Instagram User Analytics

DATA REPORT

SQL Tasks :

A) Marketing Analysis:

Loyal User Reward: The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.

Your Task: Identify the five oldest users on Instagram from the provided database.

Syntax :

```
select * from users
order by created_at asc
limit 5;
```

Output :

id	username	created_at
180	Darby_Herzog	2016-05-06 00:14:21
80	Darby_Herzog	2016-05-06 00:14:21
280	Darby_Herzog	2016-05-06 00:14:21
380	Darby_Herzog	2016-05-06 00:14:21
480	Darby_Herzog	2016-05-06 00:14:21
NULL	NULL	NULL

Result : The five oldest user in Instagram ID'S (35,63,67,80,95)

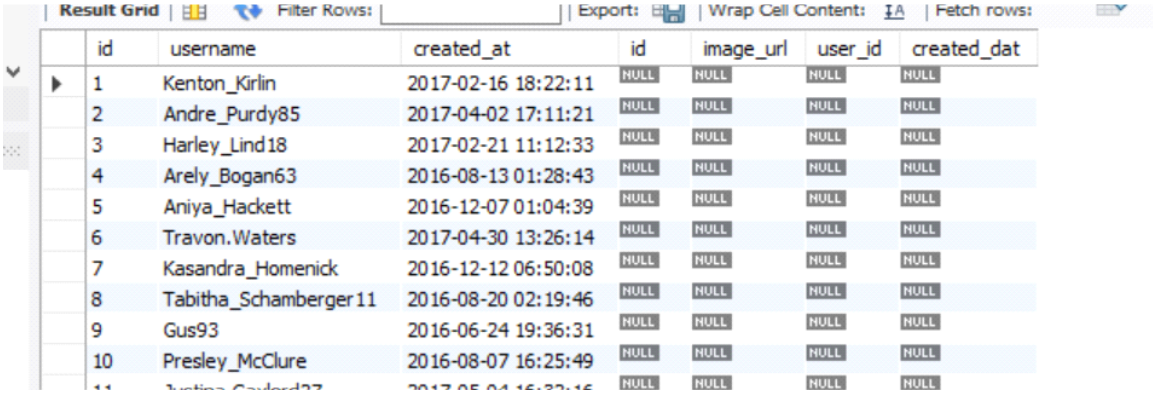
Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails**.**

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

Syntax :

```
select * from users as a
left join photos as b on
a.id = b.user_id and
b.user_id is null
```

Output :



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

id	username	created_at	id	image_url	user_id	created_dat
1	Kenton_Kirlin	2017-02-16 18:22:11	NULL	NULL	NULL	NULL
2	Andre_Purdy85	2017-04-02 17:11:21	NULL	NULL	NULL	NULL
3	Harley_Lind18	2017-02-21 11:12:33	NULL	NULL	NULL	NULL
4	Arely_Bogan63	2016-08-13 01:28:43	NULL	NULL	NULL	NULL
5	Aniya_Hackett	2016-12-07 01:04:39	NULL	NULL	NULL	NULL
6	Travon.Waters	2017-04-30 13:26:14	NULL	NULL	NULL	NULL
7	Kasandra_Homenick	2016-12-12 06:50:08	NULL	NULL	NULL	NULL
8	Tabitha_Schamberger11	2016-08-20 02:19:46	NULL	NULL	NULL	NULL
9	Gus93	2016-06-24 19:36:31	NULL	NULL	NULL	NULL
10	Presley_McClure	2016-08-07 16:25:49	NULL	NULL	NULL	NULL

Result : Users who have never posted a single photo in Instagram

Contest Winner Declaration: The team has organized a contest where the user with **the** most likes on a single photo wins**.**

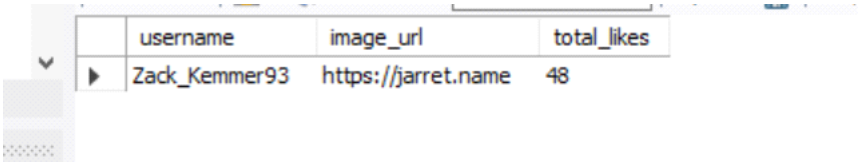
Your Task: Determine the winner of the contest and provide their details to the team**.**

Syntax :

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

O

Output :



username	image_url	total_likes
Zack_Kemmer93	https://jarret.name	48

Result : The winner of the contest is 48 by Zack kemmer93.

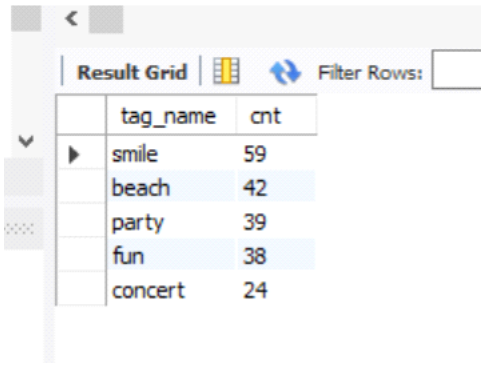
Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

Your Task: Identify and suggest the top five most commonly used hashtags on the platform**.**

Syntax :

```
select a.tag_name ,count(b.tag_id) as cnt from tags as a
left join photo_tags as b
on a.id = b.tag_id
group by a.tag_name
order by cnt desc
limit 5
```

Output :



Result Grid | Filter Rows:

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

Result : The most commonly used hastag names is (Smile,Beach,Party,Fun,Concert).

Ad Campaign Launch: The team wants to know the best day of the week to launch ads.

Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign**.**

Syntax :

```
select dayname(created_at) as day,
count(*) as total
from users
group by day
order by total desc
limit 2;
```

Output :

Result Grid

	day	total
▶	Thursday	16
	Sunday	16

Result : The most users register in Instagram on Thursday and Sunday.

B) Investor Metrics:

User Engagement: Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.

Your Task: Calculate the average number of posts per user on Instagram. Also, provide the total number of photos on Instagram divided by the total number of users.

Syntax :

```
select count(*) as no_photos from photos;
select count(*) as no_users from users;

select (select count(*) as no_photos from photos) / (select count(*) as no_users from users) as Avg;
```

Output :

Result Grid

	Avg
▶	2.5700

Result Grid

	no_users
▶	100

Result Grid

	no_photos
▶	257

Result : The average number of posts per Instagram User is 2.57.

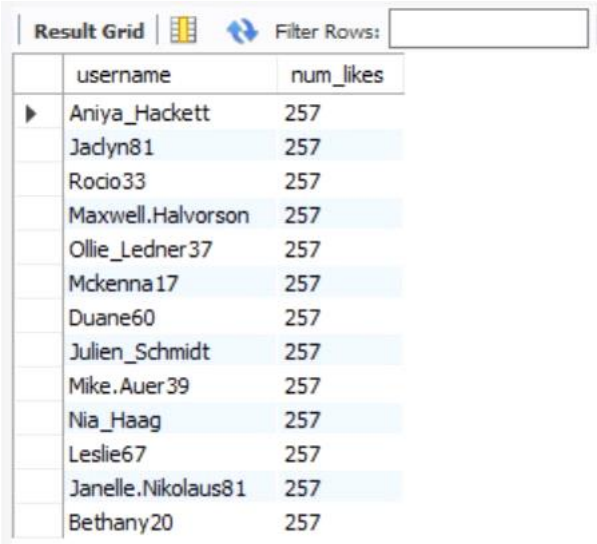
Bots & Fake Accounts: Investors want to know if the platform is crowded with fake and dummy accounts.

Your Task: Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

Syntax :

```
select username,
count(*) as num_likes
from users
inner join likes on users.id = likes.user_id
group by likes.user_id
having num_likes = (select count(*)
from photos);
```

Output :


Result Grid | Filter Rows:

username	num_likes
Aniya_Hackett	257
Jadyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257
Duane60	257
Julien_Schmidt	257
Mike.Auer39	257
Nia_Haag	257
Leslie67	257
Janelle.Nikolaus81	257
Bethany20	257

Result : I found out 13 Fake accounts in Instagram.