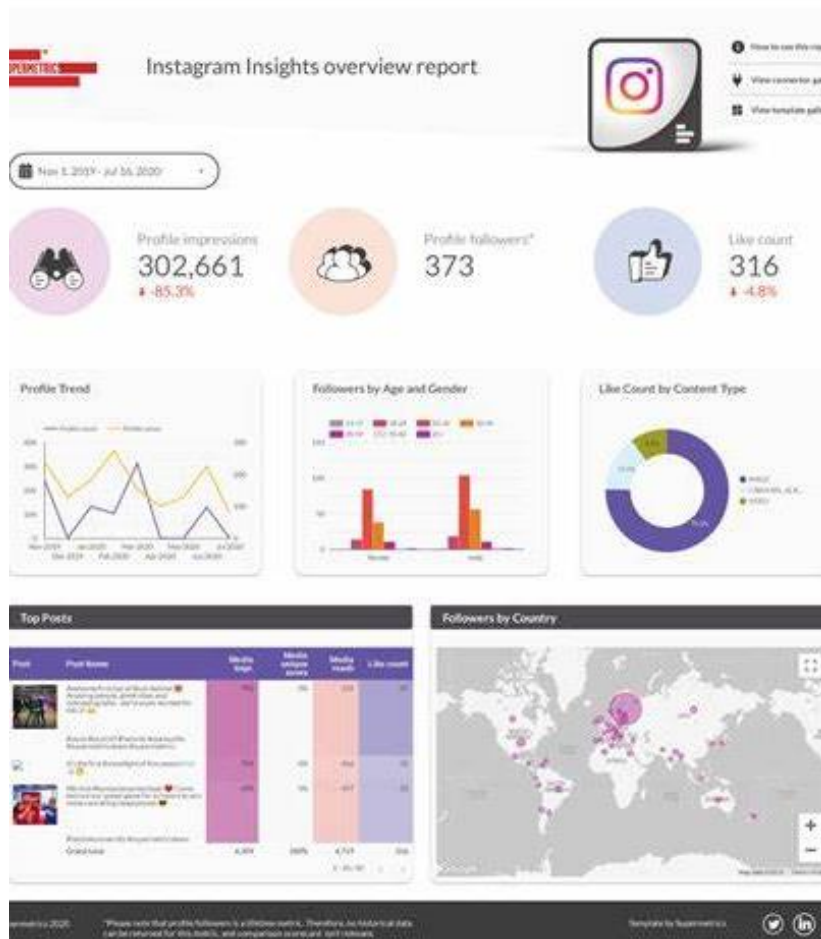


INSTAGRAM

USER ANALYTICS



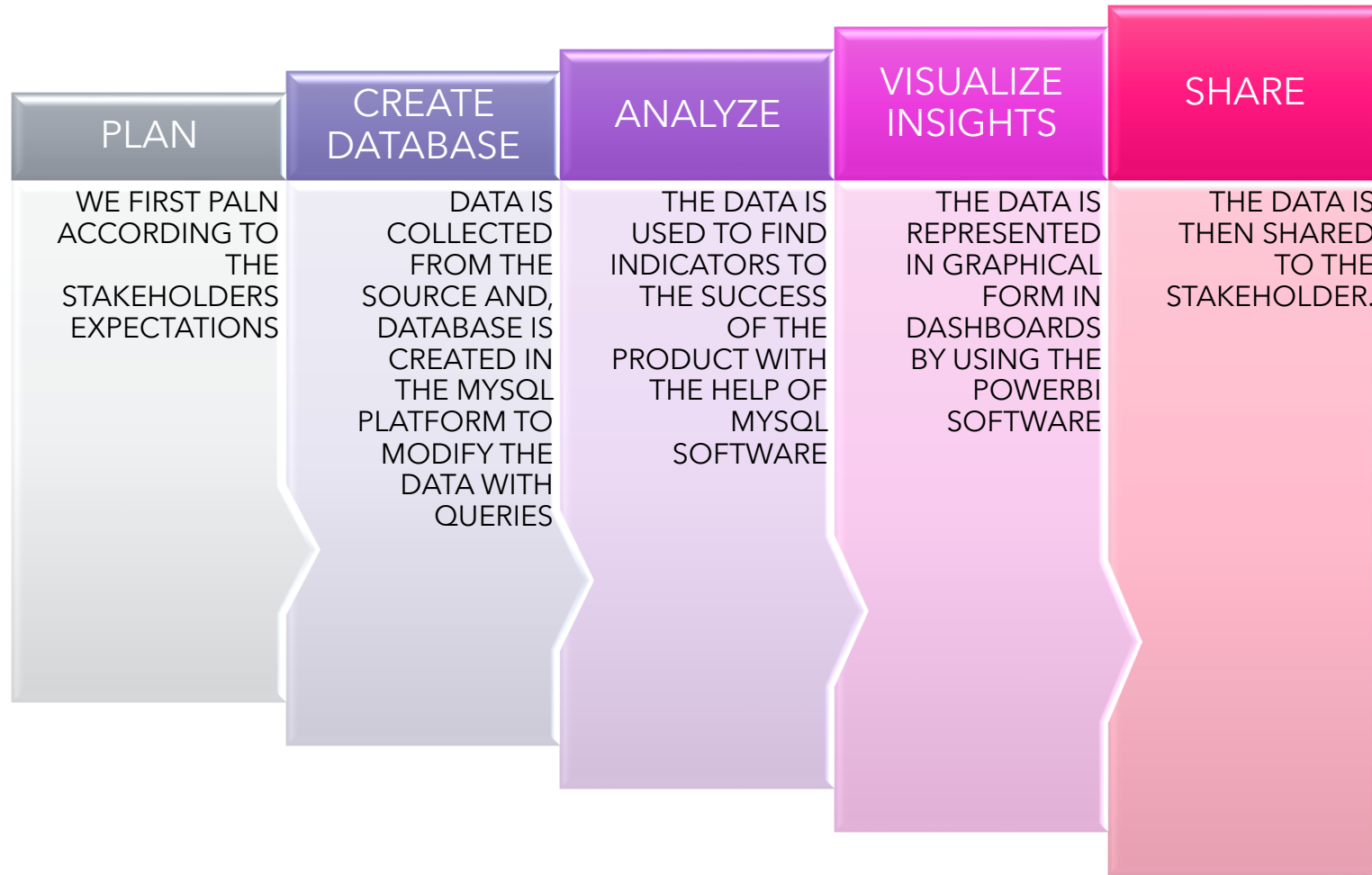
HARINI.P



PROJECT OBJECTIVE

This project has helped develop insights of the users engagement and the interaction with the Instagram application used by millions around the globe. Insights were developed according to the business , product development and marketing needs and these insights would uphold in the development of the Instagram application. Insights from the data given were developed usings SQL software and, powerbi visualization tool was used to create dashboards.

Project approach





TECH-STACK USED

MYSQL WORKBENCH:

MY SQL IS USED TO STORE MANAGE AND RETRIEVE DATA FROM DATABASES. IN THIS PROJECT IT WAS USED TO STORE DATA IN A DATABASE AND THE REQUIRED DATA WAS EXTRACTED USING QUERIES..

POWERBI DESKTOP:

THE EXTRACTED DATA (ANALYZED DATA) WAS PUT IN GRAPHICAL REPRESENTATION FORM USING THIS TOOL.

MARKETING INSIGHTS

- ❖ REWARDING MOST LOYAL USERS
- ❖ REMINDING INACTIVE USRES TO START POSTING
- ❖ DECLARING CONTEST WINNERS
- ❖ HASHTAG RESEARCHING
- ❖ LAUNCHING AD CAMPAIGNS

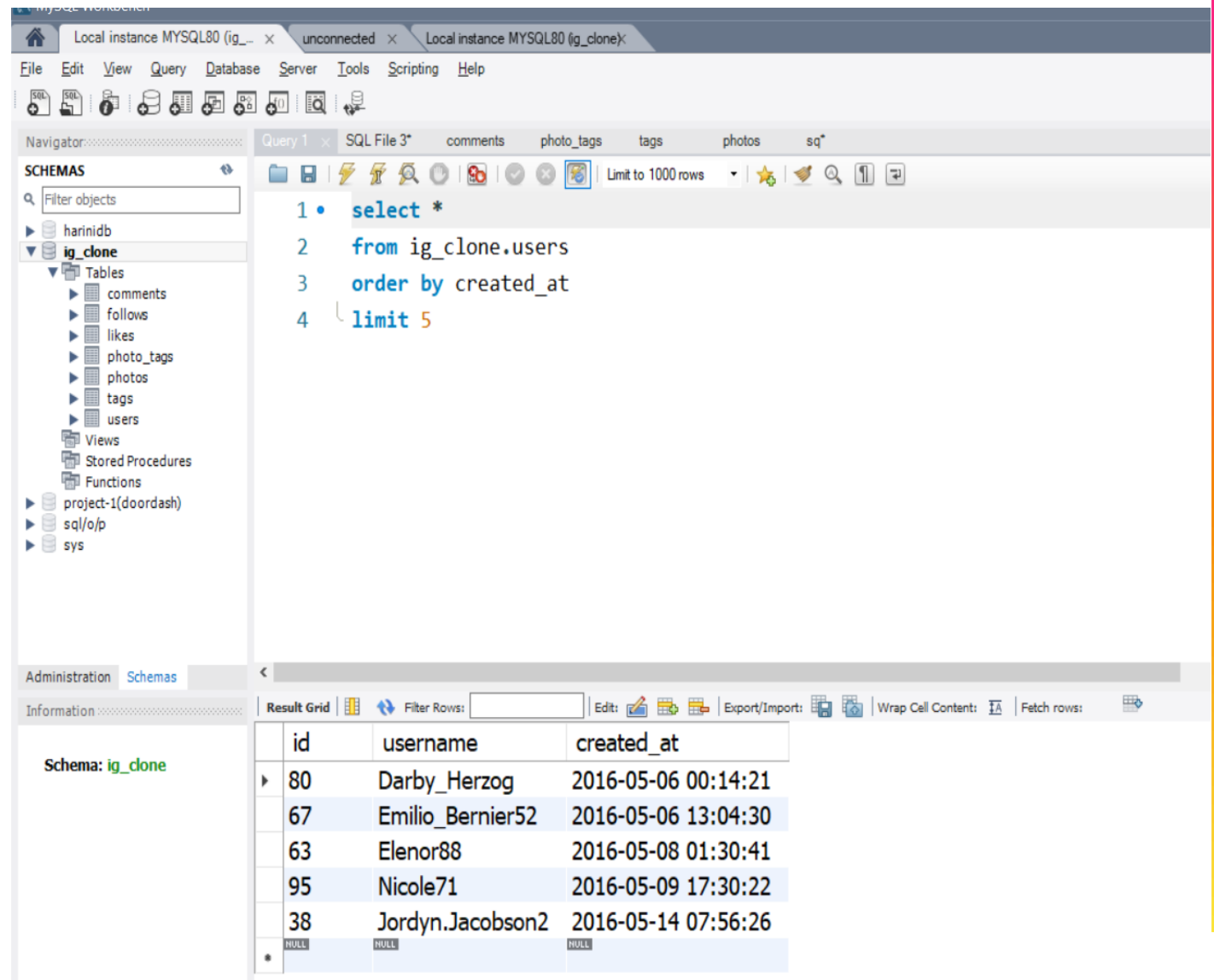


DATABASE:IG_CLONE
TABLES: COMMENTS ,
FOLLOWS , LIKES ,
PHOTO_TAGS ,
PHOTOS , TAGS,
USERS.

1) REWARDING MOST LOYAL USERS

BASED ON THE LEAST DATE AND TIME OF THE ACCOUNT CREATED THE 5 USERS WHO HAVE BEEN USING THE PLATFORM FOR THE LONGEST TIME HAVE BEEN FOUND

- + DARBY_HERZOG
- + EMILIO_BERNIER52
- + ELENOR88
- + NICOLE71
- + JORDYN.JACOBSON2



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'ig_clone' database selected. The main editor window shows a SQL query: `select * from ig_clone.users order by created_at limit 5`. The 'Result Grid' at the bottom displays the results of the query, showing the top 5 users by creation date.

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
NULL	NULL	NULL

2) INACTIVE USERS

- + THE USERS WHO HAVENT POSTED A SINGLE PHOTO ARE CONSIDERED INACTIVE USERS.

The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'ig_clone' database selected. The main query editor contains the following SQL query:

```
1 • SELECT b.id,b.username
2 FROM ig_clone.photos a
3 right join ig_clone.users b on a.user_id=b.id
4 where a.user_id is null
```

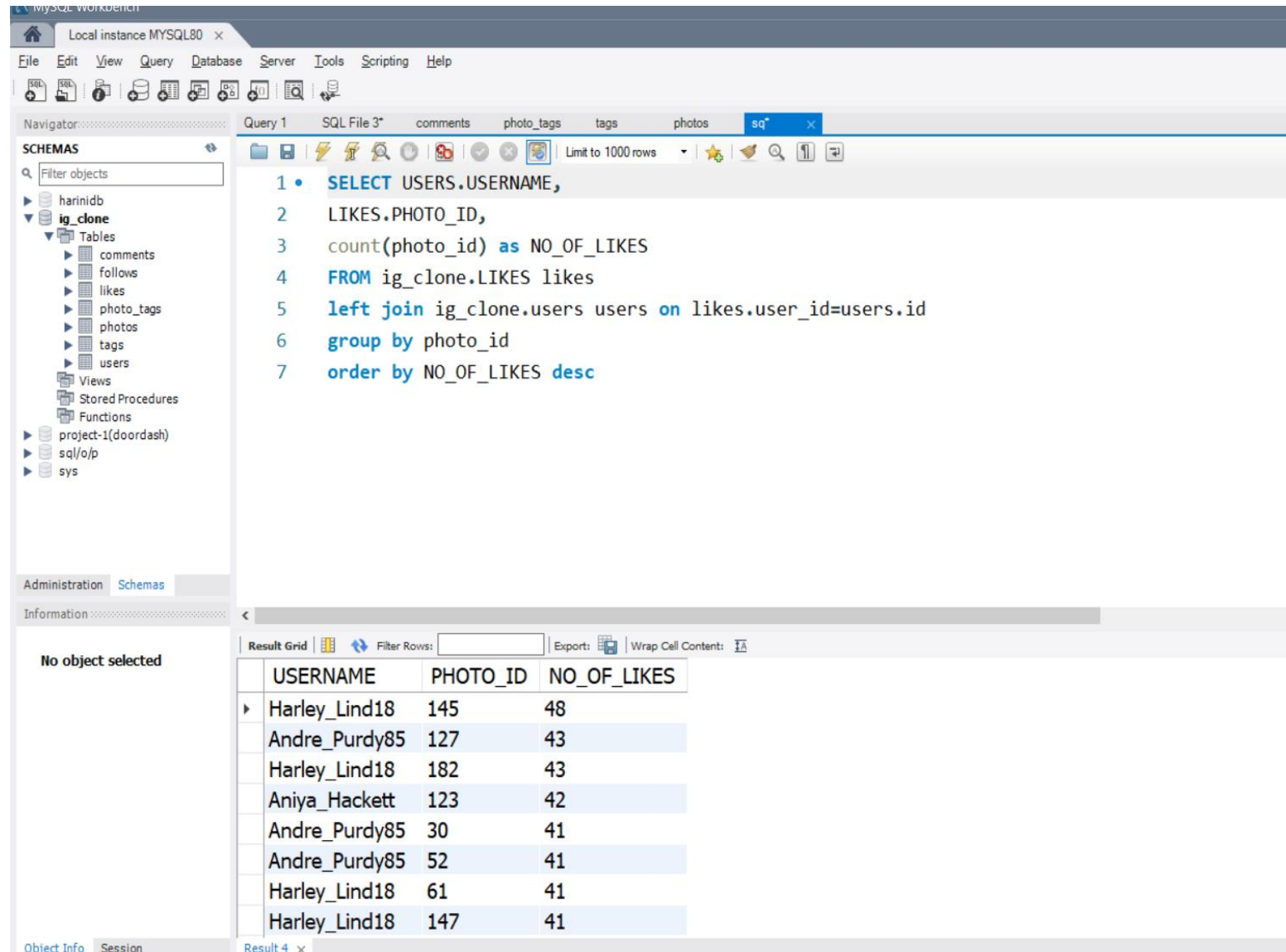
The 'Result Grid' at the bottom shows the results of the query, listing the IDs and usernames of inactive users:

id	username
5	Aniya_Hackett
7	Kassandra_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

The status bar at the bottom indicates 'Query Completed'.

3) CONTEST WINNERS

- + The contest winner for the most liked video is Harley_lind18 with the total no of likes as 48.



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'ig_clone' database selected. The main editor window shows a SQL query:

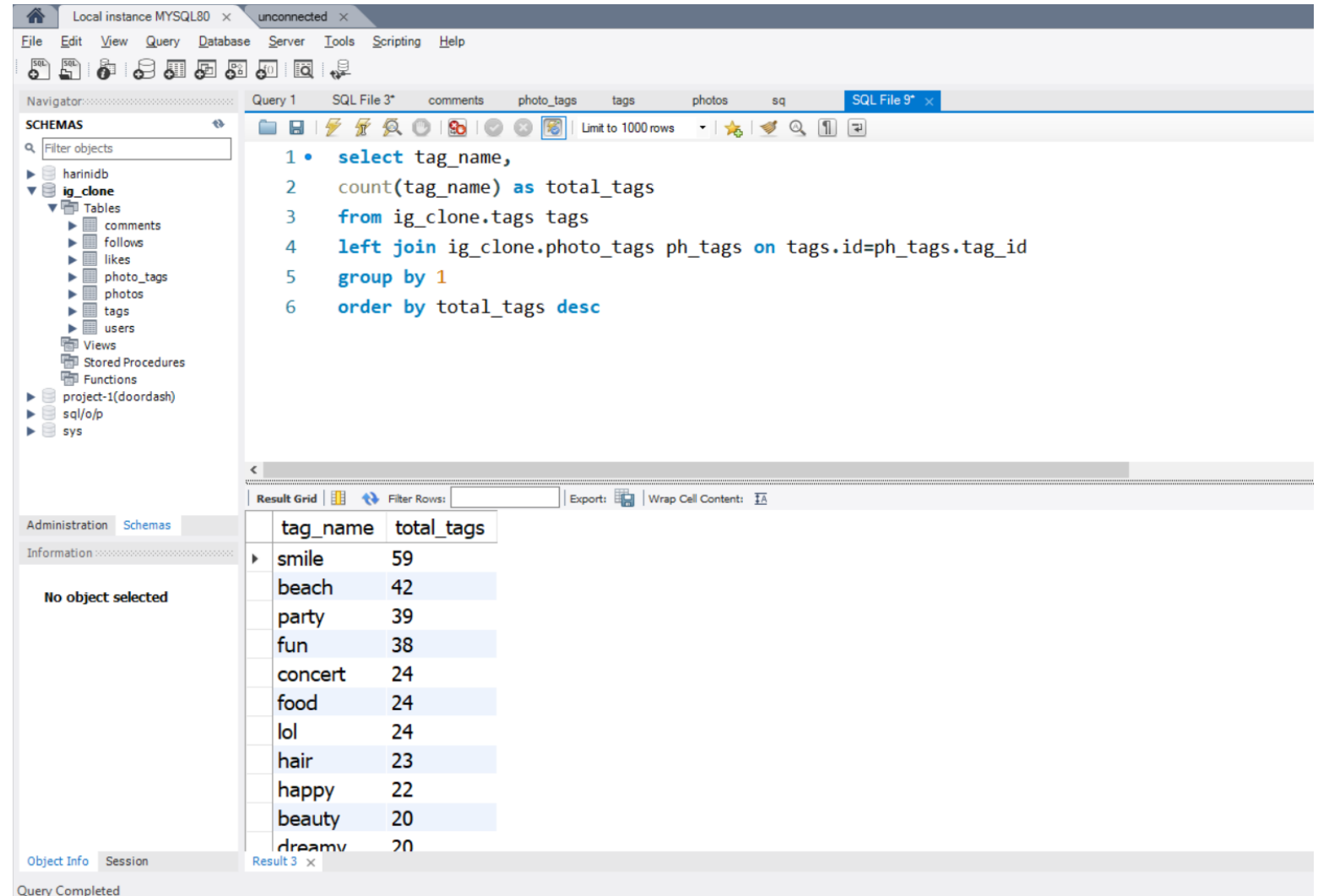
```
1 • SELECT USERS.USERNAME,  
2 LIKES.PHOTO_ID,  
3 count(photo_id) as NO_OF_LIKES  
4 FROM ig_clone.LIKES likes  
5 left join ig_clone.users users on likes.user_id=users.id  
6 group by photo_id  
7 order by NO_OF_LIKES desc
```

 The bottom panel shows the 'Result Grid' with the following data:

USERNAME	PHOTO_ID	NO_OF_LIKES
Harley_Lind18	145	48
Andre_Purdy85	127	43
Harley_Lind18	182	43
Aniya_Hackett	123	42
Andre_Purdy85	30	41
Andre_Purdy85	52	41
Harley_Lind18	61	41
Harley_Lind18	147	41

4) HASHTAG RESEARCHING

- + THE TOP 5 HASHTAGS USED ON THE PLATFORM ARE:
- + SMILE
- + BEACH
- + PARTY
- + FUN
- + CONCERT



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with 'ig_clone' selected, showing tables like 'comments', 'follows', 'likes', 'photo_tags', 'photos', 'tags', and 'users'. The main query editor contains the following SQL code:

```
1 • select tag_name,  
2 count(tag_name) as total_tags  
3 from ig_clone.tags tags  
4 left join ig_clone.photo_tags ph_tags on tags.id=ph_tags.tag_id  
5 group by 1  
6 order by total_tags desc
```

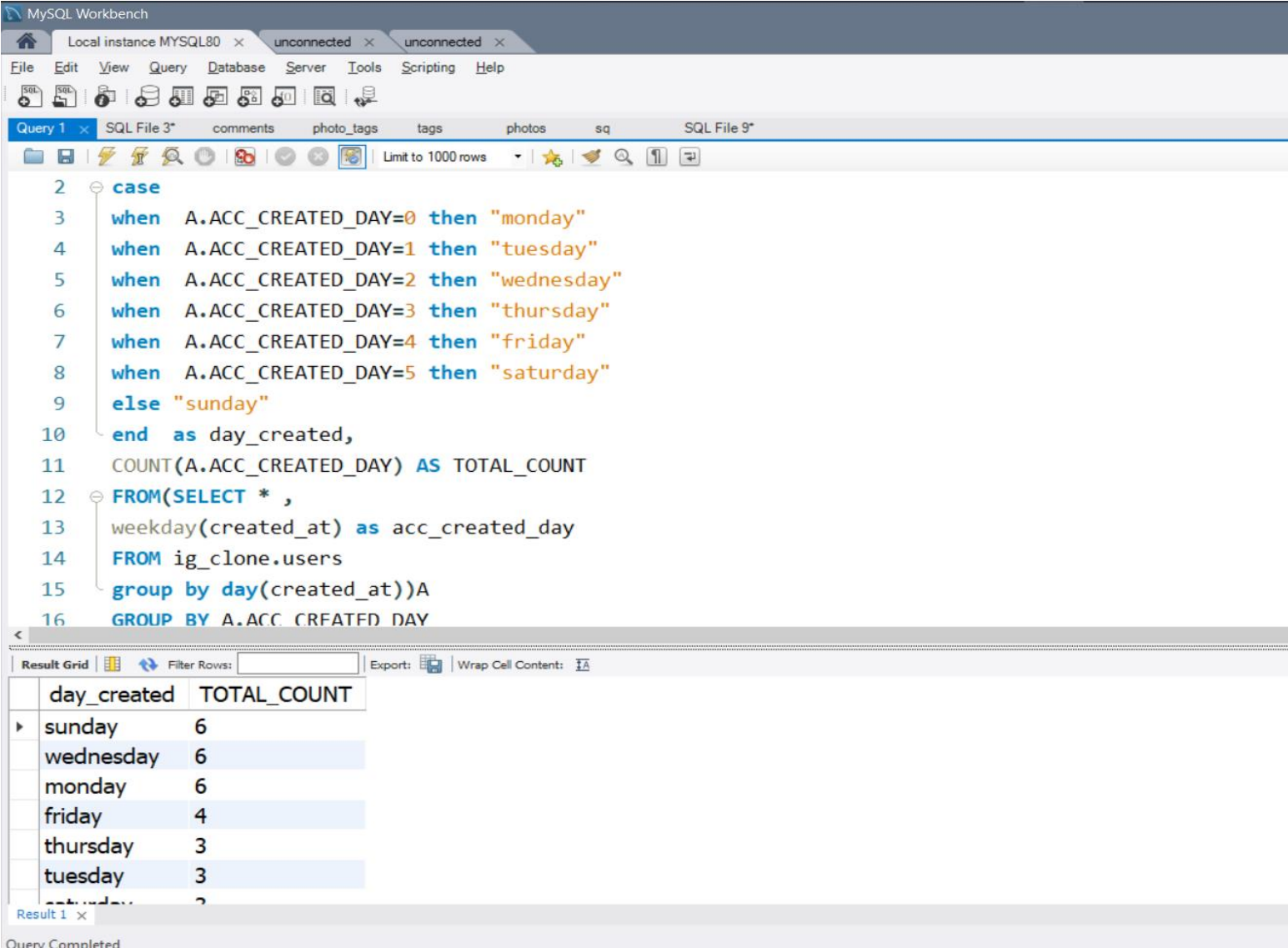
The 'Result Grid' at the bottom shows the results of the query:

tag_name	total_tags
smile	59
beach	42
party	39
fun	38
concert	24
food	24
lol	24
hair	23
happy	22
beauty	20
dreamy	20

The status bar at the bottom indicates 'Query Completed'.

5) LAUNCH AD CAMPAIGN

- + The weekdays the users login the most are extracted.



The screenshot displays the MySQL Workbench interface. The top toolbar includes icons for file operations, query execution, and database management. The main editor window shows a SQL query that uses a CASE statement to categorize users by the day of the week they created their account, based on the 'ACC_CREATED_DAY' field. The query also counts the number of users for each day. Below the query editor, the 'Result Grid' tab is active, showing the output of the query. The results are presented in a table with two columns: 'day_created' and 'TOTAL_COUNT'. The data shows that 6 users created accounts on Sunday, Wednesday, and Monday, 4 on Friday, 3 on Thursday, and 3 on Tuesday. The status bar at the bottom indicates 'Query Completed'.

```
2 case
3   when A.ACC_CREATED_DAY=0 then "monday"
4   when A.ACC_CREATED_DAY=1 then "tuesday"
5   when A.ACC_CREATED_DAY=2 then "wednesday"
6   when A.ACC_CREATED_DAY=3 then "thursday"
7   when A.ACC_CREATED_DAY=4 then "friday"
8   when A.ACC_CREATED_DAY=5 then "saturday"
9   else "sunday"
10 end as day_created,
11 COUNT(A.ACC_CREATED_DAY) AS TOTAL_COUNT
12 FROM(SELECT * ,
13   weekday(created_at) as acc_created_day
14 FROM ig_clone.users
15 group by day(created_at))A
16 GROUP BY A.ACC_CREATED_DAY
```

day_created	TOTAL_COUNT
sunday	6
wednesday	6
monday	6
friday	4
thursday	3
tuesday	3

Result 1 x

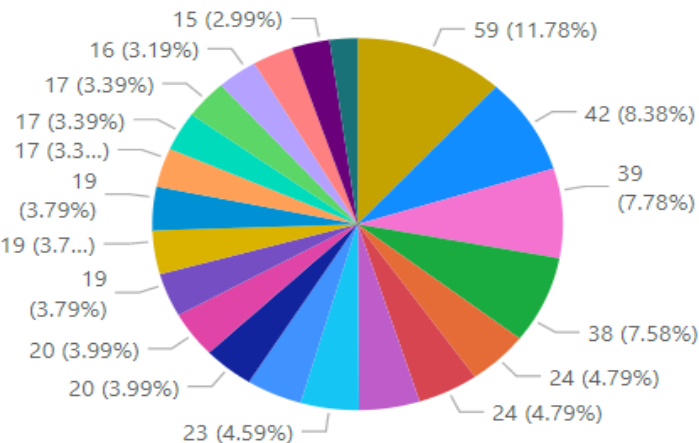
Query Completed

Marketing insights

MOST USED

hashtags

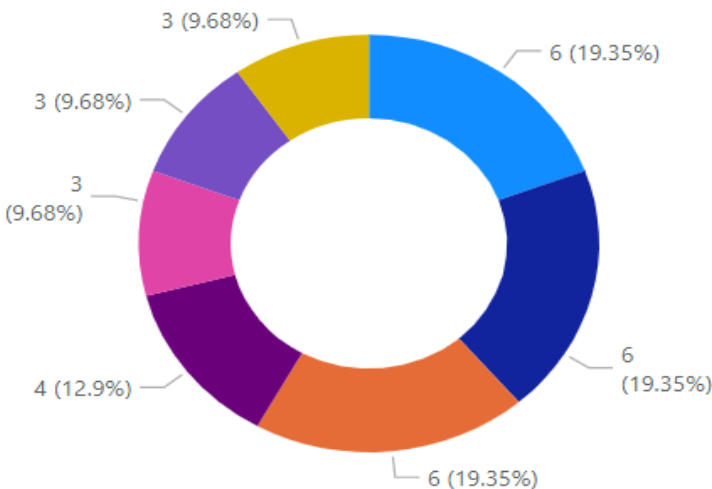
- smile
- beach
- party
- fun
- concert
- food
- lol
- hair
- happy



DAYS MOST LOGGED IN

WEEKDAYS

- monday
- sunday
- wednesday
- friday
- saturday
- thursday
- tuesday



LOYAL USERS

Darby_Herzog

Elenor88

Emilio_Bernier52

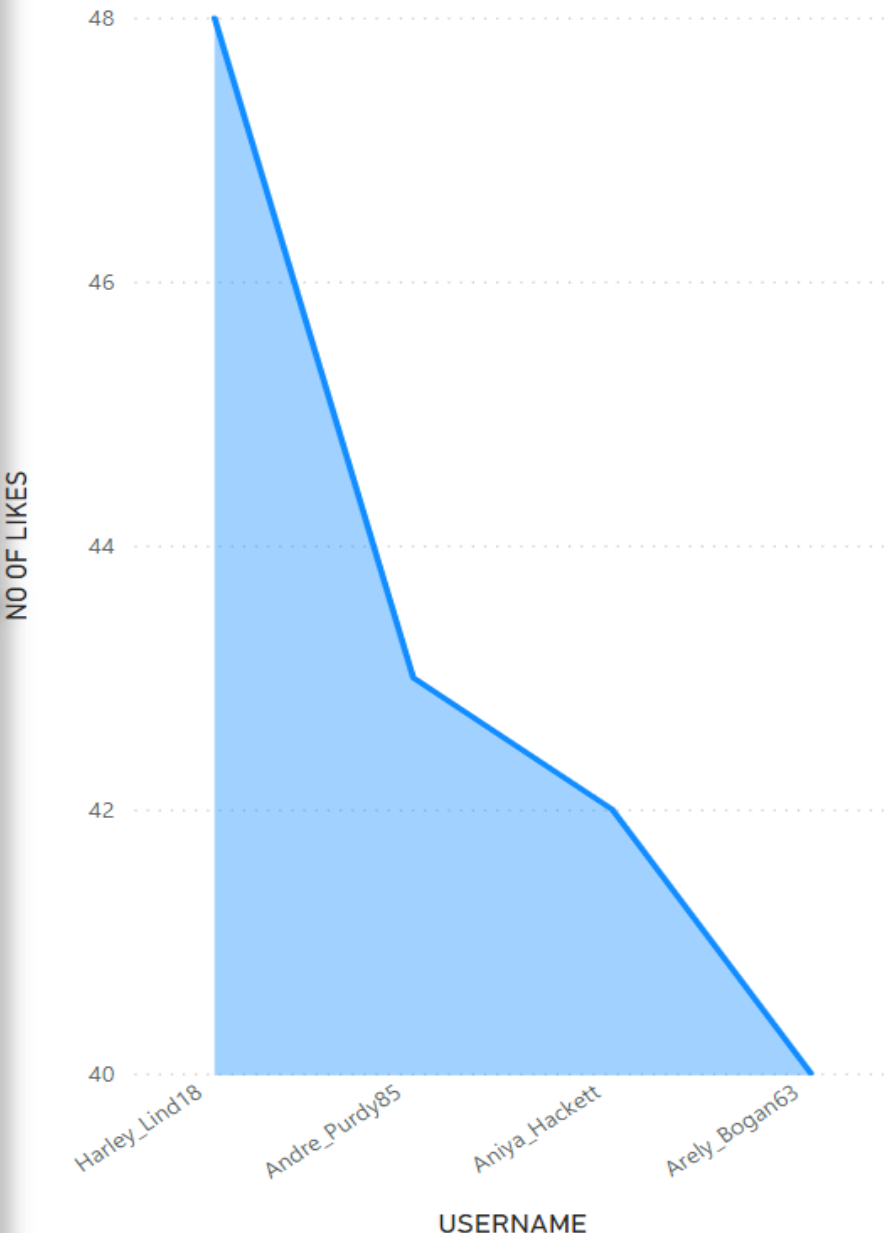
Jordyn.Jacobson2

Nicole71

26

Count of inactive_users

MOST LIKED PHOTOS



INVESTOR METRICS INSIGHT

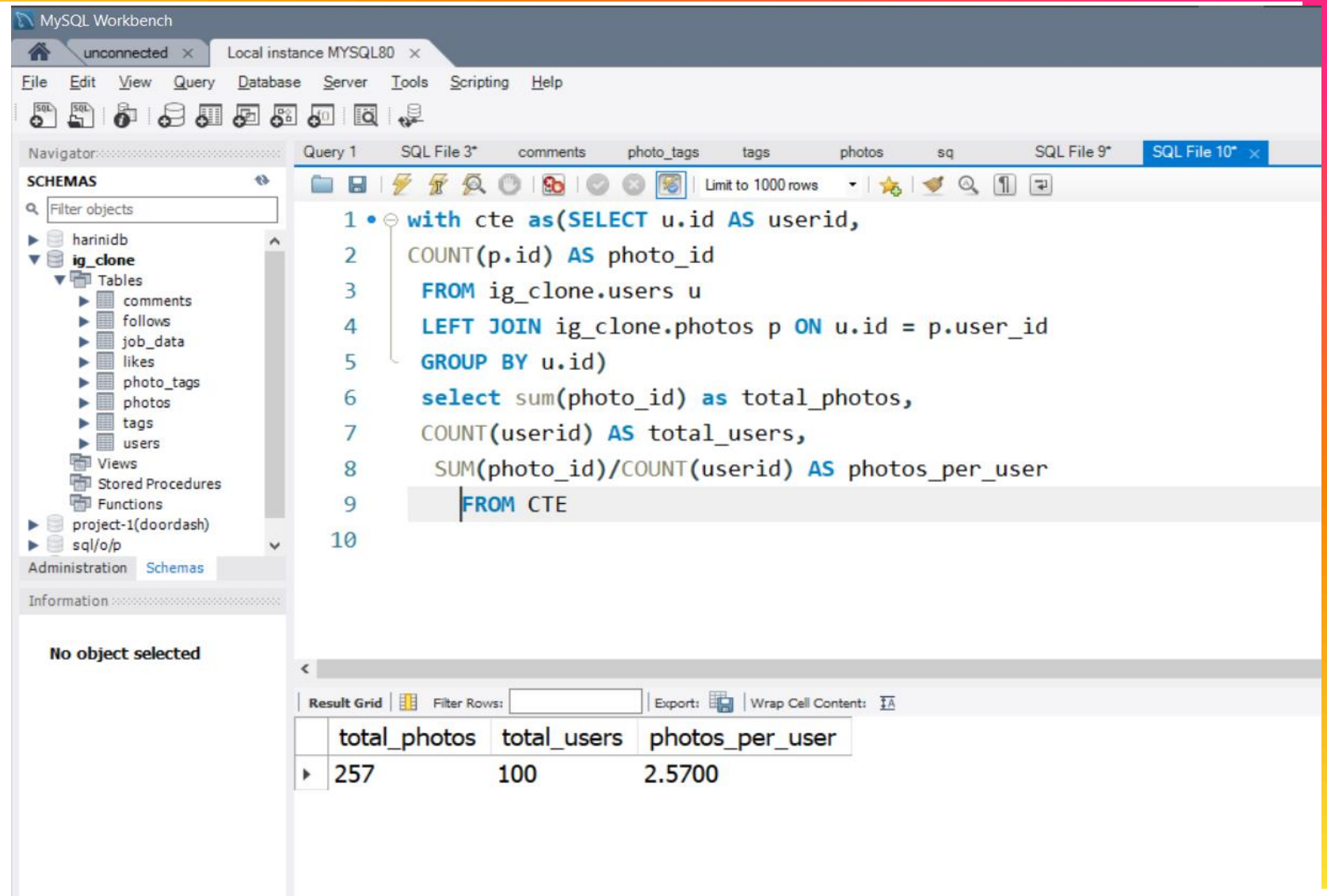
❖ USER ENGAGEMENT

❖ BOTS AND FAKE ACCOUNTS

To understand the performance and to avoid the degradation of the application certain data is extracted to give insights to get a full understanding on improving the Instagram application.

1) USER ENGAGEMENT:

- + The results of the average users posts on Instagram and the average of photos posted was extracted from the given data



The screenshot shows the MySQL Workbench interface. The left sidebar displays the 'SCHEMAS' tree with the 'ig_clone' database selected, showing tables like 'comments', 'follows', 'job_data', 'likes', 'photo_tags', 'photos', 'tags', and 'users'. The main editor displays a SQL query using a Common Table Expression (CTE) to calculate user engagement metrics. The query is as follows:

```
1 • with cte as(SELECT u.id AS userid,  
2     COUNT(p.id) AS photo_id  
3     FROM ig_clone.users u  
4     LEFT JOIN ig_clone.photos p ON u.id = p.user_id  
5     GROUP BY u.id)  
6     select sum(photo_id) as total_photos,  
7     COUNT(userid) AS total_users,  
8     SUM(photo_id)/COUNT(userid) AS photos_per_user  
9     FROM CTE  
10
```

The 'Result Grid' at the bottom shows the output of the query:

	total_photos	total_users	photos_per_user
▶	257	100	2.5700

2)BOTS AND FAKE ACCOUNTS

- + THE USERS WHO HAVE LIKED EVERY PHOTO IN THE SITE HAVE BEEN CONSIDERED AS FAKE ACCCOUNT HOLDERS AND HAVE BEEN SORTED OUT.

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' pane shows a database named 'ig_clone' with several tables, including 'likes'. The 'Table: likes' information pane shows columns: 'user_id' (int PK), 'photo_id' (int PK), and 'created_at' (timestamp). The main query editor displays the following SQL query:

```
1 • select user_id,u.username,  
2 count(photo_id)as total_photos_liked  
3 from ig_clone.likes l  
4 inner join ig_clone.users u on l.user_id=u.id  
5 group by user_id having total_photos_liked=  
6 (SELECT  
7 count(id)as total FROM ig_clone.photos)
```

The 'Result Grid' at the bottom shows the results of the query, displaying columns 'user_id', 'username', and 'total_photos_liked'. The results are as follows:

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

The status bar at the bottom indicates 'Query Completed'.

RESULT:

This project has given me a chance to see how data is collected and it has helped me understand and get a glimpse of how a data analysts works with data , I have also learnt to use SQL more effectively and powerbi to make good dashboards . I have also experienced how social media companies make data driven decisions and how marketing and user engagement data is very helpful in improving the platforms and applications.

On the whole this project has acted as a stepping stone to my data analytics career and the insights drawn encourage me to do more real life projects.



Thank you

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