PROJECT 2: INSTAGRAM USER ANALYTICS

INTRODUCTION

This project aim to extract useful insights from raw data using MYSQL workbench and the findings could potentially influence the future development of performs and thereby increase your knowledge and deepen your understanding of MYSQL

(A)MARKETING ANALYSIS:

1. Loyal User Reward:

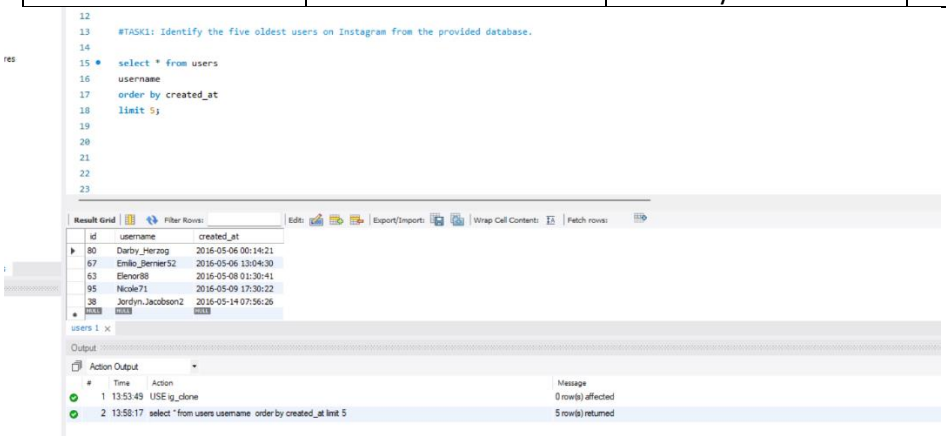
Task: Identify the five oldest users on Instagram from the provided database.

SQL QUERY:

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

Result: The five oldest users selected for loyal user Reward are follow:

Sl No.	id	username	Created_at
1	80	Darby_Herzog	2016-05-06 00:14:21
2	67	Emilio _Bernier52	2016-05-06 13:04:30
3	63	Elenor88	2016-05-08 01:30:41
4	95	Nicole71	2016-05-09 17:30:22
5	38	Jordyn.Jacobson2	2016-05-14 07:56:26



2. Inactive User Engagement:

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

SQL QUERY:

```
select users.id,(username) from users
left join photos
on users.id=photos.user_id
where photos.user_id is null;
```

Result: 26 users who have never posted a single photo on Instagram, Here's are some details of users:

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.Mraz5
91	Bethany20

```
30    # Task2:Identify users who have never posted a single photo on Instagram.
31
32    select users.id,(username) from users
33    left join photos
34    on users.id=photos.user_id
35    where photos.user_id is null;
36
```

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

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

Result 6

3. Contest Winner Declaration:

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

SQL QUERY:

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

photos.id, users.username, photos.image_url

ORDER BY

total_likes DESC

LIMIT 1;

Result: Details of the contest winner:

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

```
#Task3: Determine the winner of the contest and provide their details to the team.


SELECT
  users.username,
  photos.id,
  photos.image_url,
  COUNT(likes.user_id) AS total_likes
FROM
  photos
INNER JOIN
  likes ON likes.photo_id = photos.id
INNER JOIN
  users ON photos.user_id = users.id
GROUP BY
  photos.id, users.username, photos.image_url
ORDER BY
  total_likes DESC
LIMIT 1;
```

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

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

Result 7

4. Hashtag Research:

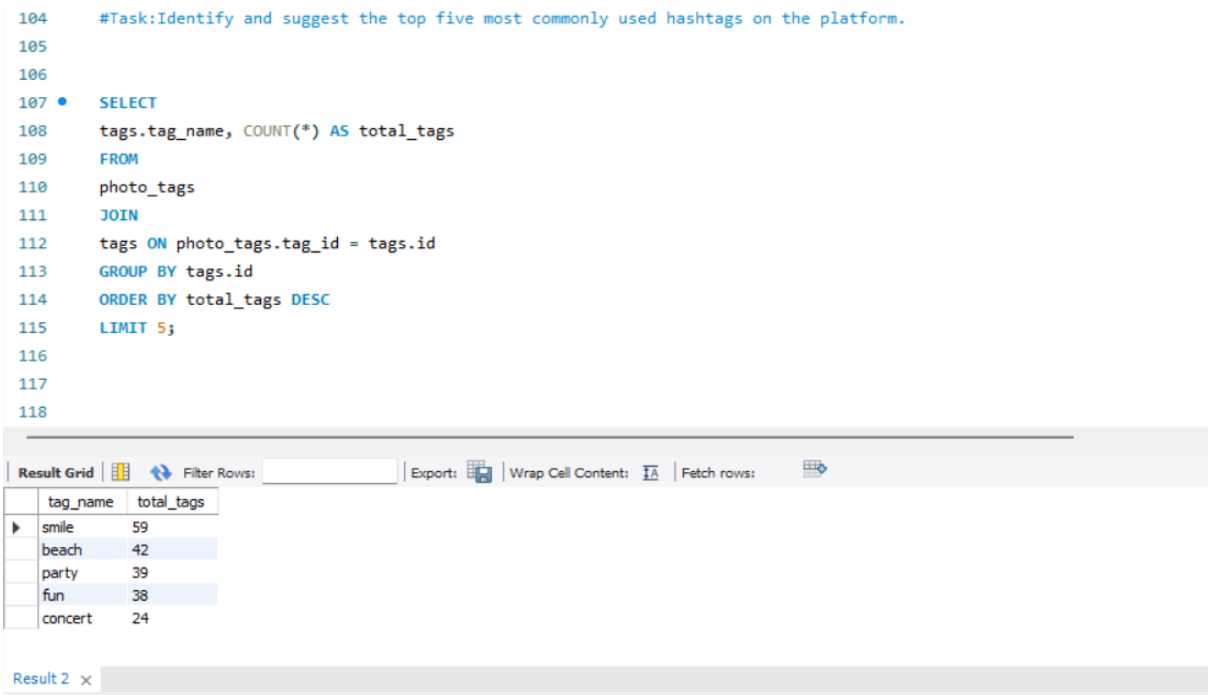
Task: Identify and suggest the top five most commonly used hashtags on the platform.

SQL QUERY: SELECT

tags.tag_name, COUNT(*) AS total_tags

```
 FROM
photo_tags
 JOIN
tags ON photo_tags.tag_id = tags.id
 GROUP BY tags.id
 ORDER BY total_tags DESC
 LIMIT 5;
```

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



5. Ad Campaign Launch:

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

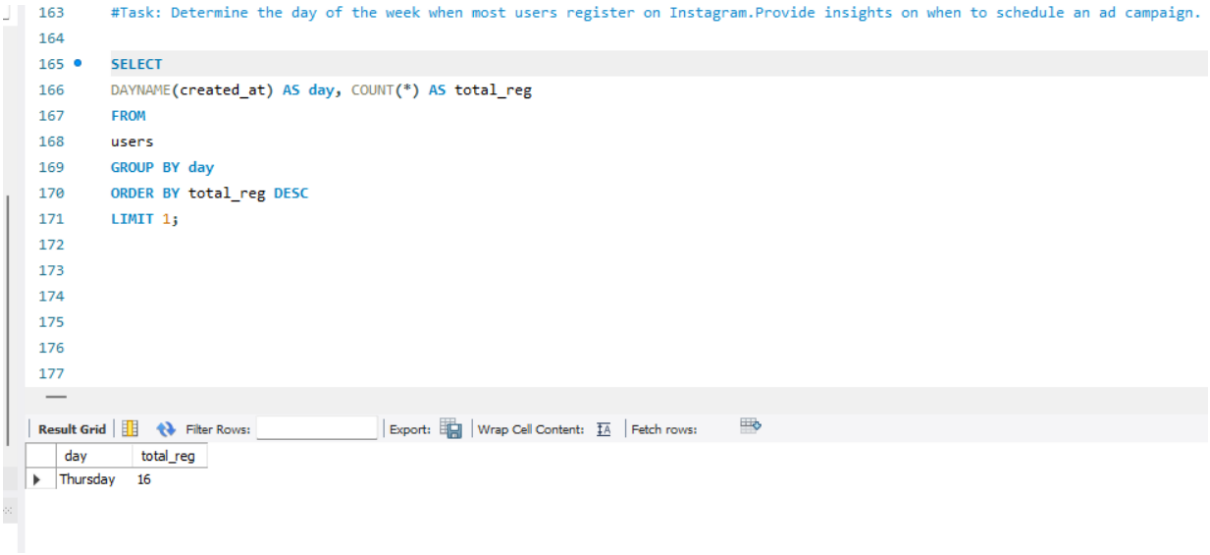
Provide insights on when to schedule an ad campaign.

SQL QUERY:

```
SELECT
DAYNAME(created_at) AS day, COUNT(*) AS total_reg
 FROM
 users
GROUP BY day
ORDER BY total_reg DESC
LIMIT 1;
```

Result: Day of the week when most users register on Instagram:

day	total_reg
Thrusday	16



(B) INVESTOR METRICS:

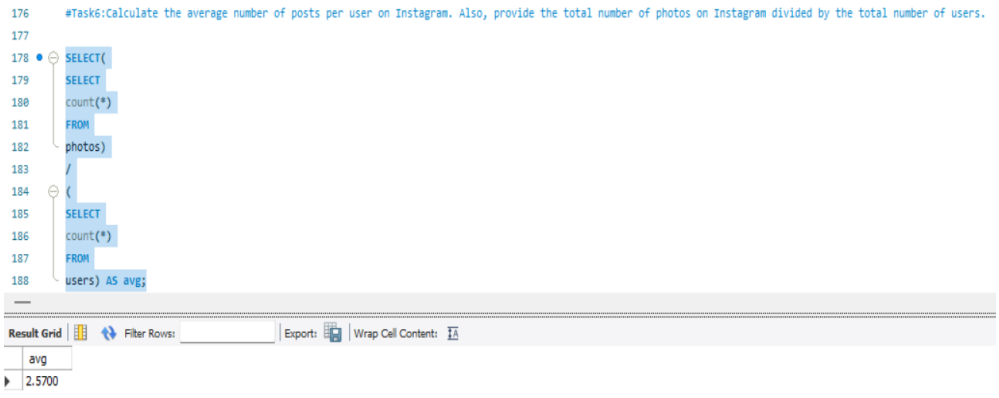
1. User Engagement:

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.

SQL QUERY:

```
SELECT(
SELECT
count(*)
FROM
photos)
/
(
SELECT
count(*)
FROM
users) AS avg;
```

Result: Average number of posts per user on Instagram = 2.5700



2. Bots & Fake Accounts:

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

SQL QUERY:

```
SELECT
    users.username, COUNT(*) AS tot_num_likes
    FROM
    users
    JOIN
    likes ON users.id = likes.user_id
GROUP BY users.id
HAVING tot_num_likes = (SELECT
COUNT(*)
FROM
photos);
```

Result : Following are the fake users or potential nots in Instagram:

username	tot_num_likes
Anlya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halyvorson	257
Ollie_Ledner37	257
Mckennai17	257
Duane60	257
Jullen.Schmldt	257
Mike.Auer39	257
Nia_Haag	257
Leslie67	257
Janelle.Nikolaus81	257
Bathany20	257

```
93
94 •  SELECT
95    users.username, COUNT(*) AS tot_num_likes
96    FROM
97    users
98    JOIN
99    likes ON users.id = likes.user_id
00    GROUP BY users.id
01    HAVING tot_num_likes = (SELECT
02    COUNT(*)
03
04    FROM
05    photos);
06
07
08
```

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

username	tot_num_likes
Aniya_Hackett	257
Jaclyn81	257
Rocio33	257
Maxwell.Halvorson	257
Ollie_Ledner37	257
Mckenna17	257
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