Project 2 – Instagram Data Analytics

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SQL Tasks

A)Marketing Analysis

Q.1) Loyal User Award

Identified the 5 Oldest users on Instagram

```
11      -- Q.1) - find the 5 oldest users of the Instagram from the database provided
12      select username , created_at from users
13      order by created_at
14      limit 5;
15
```

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

username	created_at
Darby_Herzog	2016-05-06 00:14:21
Emilio_Bernier52	2016-05-06 13:04:30
Elenor88	2016-05-08 01:30:41
Nicole71	2016-05-09 17:30:22
Jordyn.Jacobson2	2016-05-14 07:56:26

Q.2) Inactive User Engagement

Identifying users who have never posted a single photo on Instagram

```
16      -- Q.2)- Find the users who have never posted a single photo on Instagram
17      select * from users
18      left join photos
19      on
20      photos.user_id=users.id
21      where
22      photos.image_url is null
23      order by users.username;
24
```

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

id	username	created_at	id	image_url	user_id	created_dat
5	Aniya_Hackett	2016-12-07 01:04:39	NULL	NULL	NULL	NULL
83	Bartholome.Bernhard	2016-11-06 02:31:23	NULL	NULL	NULL	NULL
91	Bethany20	2016-06-03 23:31:53	NULL	NULL	NULL	NULL
80	Darby_Herzog	2016-05-06 00:14:21	NULL	NULL	NULL	NULL
45	David.Osinski47	2017-02-05 21:23:37	NULL	NULL	NULL	NULL
54	Duane60	2016-12-21 04:43:38	NULL	NULL	NULL	NULL
90	Esmeralda.Mraz57	2017-03-03 11:52:27	NULL	NULL	NULL	NULL
81	Esther.Zulauf61	2017-01-14 17:02:34	NULL	NULL	NULL	NULL

Q.3) Contest Winner Declaration

Determine the winner of the contest and provide their details to the team.

```
25      -- Q.3)- Identify the winner of the contest and provide  their details to the team
26 •    select likes.photo_id,users.username,count(likes.user_id) as liked
27      from likes
28      inner join
29      photos
30      on
31      likes.photo_id=photos.id
32      inner join users on photos.user_id=users.id
33      group by likes.photo_id,users.username order by liked desc;
```

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

photo_id	username	liked
145	Zack_Kemmer93	48
127	Malinda_Streich	43
182	Adelle96	43
123	Seth46	42
30	Presley_McClure	41
52	Annalise.McKenzie16	41
61	Delpha.Kihn	41
147	Meggie_Doyle	41

Q.4) Hashtag Research

Identify and suggest top 5 most commonly used hashtags on the platform

```
34      -- Q.4) Commonly used hashtags
35 •    select tags.tag_name,
36      count(photo_tags.photo_id) from photo_tags
37      inner join
38      tags
39      on
40      tags.id = photo_tags.tag_id
41      group by tags.tag_name order by count(photo_tags.photo_id) desc limit 5;
```

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

tag_name	count(photo_tags.photo_id)
smile	59
beach	42
party	39
fun	38
concert	24

Q.5) Ad Campaign Launch

Determine the day of the week when most users register on Instagram.

```
43      -- Q.5) What day of the week do most users register on?
44      select date_format((created_at),'%W') as dayyy,
45      count(username) from users group by dayyy
46      order by count(username) desc;
47
```

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

dayyy	count(username)
Thursday	16
Sunday	16
Friday	15
Tuesday	14
Monday	14
Wednesday	13
Saturday	12

B.) Investor Metrics

Q.1) User Engagement

Calculate the average number of posts per user on Instagram.

```
50      -- Q.6) User Engagement
51      with base as (
52      select u.id as userid,
53      count(photos.id) as photoid
54      from users u left join photos on
55      photos.user_id = u.id group by u.id)
56      select sum(photoid) as totalphotos,count(userid) as total_users,
57      sum(photoid)/count(userid) as photoperuser
58      from base;
59
```

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

totalphotos	total_users	photoperuser
257	100	2.5700

Q.2) Bots and Fake Accounts

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

```
61    -- Q.7) Bots
62    with base as (
63    select u.username,count(l.photo_id) as likesss
64    from likes l inner join users u on u.id=l.user_id
65    group by u.username)
66    select username,likesss from base where likesss=(select count(*) from photos) order by username;
```

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

username	likesss
Aniya_Hackett	257
Bethany20	257
Duane60	257
Jaclyn81	257
Janelle.Nikolaus81	257
Julien_Schmidt	257
Leslie67	257

This project is done on MySQL Workbench .

Thank you.