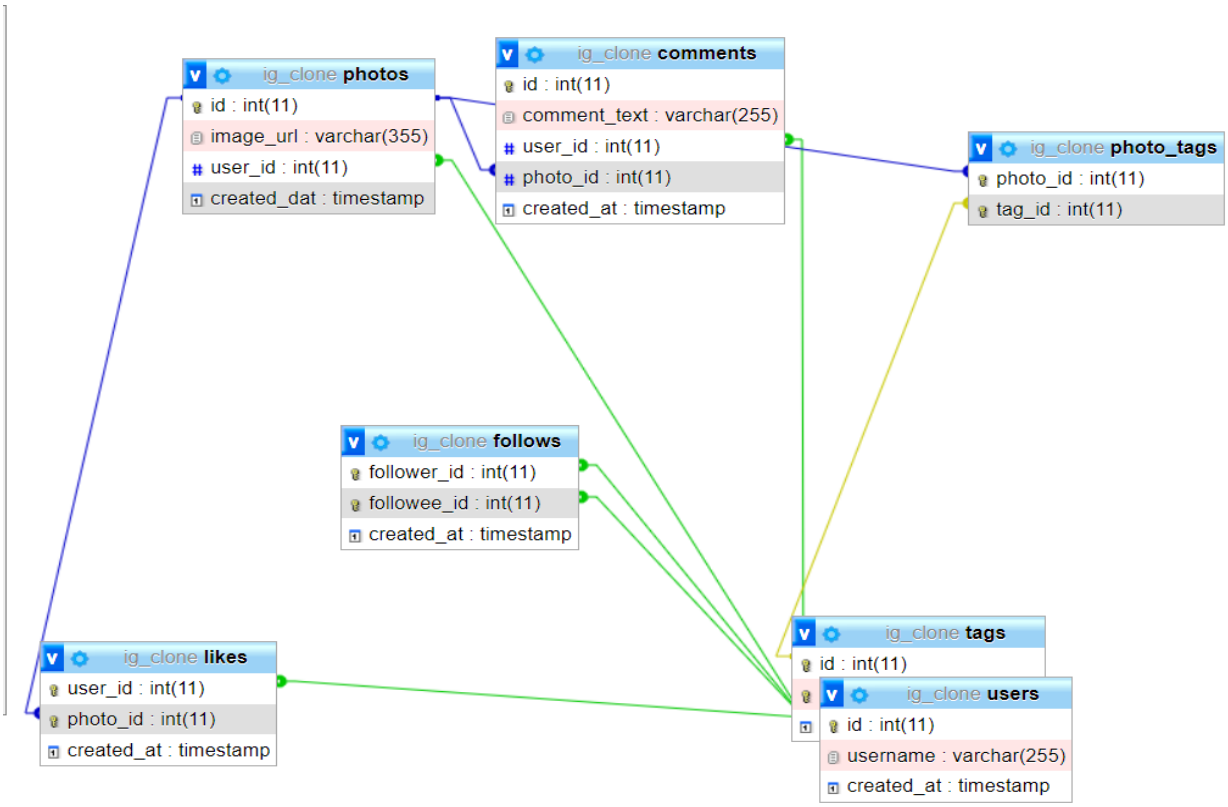
Project-2

Instagram User Analytics

User analysis of data involves **studying** and **interpreting** data related to user behavior, interactions, preferences, and characteristics within a specific context, platform, or system. It is a process of extracting meaningful insights and patterns from the data to make informed decisions and improvements. User analysis can be applied in various fields, including web analytics, customer behavior analysis, marketing, and product development.

DATABASE



SQL Tasks

A.Marketing Analysis

1. Loyal User Reward:

Query:

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

INPUT

```
1 SELECT * FROM `users`
2 ORDER BY created_at ASC
3 LIMIT 5
```

OUTPUT

		id	username	created_at
☐	Edit Copy Delete	80	Darby_Herzog	2016-05-06 00:14:21
☐	Edit Copy Delete	67	Emilio_Bernier52	2016-05-06 13:04:29
☐	Edit Copy Delete	63	Elenor88	2016-05-08 01:30:40
☐	Edit Copy Delete	95	Nicole71	2016-05-09 17:30:22
☐	Edit Copy Delete	38	Jordyn.Jacobson2	2016-05-14 07:56:25

2. Inactive User Engagement:

Query:

Select u.username,u.id from users as Where u.id NOT IN (Select Distict p.user_id from photos as p)

INPUT

```
1 SELECT u.username,u.id from users as u
2 WHERE u.id NOT IN (SELECT DISTINCT p.user_id from photos as p);
```

OUTPUT

+ Options

	username	id
Edit Copy Delete	Aniya_Hackett	5
Edit Copy Delete	Kasandra_Homenick	7
Edit Copy Delete	Jaclyn81	14
Edit Copy Delete	Rocio33	21
Edit Copy Delete	Maxwell.Halvorson	24
Edit Copy Delete	Tierra.Trantow	25
Edit Copy Delete	Pearl7	34
Edit Copy Delete	Ollie_Ledner37	36
Edit Copy Delete	Mckenna17	41
Edit Copy Delete	David.Osinski47	45
Edit Copy Delete	Morgan.Kassulke	49
Edit Copy Delete	Linnea59	53
Edit Copy Delete	Duane60	54
Edit Copy Delete	Julien_Schmidt	57
Edit Copy Delete	Mike.Auer39	66
Edit Copy Delete	Franco_Keebler64	68
Edit Copy Delete	Nia_Haag	71
Edit Copy Delete	Hulda.Macejkovic	74
Edit Copy Delete	Leslie67	75
Edit Copy Delete	Janelle.Nikolaus81	76
Edit Copy Delete	Darby_Herzog	80
Edit Copy Delete	Esther.Zulauf61	81
Edit Copy Delete	Bartholome.Bernhard	83
Edit Copy Delete	Jessyca_West	89
Edit Copy Delete	Esmeralda.Mraz57	90
Edit Copy Delete	Bethany20	91

3. Contest Winner Declaration:

Query:

```
SELECT likes.photo_id,users.username,COUNT(likes.user_id) as Like_User
from likes
INNER JOIN photos on likes.photo_id = photos.id
INNER JOIN users on photos.user_id = users.id
GROUP BY likes.photo_id,users.username
ORDER BY Like_User desc
LIMIT 1
```

INPUT

```
1 SELECT likes.photo_id,users.username,COUNT(likes.user_id) as Like_User
2 from likes
3 INNER JOIN photos on likes.photo_id = photos.id
4 INNER JOIN users on photos.user_id = users.id
5 GROUP BY likes.photo_id,users.username
6 ORDER BY Like_User desc
7 LIMIT 1;
```

OUTPUT

photo_id	username	Like_User
145	Zack_Kemmer93	48

4. Hashtag Research:

Query:

```
SELECT tags.tag_name,COUNT(photo_tags.photo_id) as Num_Tag from photo_tags
INNER JOIN tags on tags.id = photo_tags.tag_id
GROUP BY tags.tag_name
ORDER BY Num_Tag DESC
LIMIT 5;
```

INPUT

```
1 SELECT tags.tag_name,COUNT(photo_tags.photo_id) as Num_Tag from photo_tags
2 INNER JOIN tags on tags.id = photo_tags.tag_id
3 GROUP BY tags.tag_name
4 ORDER BY Num_Tag DESC
5 LIMIT 5;
```

OUTPUT

tag_name	Num_Tag ▼ 1
smile	59
beach	42
party	39
fun	38
concert	24

5. Ad Campaign Launch:

Query:

```
SELECT   weekday(created_at) as WeekDay, COUNT(users.username) as
Users_Num  FROM users
GROUP by WeekDay
ORDER BY  Users_Num desc
```

INPUT

```sql
SELECT weekday(created_at) as WeekDay, COUNT(users.username) as Users_Num
FROM users
GROUP by WeekDay
ORDER BY Users_Num desc;
```

OUTPUT

WeekDay	Users_Num
3	16
6	16
4	15
1	14
0	14
2	13
5	12

B.Investor Metrics

1. User Engagement:

INPUT

```
WITH cte AS(
SELECT users.id as User_ID,COUNT(photos.id) as photo_id
from users
LEFT JOIN photos on users.id = photos.user_id
GROUP BY (User_ID))
SELECT SUM(photo_id)/ count(User_ID) as Posts_Per_User
from cte
WHERE photo_id>0;
```

OUTPUT

Posts_Per_User
3.4730

INPUT

Showing rows 0 - 0 (1 total, Query took 0.0015 seconds.)

```
WITH cte AS(
SELECT users.id as User_ID,COUNT(photos.id) as photo_id
from users
LEFT JOIN photos on users.id = photos.user_id
GROUP BY (User_ID))
SELECT SUM(photo_id) as total_photos, count(User_ID) as Total_Users,SUM(photo_id)/ count(User_ID) as Posts_Per_User
from cte;
```

OUTPUT

+ Options

total_photos	Total_Users	Posts_Per_User
257	75	3.4267

---

2. Bots and Fake Account:

INPUT

```
WITH Photo_Count as(
SELECT likes.user_id,COUNT(likes.photo_id) as Likes_Num
from likes
GROUP BY likes.user_id
ORDER BY Likes_Num DESC)
SELECT * from Photo_Count
WHERE Likes_Num = (SELECT COUNT(*) from photos);
```

OUTPUT

+ Options

	user_id	Likes_Num
Edit Copy Delete	14	257
Edit Copy Delete	54	257
Edit Copy Delete	75	257
Edit Copy Delete	76	257
Edit Copy Delete	36	257
Edit Copy Delete	57	257
Edit Copy Delete	21	257
Edit Copy Delete	41	257
Edit Copy Delete	5	257
Edit Copy Delete	91	257
Edit Copy Delete	24	257
Edit Copy Delete	66	257
Edit Copy Delete	71	257
