**Instagram User Analytics**

Project Description: - In this project I am working with the product team of Instagram and the product manager has asked me to provide insights on the questions asked by the management team.

The marketing team wants to launch some campaigns, and they have asked following queries-

1. Rewarding Most Loyal Users
2. Remind Inactive Users to Start Posting
3. Declaring Contest Winner
4. Hashtag Researching
5. Launch AD Campaign

 And alsoour 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
2. Bots & Fake Accounts

I am going to solve all the seven queries and provide the required data to marketing team and our investors.

Approach: - My approach is simple. I used the given database to solve the questions. I wrote down the program for each question and used MySQL workbench to run these program and find the required output.

Tech-Stack Used: - MySQL Workbench, Version- 8.0 CE

This software is very easy to use and provide lots of options for different work.

Case Study: -

1. Find the 5 oldest users of the Instagram from the database provided-

Ans- SELECT \*

FROM users

ORDER BY created\_at

LIMIT 5;

1. Find the users who have never posted a single photo on Instagram-

Ans- SELECT username

FROM users

LEFT JOIN photos

ON users.id=photos.user\_id

WHERE photos.id IS NULL;

1. Identify the winner of the contest and provide their details to the team: -

Ans- SELECT

username,

photos.id,

photos.image\_url,

count(likes.user\_id) AS total

FROM photos

INNER JOIN likes

ON likes.photo\_id=photos.id

INNER JOIN users

ON photos.user\_id = users.id

GROUP BY photos.id

ORDER BY total DESC

LIMIT 1;

1. Identify and suggest the top 5 most commonly used hashtags on the platform: -

Ans- SELECT

tags.tag\_name,

COUNT(\*) AS total

FROM photo\_tags

JOIN tags

ON photo\_tags.tag\_id= tags.id

GROUP BY tags.id

ORDER BY total DESC

LIMIT 5;

1. What day of the week do most users register on? Provide insights on when to schedule an ad campaign

Ans- SELECT

dayname(created\_at) AS day,

count(\*) as total

FROM users

GROUP BY day

ORDER BY total DESC

1. Provide how many times does average user posts on Instagram. Also, provide the total number of photos on Instagram/total number of users

Ans- SELECT (SELECT COUNT(\*)FROM photos)/(SELECT COUNT(\*) FROM users) as avg;

1. 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)

Ans- SELECT users.id,username, COUNT(users.id) As total\_likes\_by\_user

FROM users

JOIN likes ON users.id = likes.user\_id

GROUP BY users.id

HAVING total\_likes\_by\_user = (SELECT COUNT(\*) FROM photos);

Insights: - Using Instagram user analytics I have learned a lot about SQL how to write a program, how to use a database, how to run a query and get the output, how to find errors in queries and how to solve them.

Result: -I got to how to solve problems using SQL, how to find things from big database, what queries to use to solve these problems.