Social media - Database Schema and SQL Analytics

The Project is based on the Ig Clone datasets related to the Social Media and covers the following points.

- User Engagement Analysis
- User Authenticity Assessment
- User Onboarding Insights
- Bot Detection
- Advanced User Profiling
- User Activity Assessment

The dataset contains the Following Tables
1. Users
2. Photos
3. Comments
4. Likes
5. Follows
6. Tags
7. Photo Tags

The Queries are run on the MYSQL software.

1.0 We want to reward the user who has been around the longest, Find the 5 oldest users.

```
SELECT ID, USERNAME FROM USERS order by CREATED_AT LIMIT 5;
```

2.To target inactive users in an email ad campaign, find the users who have never posted a photo.

```
SELECT USERNAME FROM USERS where id not in (select user_id from photos);
```

3.Suppose you are running a contest to find out who got the most likes on a photo. Find out who won?

```
with cte as (select photo_id, count(user_id) as nlikes from likes
            group by photo_id order by nlikes desc limit 1)
select u.username, c.photo_id, c.nlikes from cte c
                                join photos p on p.id=c.photo_id
                                join users u on p.user_id=u.id;
```

4.The investors want to know how many times does the average user post.

```
with cte as (select u.id, count(p.id) as photonum
            from photos p right join users u
            on p.user_id=u.id group by u.id)
            select avg(photonum) as avguserpost from cte;
```

5. A brand wants to know which hashtag to use on a post, and find the top 5 most used hashtags.

```
select id as tag_id, tag_name, count(*) as tag_count
from tags t
join photo_tags pt on t.id=pt.tag_id
group by t.id order by tag_count desc limit 5;
```

6.To find out if there are bots, find users who have liked every single photo on the site.

```
select l.user_id, u.username from likes l
join users u on l.user_id = u.id
join photos p on l.photo_id=p.id
group by l.user_id, u. username
having count(distinct l.photo_id)=(select count(*) from photos );
```

7.Find the users who have created instagramid in may and select top 5 newest joinees from it?

```
select username, created_at from users
where monthname(created_at)='may' order by created_at desc limit 5;
```

8.Can you help me find the users whose name starts with c and ends with any number and have posted the photos as well as liked the photos?

```
select  distinct u.id,u.username from users u
join photos p on u.id=p.user_id
join likes l on u.id= l.user_id
where u.username regexp '^c.*[0-9]$';
```

9.Demonstrate the top 30 usernames to the company who have posted photos in the range of 3 to 5.

```
select u.username from users u join photos p on u.id = p.user_id
group by u.username having count(p.id) between 3 and 5
order by count(p.id) desc limit 30;
```