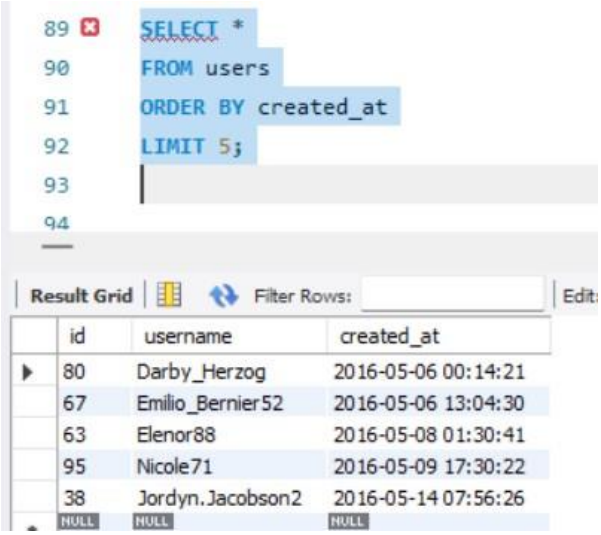
Instagram User Analytics

A) Marketing Analysis:

1. Loyal User Reward:

```
SELECT *
FROM users
ORDER BY created_at
LIMIT 5;
```



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 User Engagement:

```
SELECT users.id, users.username
FROM users
LEFT JOIN photos ON users.id = photos.user_id
WHERE photos.id IS NULL;
```

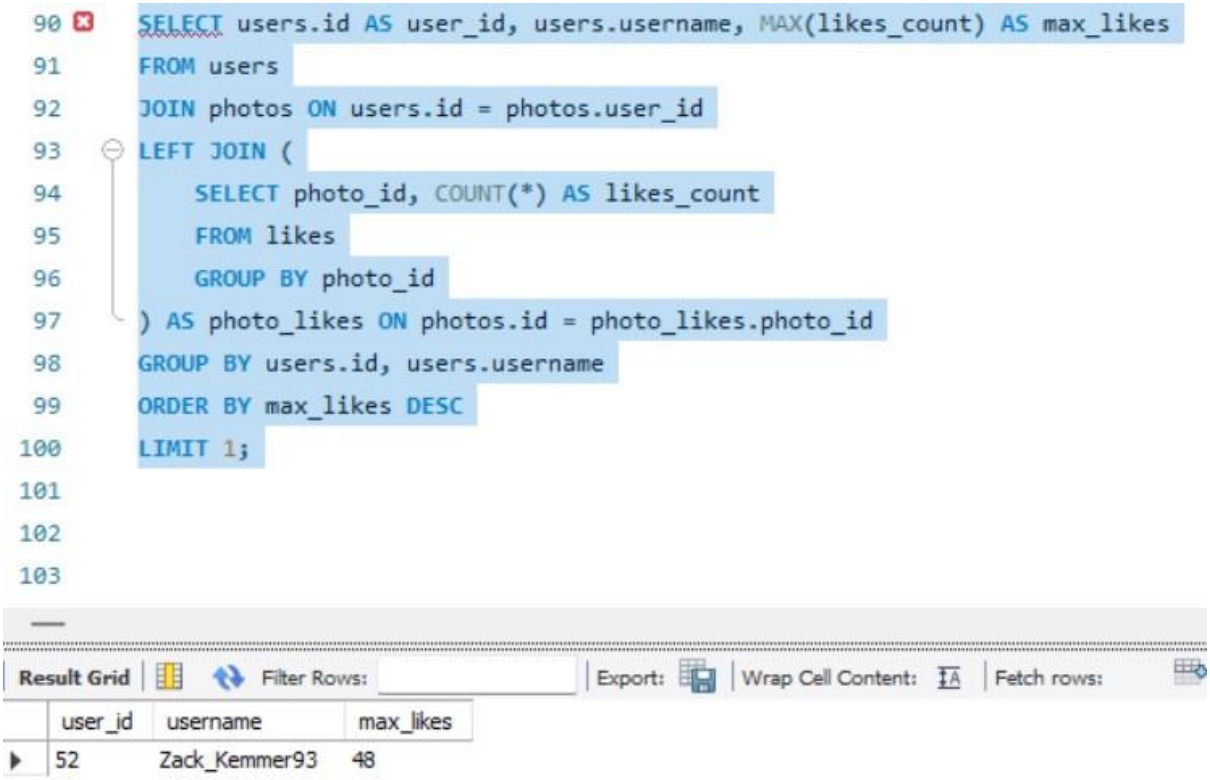
```
90  SELECT users.id, users.username
91  FROM users
92  LEFT JOIN photos ON users.id = photos.user_id
93  WHERE photos.id IS NULL;
```

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

id	username
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

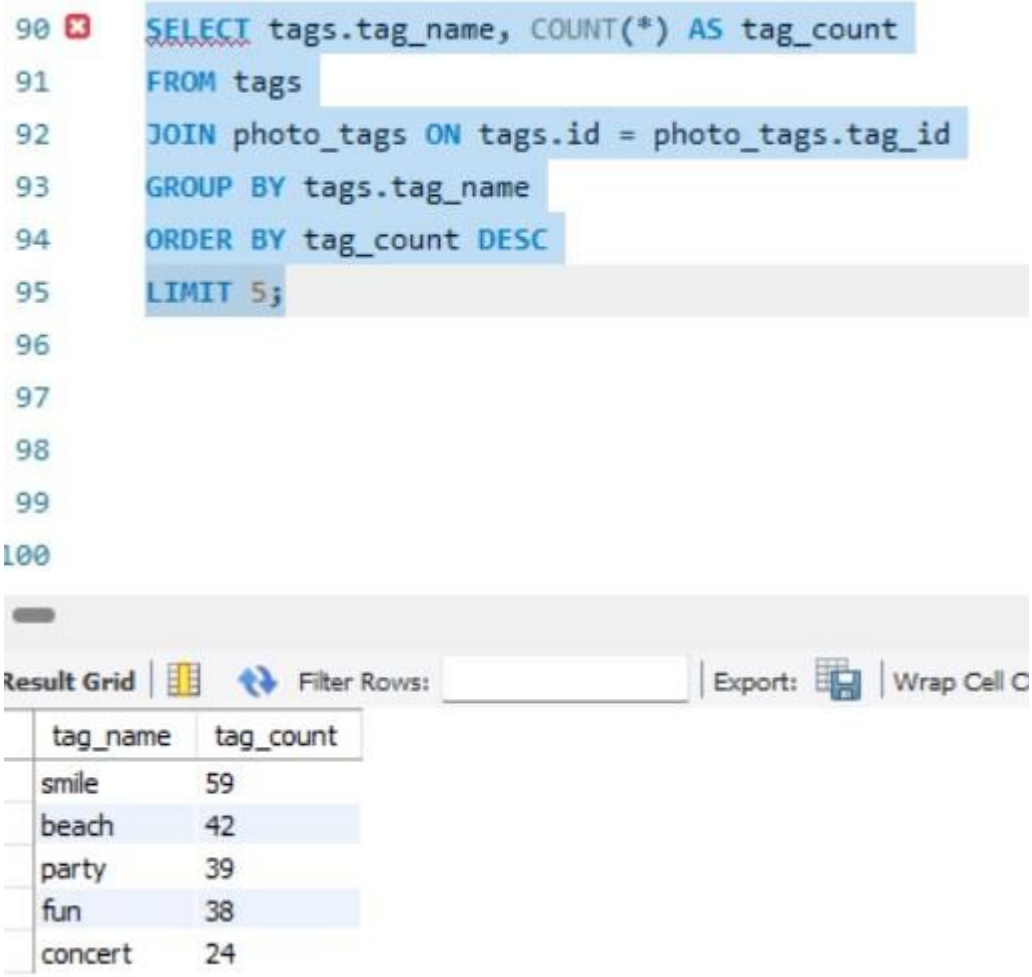
3. Contest Winner Declaration

```
SELECT users.id AS user_id, users.username, MAX(likes_count) AS max_likes
FROM users
JOIN photos ON users.id = photos.user_id
LEFT JOIN (
   SELECT photo_id, COUNT(*) AS likes_count
   FROM likes
   GROUP BY photo_id
) AS photo_likes ON photos.id = photo_likes.photo_id
GROUP BY users.id, users.username
ORDER BY max_likes DESC
LIMIT 1;
```



4. Hashtag Research:

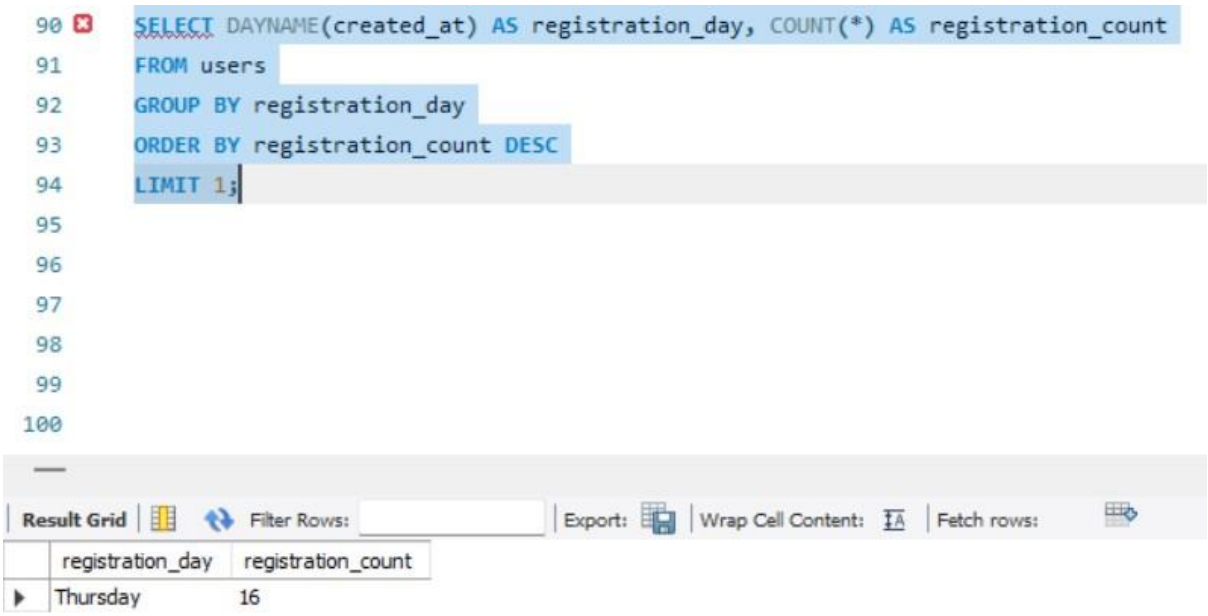
```
SELECT tags.tag_name, COUNT(*) AS tag_count
FROM tags
JOIN photo_tags ON tags.id = photo_tags.tag_id
GROUP BY tags.tag_name
ORDER BY tag_count DESC
LIMIT 5;
```



tag_name	tag_count
smile	59
beach	42
party	39
fun	38
concert	24

5. Ad Campaign Launch:

```
SELECT DAYNAME(created_at) AS registration_day, COUNT(*) AS registration_count
FROM users
GROUP BY registration_day
ORDER BY registration_count DESC
LIMIT 1;
```

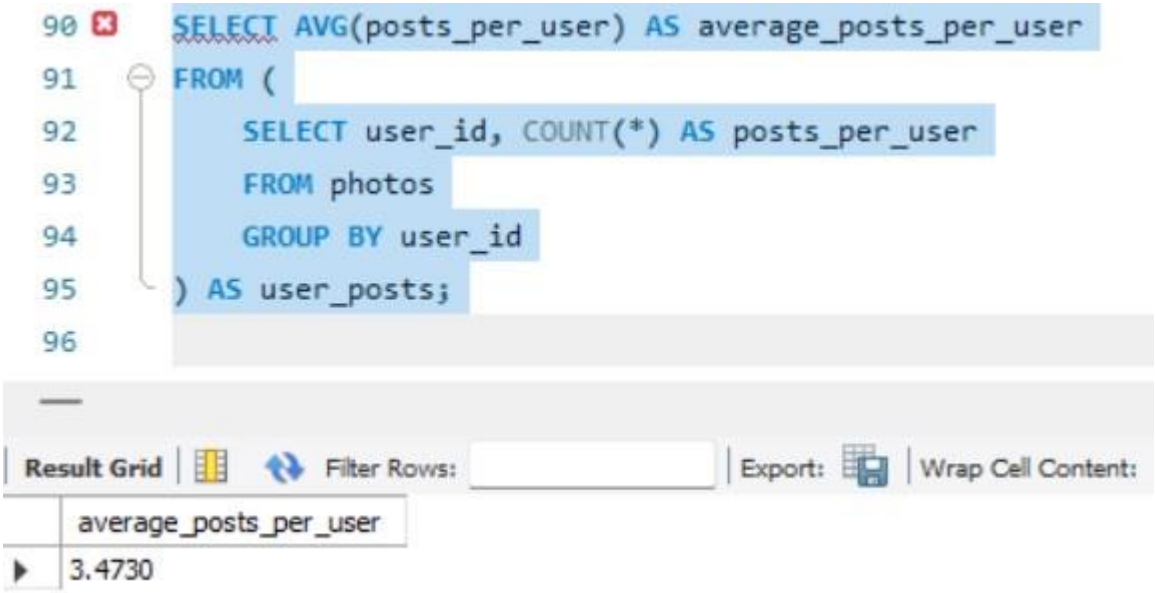


B) Investor Metrics:

1. User Engagement:

- Average number of Posts per user

```
SELECT AVG(posts_per_user) AS average_posts_per_user
FROM (
    SELECT user_id, COUNT(*) AS posts_per_user
    FROM photos
    GROUP BY user_id
) AS user_posts;
```



- Total number of photos on Instagram divided by the total number of users

```
SELECT COUNT(*) AS total_photos, COUNT(DISTINCT user_id) AS total_users,
    COUNT(*) / COUNT(DISTINCT user_id) AS photos_per_user_ratio
FROM photos;
```

```
90  SELECT COUNT(*) AS total_photos, COUNT(DISTINCT user_id) AS total_users,
91         COUNT(*) / COUNT(DISTINCT user_id) AS photos_per_user_ratio
92  FROM photos;
93
94
95
96
97
98
99
100
```

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

total_photos	total_users	photos_per_user_ratio
257	74	3.4730

2. Bots & Fake Accounts:

```
SELECT user_id
FROM (
   SELECT DISTINCT user_id, photo_id
   FROM likes
) AS unique_likes
GROUP BY user_id
HAVING COUNT(DISTINCT photo_id) = (SELECT COUNT(*) FROM photos);
```

```
91  SELECT user_id
92  FROM (
93      SELECT DISTINCT user_id, photo_id
94      FROM likes
95  ) AS unique_likes
96  GROUP BY user_id
97  HAVING COUNT(DISTINCT photo_id) = (SELECT COUNT(*) FROM photos);
```

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

user_id
5
14
21
24
36
41
54
57
66
71
75
76
91