INSTAGRAM USER ANALYTICS

- **Project Description** – Find the business insights, the teams will use to help the business grow.

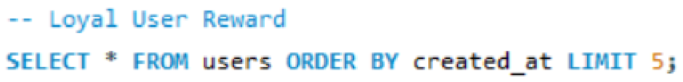
- **Approach** –

  - Database creation – The database is created, using SQL queries on SQL Workbench.
  - Insights extraction – Generating the insights from the database using SQL queries on SQL Workbench.

- **Tech-Stack Used** – Using SQL Workbench for this project.

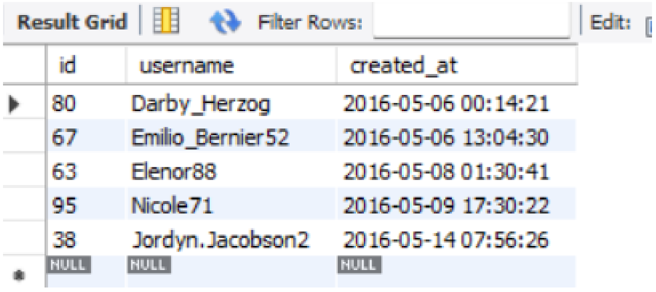
- **Insights** –

  - **Loyal User Reward** –



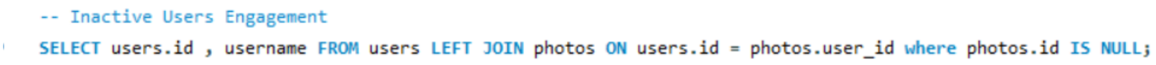
```sql
-- Loyal User Reward
SELECT * FROM users ORDER BY created_at LIMIT 5;
```

The 5 oldest users on Instagram from the provided database.



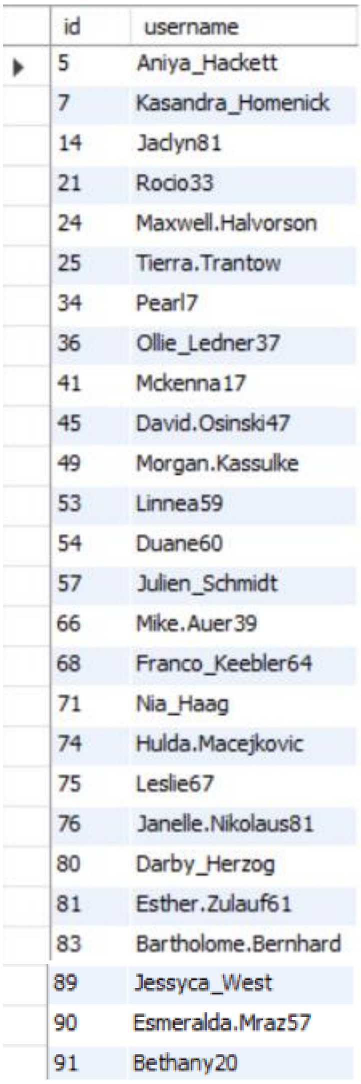
	id	username	created_at
▶	80	Darby_Herzog	2016-05-06 00:14:21
	67	Emilio_Bernier52	2016-05-06 13:04:30
	63	Elenor88	2016-05-08 01:30:41
	95	Nicole71	2016-05-09 17:30:22
	38	Jordyn.Jacobson2	2016-05-14 07:56:26
*	NULL	NULL	NULL

  - **Inactive User Engagement** –



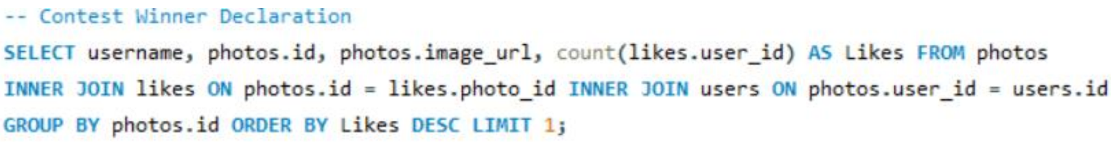
```sql
-- Inactive Users Engagement
SELECT users.id , username FROM users LEFT JOIN photos ON users.id = photos.user_id where photos.id IS NULL;
```

Users who have never posted a single photo on Instagram.



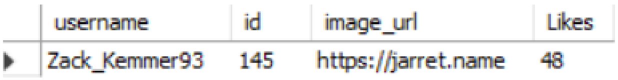
id	username
5	Aniya_Hackett
7	Kasandra_Homenick
14	Jaclyn81
21	Rocio33
24	Maxwell.Halvorson
25	Tierra.Trantow
34	Pearl7
36	Ollie_Ledner37
41	Mckenna17
45	David.Osinski47
49	Morgan.Kassulke
53	Linnea59
54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
68	Franco_Keebler64
71	Nia_Haag
74	Hulda.Macejkovic
75	Leslie67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

- Contest Winner Declaration –



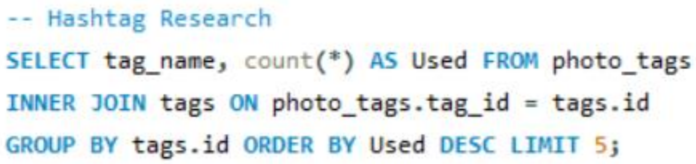
```sql
-- Contest Winner Declaration
SELECT username, photos.id, photos.image_url, count(likes.user_id) AS Likes FROM photos
INNER JOIN likes ON photos.id = likes.photo_id INNER JOIN users ON photos.user_id = users.id
GROUP BY photos.id ORDER BY Likes DESC LIMIT 1;
```

The user with the most likes on a single photo.



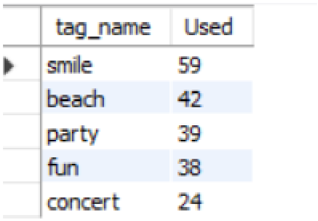
username	id	image_url	Likes
Zack_Kemmer93	145	https://jarret.name	48

- Hashtag Research –



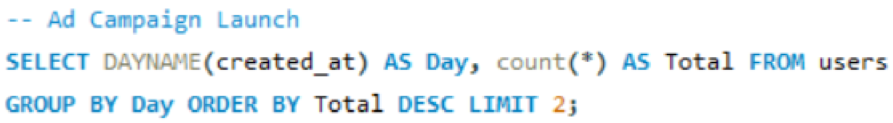
```sql
-- Hashtag Research
SELECT tag_name, count(*) AS Used FROM photo_tags
INNER JOIN tags ON photo_tags.tag_id = tags.id
GROUP BY tags.id ORDER BY Used DESC LIMIT 5;
```

The top five most commonly used hashtags.



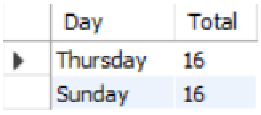
tag_name	Used
smile	59
beach	42
party	39
fun	38
concert	24

- Ad Campaign Launch –



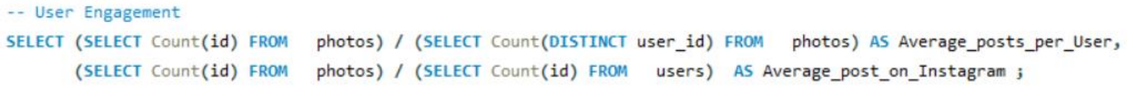
```sql
-- Ad Campaign Launch
SELECT DAYNAME(created_at) AS Day, count(*) AS Total FROM users
GROUP BY Day ORDER BY Total DESC LIMIT 2;
```

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



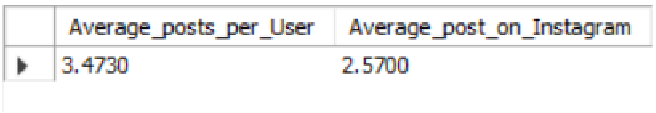
Day	Total
Thursday	16
Sunday	16

- User Engagement –



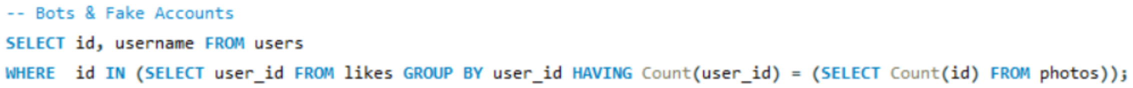
```sql
-- User Engagement
SELECT (SELECT Count(id) FROM   photos) / (SELECT Count(DISTINCT user_id) FROM   photos) AS Average_posts_per_User,
       (SELECT Count(id) FROM   photos) / (SELECT Count(id) FROM   users)  AS Average_post_on_Instagram ;
```

The average number of posts per user on Instagram and the total number of photos on Instagram divided by the total number of users.



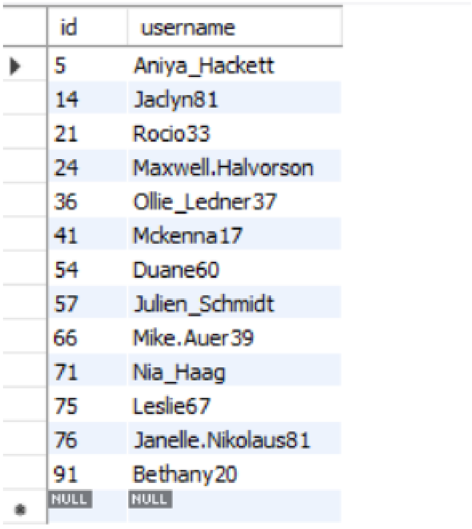
Average_posts_per_User	Average_post_on_Instagram
3.4730	2.5700

- Bots & Fake Accounts –



```sql
-- Bots & Fake Accounts
SELECT id, username FROM users
WHERE  id IN (SELECT user_id FROM likes GROUP BY user_id HAVING Count(user_id) = (SELECT Count(id) FROM photos));
```

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



id	username
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54	Duane60
57	Julien_Schmidt
66	Mike.Auer39
71	Nia_Haag
75	Leslie67
76	Janelle.Nikolaus81
91	Bethany20
NULL	NULL

➢ **Results** –

- The marketing team can reward old and loyal customers.
- The team can attract inactive users by sending them promotional e-mails.
- The team can reward the winner of the contest.
- The team can use popular hashtags for band promotion.
- The team can organize an ad campaign on Thursday and Sunday as they are the most engaging days.
- The team can remove the bots and fake accounts from Instagram for a better experience for users.