**INSTAGRAM USER ANALYTICS**

**PROJECT** **DESCRIPTION-**

Instagram, as we all must know, is one of the most used social sites in today’s world. It’s really addicting right?

You can share your favorite photo or video. It allows users to upload media that can be edited with various inbuilt filters and hashtags and geographical tagging. You also get options to share with your preapproved followers or publicly. It is interesting to think where all the data gets stored when we like or comment on someone’s picture. To understand all these, I created a small project that replicates some of the features of Instagram.

The database consists of 7 tables.

* Users Table
* Photos Table
* Comments Table
* Hashtags Table
* Likes Table
* Follows Table
* Photos Tag Table

Tech stack used was **SQL (Ver 8.0.32)-**downloaded it from link provided in the document then after that downloaded the **SQL WORKBENCH (Ver 8.0.32)-** it provides a visual console to easily administer the MySQL environments and gain better visibility into the database.

Detailed Report

**A) Marketing Analysis:**

1. **Loyal User Reward:** The marketing team wants to reward the most loyal users, i.e., those who have been using the platform for the longest time.

Query: -

Select id, username, created\_at from users order by created\_at limit 5;

Select tell data base to select id, user name and created time from user table, order by helps in arranging the data in ascending order with limiting the results till 5th row.

Result: -

|  |  |  |
| --- | --- | --- |
| id | username | created\_at |
| 80 | Darby\_Herzog | 2016-5-6 0:14 |
| 67 | Emilio\_Bernier52 | 2016-5-6 13:04 |
| 63 | Elenor88 | 2016-5-8 1:30 |
| 95 | Nicole71 | 2016-5-9 17:30 |
| 38 | Jordyn.Jacobson2 | 2016-5-14 7:56 |

1. **Inactive User Engagement:** The team wants to encourage inactive users to start posting by sending them promotional emails.  
   Your Task: Identify users who have never posted a single photo on Instagram.

Query:-

Select username,user\_id

from users

left join photos

on photos.user\_id=users.id

where image\_url is null

order by username;  
  
Result:-

|  |
| --- |
| Aniya\_Hackett |
| Kasandra\_Homenick |
| Jaclyn81 |
| Rocio33 |
| Maxwell.Halvorson |
| Tierra.Trantow |
| Pearl7 |
| Ollie\_Ledner37 |
| Mckenna17 |
| David.Osinski47 |
| Morgan.Kassulke |
| Linnea59 |
| Duane60 |
| Julien\_Schmidt |
| Mike.Auer39 |
| Franco\_Keebler64 |
| Nia\_Haag |
| Hulda.Macejkovic |
| Leslie67 |
| Janelle.Nikolaus81 |
| Darby\_Herzog |
| Esther.Zulauf61 |
| Bartholome.Bernhard |
| Jessyca\_West |
| Esmeralda.Mraz57 |
| Bethany20 |

1. **Contest Winner Declaration:** The team has organized a contest where the user with the most likes on a single photo win.

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

Query: -

Select likes.photo\_id,users.username, count(likes.photo\_id) as total\_likes

from likes inner join photos on likes.photo\_id=photos.id

inner join users on photos.user\_id=users.id group by

likes.photo\_id,users.username order by total\_likes desc;  
  
Result:-

|  |  |  |  |
| --- | --- | --- | --- |
| username | id | image\_url | total\_likes |
| Kaley9 | 30 | http://kenny.com | 41 |

1. **Hashtag Research:** A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.  
   Your Task: Identify and suggest the top five most used hashtags on the platform.

Query:-

Select tag\_name,count(tag\_name) as Total\_tags

from tags

join photo\_tags on tags.id=photo\_tags.tag\_id

group by tags.id

order by total\_tags desc

limit 5;

Result:-

|  |  |
| --- | --- |
| tag\_name | Total\_tags |
| smile | 59 |
| beach | 42 |
| party | 39 |
| fun | 38 |
| concert | 24 |

1. **Ad Campaign Launch:** The team wants to know the best day of the week to launch ads.  
   Your Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.

Query:-

Select date\_format(created\_at,'%W') as week\_day,count(\*) as number\_of\_users

from users

group by 1;  
  
Result:-

|  |  |
| --- | --- |
| week\_day | number\_of\_users |
| Thursday | 16 |
| Sunday | 16 |
| Tuesday | 14 |
| Saturday | 12 |
| Wednesday | 13 |
| Monday | 14 |
| Friday | 15 |

**B) Investor Metrics:**

1. **User Engagement:** Investors want to know if users are still active and posting on Instagram or if they are making fewer posts.  
   Your 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.

**Query:**-

Select round((select count(\*) from photos)/(select count(\*) from users),2) as avg;

Result:-

|  |
| --- |
| avg |
| 2.57 |

1. **Bots & Fake Accounts:** Investors want to know if the platform is crowded with fake and dummy accounts.  
   Your Task: Identify users (potential bots) who have liked every single photo on the site, as this is not typically possible for a normal user.

Select username,Count(\*)As number\_of\_likes

from users

Inner join likes

On users.id=likes.user\_id

group by likes.user\_id

Having number\_of\_likes=(Select count(\*) from photos);  
  
Result:-

|  |  |
| --- | --- |
| username | number\_of\_likes |
| Aniya\_Hackett | 257 |
| Jaclyn81 | 257 |
| Rocio33 | 257 |
| Maxwell.Halvorson | 257 |
| Ollie\_Ledner37 | 257 |
| Mckenna17 | 257 |
| Duane60 | 257 |
| Julien\_Schmidt | 257 |
| Mike.Auer39 | 257 |
| Nia\_Haag | 257 |
| Leslie67 | 257 |
| Janelle.Nikolaus81 | 257 |
| Bethany20 | 257 |

**Summary: -** While doing this project I have found out some important terms of My Sql which have helped me to solve the complex problems. I have tries to provide the best possible solutions for the projects.