Project - Project is Instagram user analytics

Description – The Instagram user analytics project defines how is the engagement of user on the platform. That user is uploading content or not or is he liking the content or not all the stuff like likes, comment, share. The tool we required for this project is SQL.

Approach – Ok so steps for the queries I have executed:

For que 1)

This was the easiest question.

I have used **users** table here. With the help of **order by** clause I execute this table.

So Basically , by using **order by** we can arrange the column in ascending and descending order. So by arranging the particular column in descending order we can get it like **biggest to lowest.**

So I arranged it in desc order and I got the required output.

For que 2)

In this que ,had to identify users who have never posted a single photo on Instagram.

So first I executed **users and photos** table to know the database.

After that I did the use of **left join** to know the users who have never posted a single photo on instagram.

Here I used the aggregate function to know the total no of usernames.

From users I left join photos then I equal photos id with users' username.

Then I put a condition where I wanted image_url to be null and I did that with the help of **is null.**

For que 3)

In this que,I had to determine the winner of the contest and provide their details to the team.

So first I executed three table to know the data.I executes **likes,users,photos.**

So I took photo_id from likes and username from users and used the aggregate function count for user_id as total likes then I did the use of inner join for three tables

First I did inner join of likes and photos and then likes and users.

And group by photo_id and username to get particular name or id.

And columns in the descending order using order by clause.

For que 4)

In this que, we had to identify top five commonly used hashtags.

So I used two tables here which are tags,photo tags.

With the help of inner join I did this.

So first I take tag name from tags table and used aggregate function count to know the total number of likes .

Then I inner join photo tags with tags.I equal tag id from photos tags table and id from tags table

And group by tag name .And I wanted 5 hashtags only so I used limit.

For que 5)

In this que , I just use date format function and count the username who visited most of the time on the platform .From the users table I took the data.

For que 6)

In this que ,I have used common table expression in which there is a with clause.

Basically what it does is it allows us to specify more than one cte's in a single query.

So I names CTE as jupy ,Inside I insert a query.In that I used left join with the help of two tables users and photos.

For que 7)

In this que,

Again I used CTE with the help of two tables users and likes.I used here inner join to get the same records from both the tables.Here I wanted to find total likes given by a particular user on someone's post.

Tech-Stack Used –

I used My SQL workbench and it is far better than to use this one than others. Actually, it's very easy to use and very understandable.

Insights –

In the Instagram user analytics project, I found that the engrossment level or the engagement level depends on the type of content they are receiving. If the user likes the content, then they will like or comment or share. Here I was able to predict how the follower growth could improve by creating the best content strategies. These insights can help creators to post content which is likeable by the user and to get the more attention and engagement.

Results –

The results of instagram user analytics project showed that engagement is higher during daytime. Posts with relevant hashtags and appealing topics saw more interactions. Being consistent to your content can make faster growth. And I also saw that uploading your content on evening time can give a faster growth and by being consistent.

Drive link -

```sql
use ig_clone;

select * from users;

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

select * from users
order by username
limit 5;
```

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

id	username	created_at
65	Adelle96	2016-10-01 00:37:57
31	Aiyana_Hoeger	2016-09-29 20:28:12
99	Alek_Watsica	2016-12-10 07:43:58
13	Alexandro35	2017-03-29 17:09:02
84	Alysa22	2017-01-01 17:44:43
NULL	NULL	NULL

```sql
# 2)Your Task: Identify users who have never posted a single photo on Instagram.

select * from users,photos;

select* from photos;

select count(username) as user_name from users
left join photos
on  photos.user_id=users.username
where image_url is null
order by username;
```

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

user_name
100

```sql
-- 3)Your Task: Determine the winner of the contest and provide their details to the team.

select * from likes,users,photos;



SELECT
    photo_id, username, COUNT(likes.user_id) AS total_likes
FROM
    likes
        INNER JOIN
    photos ON likes.photo_id = photos.user_id
        INNER JOIN
    users ON photos.user_id = users.id
GROUP BY photo_id , username
ORDER BY total_likes DESC;
```

photo_id	username	total_likes
23	Eveline95	456
59	Cesar93	370
88	Clint27	363
86	Delfina_VonRueden68	306
58	Aurelie71	288
29	Jaime53	264
77	Donald.Fritsch	210
52	Zack_Kemmer93	205
13	Alexandro35	200
43	Janet.Armstrong	185
64	Florence99	170
78	Colten.Harris76	170
65	Adelle96	165
11	Justina.Gaylord27	165
72	Kathryn80	165
44	Seth46	156
6	Travon.Waters	155
3	Harley_Lind18	152
63	Elenor88	152
47	Harrison.Beatty50	150
26	Josianne.Friesen	150
87	Rick29	148
16	Annalise.McKenzie16	148
33	Yvette.Gottlieb91	145
51	Mariano_Koch3	145

photo_id	username	total_likes
28	Dario77	144
46	Malinda_Streich	136
15	Billy52	136
32	Irwin.Larson	132
1	Kenton_Kirlin	125
9	Gus93	124
12	Dereck65	116
4	Arely_Bogan63	114
42	Maya.Farrell	111
17	Norbert_Carroll35	108
8	Tabitha_Schamberge...	108
67	Emilio_Bernier52	105
99	Alek_Watsica	102
96	Keenan.Schamberger60	90
10	Presley_McClure	90
92	Frederik_Rice	87
30	Kaley9	82
50	Gerard79	81
97	Tomas.Beatty93	80
100	Javonte83	78
62	Ressie_Stanton46	78
85	Milford_Gleichner42	72
19	Hailee26	70
82	Aracely.Johnston98	70

Alek_Watsica

84	Alysa22	70
35	Lennie_Hartmann40	64
60	Sam52	64
38	Jordyn.Jacobson2	62
93	Willie_Leuschke	62
95	Nicole71	56
61	Jayson65	41
69	Karley_Bosco	38
37	Yazmin_Mills95	38
40	Rafael.Hickle2	37
56	Peter.Stehr0	36
20	Delpha.Kihn	35
55	Meggie_Doyle	35
48	Granville_Kutch	35
70	Erick5	34
39	Kelsi26	34
79	Katarina.Dibbert	34
94	Damon35	34
98	Imani_Nicolas17	34
31	Aiyana_Hoeger	31
27	Darwin29	31
18	Odessa2	31
73	Jaylan.Lakin	31
22	Kenneth64	28

```sql
-- 4)Your Task: Identify and suggest the top five most commonly used hashtags on the platform.

select * from tags ,photo_tags;

use ig_clone;

select tag_name,count(photo_id) as hashtags
from photo_tags inner join tags
on tags.id=photo_tags.tag_id
group by tag_name
order by hashtags desc
limit 5;
```

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

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

Query 1 | SQL File 3* | SQL File 5* | SQL File 6*

Limit to 1000 rows

```sql
-- 5)Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.
select * from users;

SELECT
    DATE_FORMAT((created_at), '%W') AS week_day,
    COUNT(username) AS total_users
FROM
    users
GROUP BY week_day
ORDER BY total_users DESC;
```

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

week_day	total_users
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

```sql
use ig_clone;
-- 6)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.
select * from users,photos;

with jupy as (
select users.id as userssid,count(photos.id) as photoid from users
left join photos
on photos.user_id=users.id
group by users.id)
select sum(photoid) as total_photos,count(userssid) as userid,
sum(photoid)/count(userssid) as photo_per_user
from jupy;
```

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

total_photos	userid	photo_per_user
257	100	2.5700

Result Grid
Form Editor

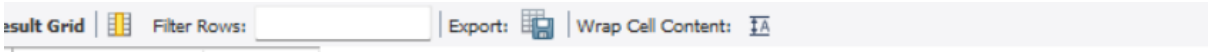
Query 1 | SQL File 1* | Administration - Status and Syst...

Limit to 1000 rows

```sql
-- 7) 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.

select * from users,likes;


with jupy as (
select username ,count(likes.photo_id) as total_likes from likes
inner join users
on users.id=likes.user_id
group by username)
select username,total_likes  from jupy  where total_likes =( select count(*) from photos)
order by username;
```



username	total_likes
Aniya_Hackett	257
Bethany20	257
Duane60	257
Jaclyn81	257
Janelle.Nikolaus81	257
Julien_Schmidt	257
Leslie67	257
Maxwell.Halvorson	257
Mckenna17	257
Mike.Auer39	257
Nia_Haag	257
Ollie_Ledner37	257
Rocio33	257