**Project No. 2**

**Instagram User Metrics**

1. **Project Description**

To provide info regarding the users, their interaction with Instagram, such as likes by users, hashtags used by them etc. etc.

1. **Approach**

My approach was pretty simple . I used to breakdown the problems into bits at first so that it was easy to understand and then find solutions to the fragmented parts and then combine them into the whole answer so that I wont make mistakes. I did make a lot of mistakes though.

1. **Tech Stack**

I used mysqlworkbench 8.0 CE. It was mentioned in the links along with the video. I downloaded it and got it running. I also used Ms Word to note down the queries and create pdf file out of it to submit

1. **Insights**

I learnt that many people use Instagram . As I saw in this project and in real life as there are many people on Instagram you can very well bet that there are many people who don’t use Insta that much also people love to comment on many photos posted by their friends or family etc.

1. **Results**

I found that there can be competitions hosted on instagram to increase the user engagement with instagram. If by looking at the users engagement we can provide more such competitions and gifts and many other offers. By understanding the hashtags we can then offer similar videos, photos and vloggers etc. to such people. E.g: Hashtags like #concert, #beach etc. for people who have used those hashtags we can suggest similar vlogs videos etc to such people increasing their user engagement and helping business who do offer ‘tickets to concerts’ or ‘trips to beaches’. This is what I have concluded by this project. Aso finding out the fake bots and accounts

1. **Drive link**

It was a very good experience to solve this project. Also very much fun.

I was able to :

1. Found out the oldest users
2. Total no. of users on Instagram
3. Bots and fake accounts
4. Most liked photo
5. Most hashtags etc.

# **Q.1**  Identify the five oldest users on Instagram from the provided database.

In this question we have to find about the five oldest users on Instagram i.e oldest date of creation of an account.

**Answer**:- Query Syntax

select \* from users

order by created\_at

limit 5;

**OUTPUT :**

# id, username, created\_at

38, Jordyn.Jacobson2, 2016-05-14 07:56:26

63, Elenor88, 2016-05-08 01:30:41

67, Emilio\_Bernier52, 2016-05-06 13:04:30

80, Darby\_Herzog, 2016-05-06 00:14:21

95, Nicole71, 2016-05-09 17:30:22

**#Q.2 Identify users who have never posted a single photo on Instagram.**

**Details : Here we need to find out about the people who have never posted any photo on Instagram**

**Answer** : - Query Syntax

select u.id, u.username

from users as u

left join photos as p

on u.id = p.user\_id

where p.user\_id is null;

**OUTPUT :**

**# id, username #id,username**

5, Aniya\_Hackett 49, Morgan.Kassulke

7, Kasandra\_Homenick 53, Linnea59

14, Jaclyn81 54, Duane60

21, Rocio33 57, Julien\_Schmidt

24, Maxwell.Halvorson 80, Darby\_Herzog

25, Tierra.Trantow 81, Esther.Zulauf61

34, Pearl7 83, Bartholome.Bernhard

36, Ollie\_Ledner37 89, Jessyca\_West

41, Mckenna17 90, Esmeralda.Mraz57

45, David.Osinski47 91, Bethany20

66, Mike.Auer39 74, Hulda.Macejkovic

68, Franco\_Keebler64 75, Leslie67

71, Nia\_Haag 76, Janelle.Nikolaus81

**# Q.3 Determine the winner of the contest and provide their details to the team.**

**Details :- Here We need to find out about the most liked photo and that person will be the winner of the contest**

**Answer :-** Query Syntax

select

users.id as user\_id,

username,

photos.id AS photo\_id,

photos.image\_url,

COUNT(\*) AS total\_likes\_count

from photos

inner join likes

on photos.id = likes.photo\_id

inner join users

on users.id = photos.user\_id

group by photos.id

order by total\_likes\_count desc **;**

**OUTPUT :**

**# user\_id, username, photo\_id, Image\_url, total\_likes\_count**

'52', 'Zack\_Kemmer93', '145', 'https://jarret.name', '48'

**# Q.4 Identify and suggest the top five most commonly used hashtags on the platform.**

**Answer :-** Query Syntax

select

t.id AS tag\_id,

t.tag\_name,

COUNT(\*) as count\_of\_tags

from tags as t

join photo\_tags

on t.id = photo\_tags.tag\_id

group by t.id

order by count\_of\_tags desc

limit 5;

**OUTPUT :**

# tag\_id, tag\_name, count\_of\_tags

21, smile, 59

20, beach, 42

17, party, 39

13, fun, 38

18, concert, 24

**#Q.5 Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.**

**Answer :** Query Syntax

select dayname(created\_at) as the\_day\_of\_registration,

count(\*) as total\_number\_of\_registered\_people

from users

group by the\_day\_of\_registration

order by total\_number\_of\_registered\_people desc

limit 3;

**OUTPUT**

# the\_day\_of\_registration, total\_number\_of\_registered\_people

Thursday, 16

Sunday, 16

Friday, 15

**#Q.6 Calculate the average number of posts per user on Instagram**

**Part 1** :- No. of posts per user on Instagram

Query Syntax :

select

( select count(\*) from photos ) / (select count(\*) from users) as avg;

**Ans = 257**

**Part 2 :- P**rovide the total number of photos on Instagram divided by the total number of users.

Query Syntax :

select

( select count(\*) from photos ) / (select count(\*) from users);

**Ans = 2.5700**

**#Q.7 Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.**

**Answer :** Query Syntax

select u.id as user\_id,

u.username,

count(\*) as total\_likes\_by\_a\_user

from users as u

join likes

on u.id = likes.user\_id

group by u.id

having total\_likes\_by\_a\_user = (

select count(\*) from photos);

**OUTPUT :**

**# user\_id, username, total\_likes\_by\_a\_user**

5, Aniya\_Hackett, 257

14, Jaclyn81, 257

21, Rocio33, 257

24, Maxwell.Halvorson, 257

36, Ollie\_Ledner37, 257

41, Mckenna17, 257

54, Duane60, 257

57, Julien\_Schmidt, 257

66, Mike.Auer39, 257

71, Nia\_Haag, 257

75, Leslie67, 257

76, Janelle.Nikolaus81, 257

91, Bethany20, 257