TASK 2

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A) Marketing: The marketing team wants to launch some campaigns, and they need your help with the following

1. **Rewarding Most Loyal Users:** People who have been using the platform for the longest time.
   Your Task: Find the 5 oldest users of the Instagram from the database provided

   SELECT id,username,created_at

   FROM users

   ORDER BY created_at

   LIMIT 5;

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

2. **Remind Inactive Users to Start Posting:** By sending them promotional emails to post their 1st photo.
   Your Task: Find the users who have never posted a single photo on Instagram

   SELECT ID,USERNAME

   From users

   Where id Not In (Select user_id From photos)

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

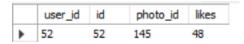| 81	Esther.Zulauf61
83	Bartholome.Bernhard
89	Jessyca_West
90	Esmeralda.Mraz57
91	Bethany20

3. **Declaring Contest Winner:** The team started a contest and the user who gets the most likes on a single photo will win the contest now they wish to declare the winner.
   Your Task: Identify the winner of the contest and provide their details to the team

   select photos.user_id,users.id,likes.photo_id,count(likes.user_id) as likes

   from likes join photos join users

   on likes.photo_id = photos.id and photos.user_id = users.id

   group by likes.photo_id

   order by likes desc

limit 1;

	user_id	id	photo_id	likes
▶	52	52	145	48

4. **Hashtag Researching:** A partner brand wants to know, which hashtags to use in the post to reach the most people on the platform.
   Your Task: Identify and suggest the top 5 most commonly used hashtags on the platform

   select tags.id,tag_name,count(photo_tags.photo_id) as Tags
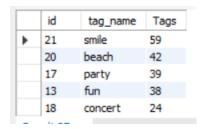
   from tags join photo_tags

   on tags.id=photo_tags.tag_id

   where photo_tags.photo_id

   group by tag_id

   order by Tags desc

   limit 5;

	id	tag_name	Tags
▶	21	smile	59
	20	beach	42
	17	party	39
	13	fun	38
	18	concert	24

5. **Launch AD Campaign:** The team wants to know, which day would be the best day to launch ADs.
   Your Task: What day of the week do most users register on? Provide insights on when to schedule an ad campaign

   select dayofweek(created_at) as dayoftheweek,count(users.id) as accountsRegistered

   from users

group by dayoftheweek

order by accountsRegistered desc;

dayoftheweek	accountsRegistered
5	16
1	16
6	15
3	14
2	14
4	13
7	12

B) Investor Metrics: Our investors want to know if Instagram is performing well and is not becoming redundant like Facebook, they want to assess the app on the following grounds

1. **User Engagement:** Are users still as active and post on Instagram or they are making fewer posts
Your Task: Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

select count(users.id) as Users,count(photos.id) as Photos, count(photos.id)/count(users.id) as Avg_posts

from photos right join users

on users.id=photos.user_id;

Users	Photos	Avg_posts
283	257	0.9081

2. **Bots & Fake Accounts:** The investors want to know if the platform is crowded with fake and dummy accounts
Your Task: Provide data on users (bots) who have liked every single photo on the site (since any normal user would not be able to do this).

select users.username,users.id,count(photo_id) as liked

from likes,users

where likes.user_id = users.id

group by likes.user_id having liked = 257;

username	id	liked
Aniya_Hackett	5	257
Jaclyn81	14	257
Rocio33	21	257
Maxwell.Halvorson	24	257
Ollie_Ledner37	36	257
Mckenna17	41	257
Duane60	54	257
Julien_Schmidt	57	257
Mike.Auer39	66	257
Nia_Haag	71	257
Leslie67	75	257
Janelle.Nikolaus81	76	257
Bethany20	91	257