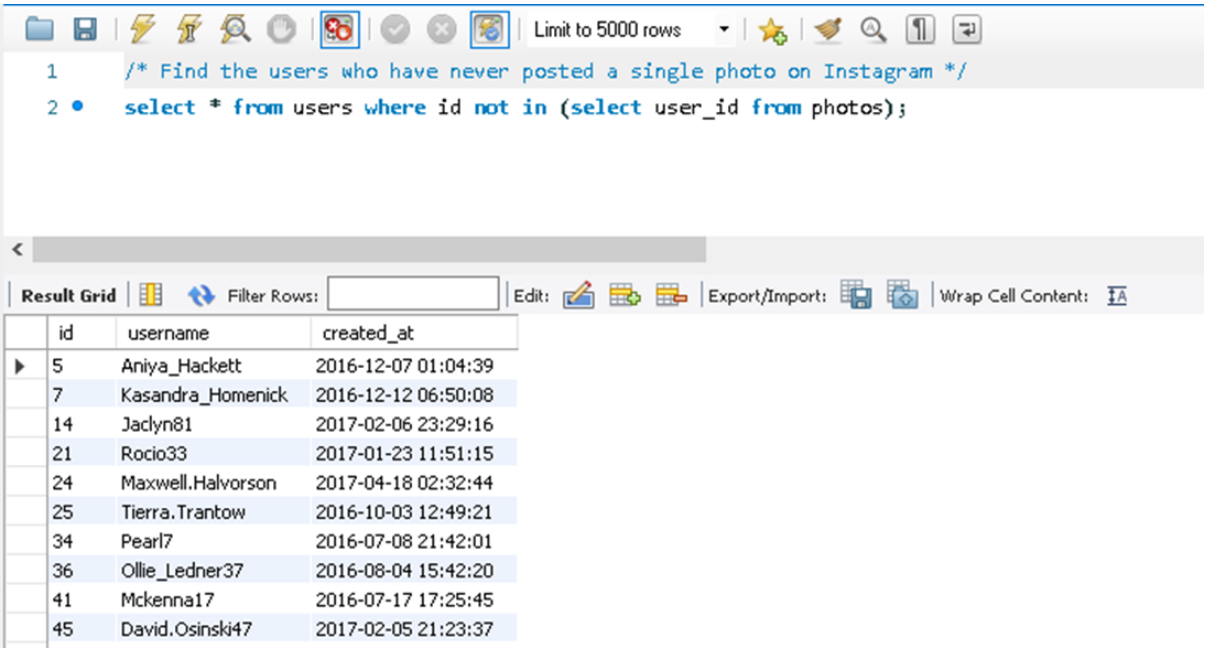
1. Rewarding most loyal users: People who have been using the platform for the longest time.



```
/* Find the 5 oldest users of the Instagram from the database provided */
select distinct username from users order by created_at limit 5;
```

username
Darby_Herzog
Emilio_Bernier52
Elenor88
Nicole71
Jordyn.Jacobson2

2. Remind Inactive Users to Start Posting: By sending them promotional emails to post their 1st photo.



```
/* Find the users who have never posted a single photo on Instagram */
select * from users where id not in (select user_id from photos);
```

id	username	created_at
5	Aniya_Hackett	2016-12-07 01:04:39
7	Kasandra_Homenick	2016-12-12 06:50:08
14	Jaclyn81	2017-02-06 23:29:16
21	Rocio33	2017-01-23 11:51:15
24	Maxwell.Halvorson	2017-04-18 02:32:44
25	Tierra.Trantow	2016-10-03 12:49:21
34	Pearl7	2016-07-08 21:42:01
36	Ollie_Ledner37	2016-08-04 15:42:20
41	Mckenna17	2016-07-17 17:25:45
45	David.Osinski47	2017-02-05 21:23:37

3. Declaring Contest Winner: The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner.

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```
1   /*  Identify the winner of the contest and provide their details to the team */
2   select users.id,users.username,photos.image_url,likes.photo_id,
3   count(likes.user_id) no_of_likes from likes
4   join photos on likes.photo_id=photos.id join users on users.id=photos.user_id
5   group by likes.photo_id order by no_of_likes desc limit 1;
```

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

id	username	image_url	photo_id	no_of_likes
52	Zack_Kemmer93	https://jarret.name	145	48

4. Hashtag Researching: A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.

```
1   /*  Identify and suggest the top 5 most commonly used hashtags on the platform */
2   select tags.id, tags.tag_name, count(photo_id) as no_of_times from tags
3   join photo_tags on tags.id=photo_tags.tag_id
4   group by photo_tags.tag_id order by no_of_times desc limit 5
```

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

id	tag_name	No_of_Times_Used
21	smile	59
20	beach	42
17	party	39
13	fun	38
18	concert	24

5. Launch AD Campaign: The team wants to know, which day would be the best day to launch ADs.

```
1   /* What day of the week do most users register on?
2   Provide insights on when to schedule an ad campaign */
3   select dayofweek(created_at) as day_of_week,count(created_at) as count from users
4   group by day_of_week order by count desc
```

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

day_of_week	count
5	96
1	96
6	90
3	84
2	84
4	78
7	72

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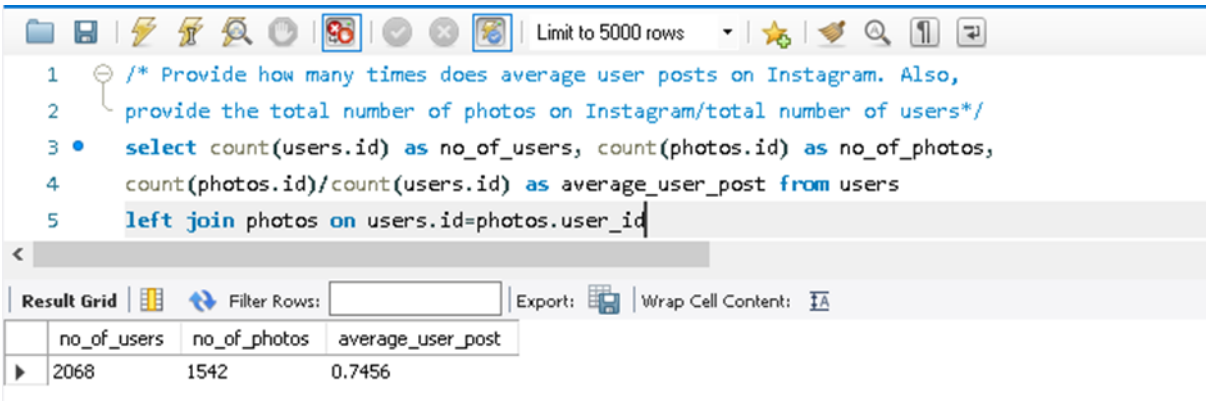
B) Investor Metrics:

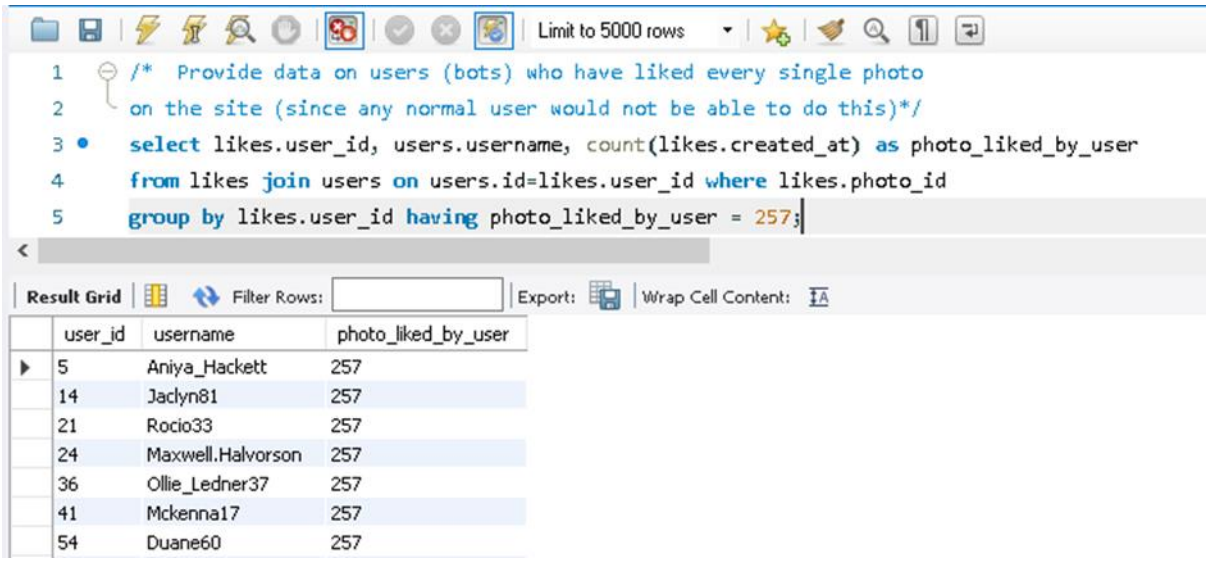
1. User Engagement: Are users still as active and post on Instagram or they are making fewer posts.



```
/* Provide how many times does average user posts on Instagram. Also,
provide the total number of photos on Instagram/total number of users*/
select count(users.id) as no_of_users, count(photos.id) as no_of_photos,
count(photos.id)/count(users.id) as average_user_post from users
left join photos on users.id=photos.user_id
```

no_of_users	no_of_photos	average_user_post
2068	1542	0.7456

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



```
/*  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)*/
select likes.user_id, users.username, count(likes.created_at) as photo_liked_by_user
from likes join users on users.id=likes.user_id where likes.photo_id
group by likes.user_id having photo_liked_by_user = 257;
```

user_id	username	photo_liked_by_user
5	Aniya_Hackett	257
14	Jaclyn81	257
21	Rocio33	257
24	Maxwell.Halvorson	257
36	Ollie_Ledner37	257
41	Mckenna17	257
54	Duane60	257