Instagram User Analytics

Project Overview:

The project involves working as a data analyst for Instagram's product team. The main goal is to analyze user interactions and engagement with the Instagram app to provide valuable insights that can help the business grow. The tasks include identifying loyal users, encouraging inactive users to start posting, determining contest winners, researching popular hashtags, and finding the best day to launch ad campaigns.

Approach:

- Understanding the database schema and the data available in each table.
- Carefully analyze each task the management team provides to understand the requirements and objectives.
- Write SQL queries to extract relevant data from the database to address each task.
- Execute SQL queries to retrieve the required information and perform analysis to derive insights.
- Interpret the findings from the data analysis to derive meaningful insights relevant to each task.
- Provide actionable recommendations based on the insights derived to support decision-making by the product team.

Tech-Stack Used:

Software Used: MySQL Workbench 8.0
**Version:** 8.0.32
Reasons for Choosing MySQL Workbench: MySQL Workbench provides a robust platform for data analysis with MySQL databases, offering a combination of user-friendly features, query execution capabilities, and compatibility that makes it well-suited for the project's requirements.

SQL Tasks:

A) Marketing Analysis:

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.
Task: Identify the five oldest users on Instagram from the provided database.
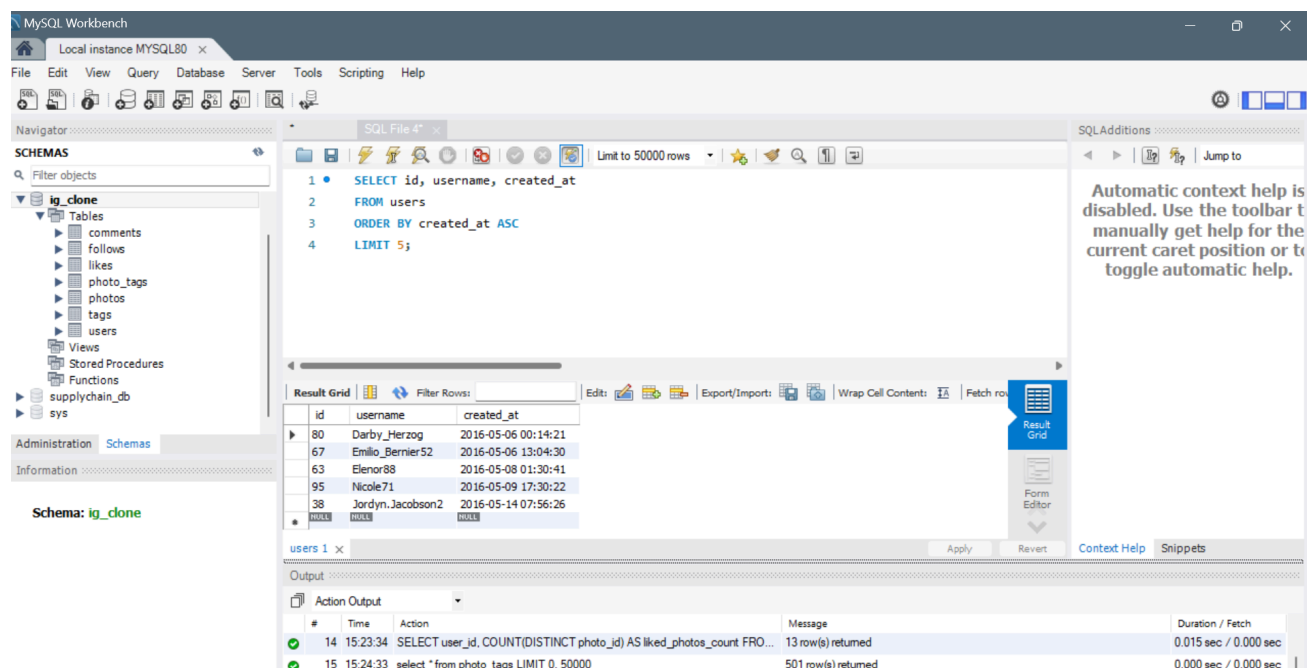
Inactive User Engagement: The team wants to encourage inactive users to start posting by sending them promotional emails.

Task: Identify users who have never posted a single photo on Instagram.
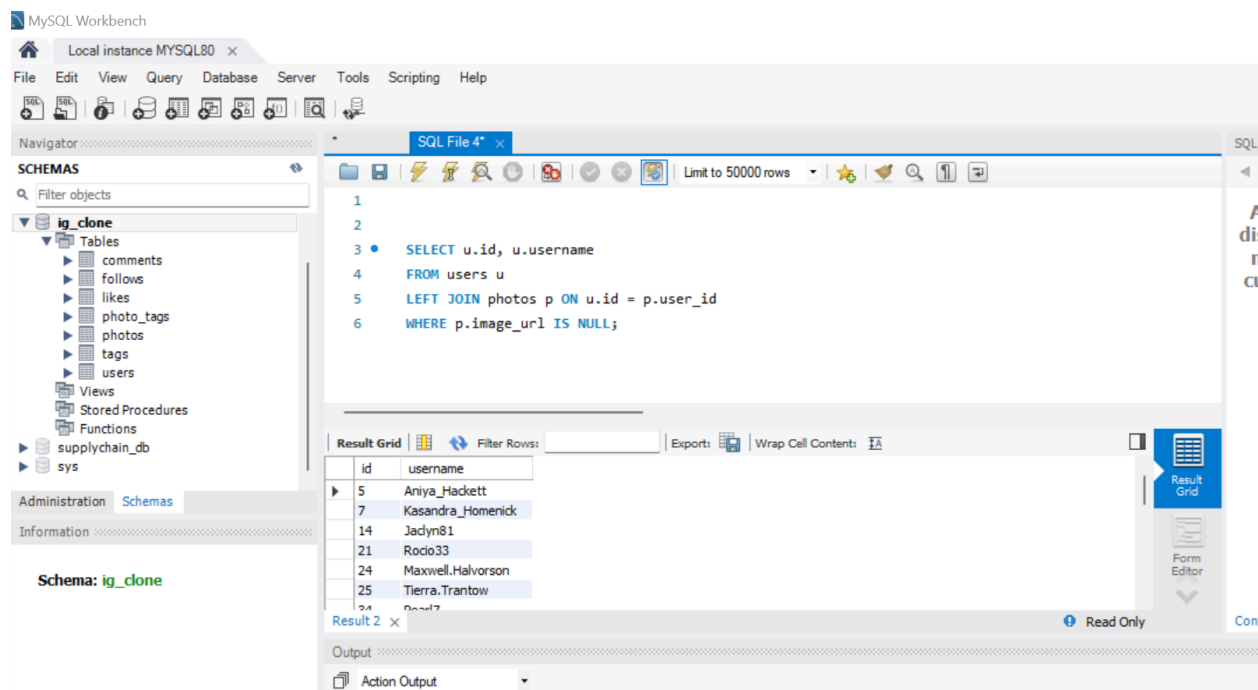
Contest Winner Declaration: The team has organized a contest where the user with the most likes on a single photo wins.

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

Hashtag Research: A partner brand wants to know the most popular hashtags to use in their posts to reach the most people.

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

Ad Campaign Launch: The team wants to know the best day of the week to launch ads.

Task: Determine the day of the week when most users register on Instagram. Provide insights on when to schedule an ad campaign.

B) Investor Metrics:

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

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.

Bots & Fake Accounts: Investors want to know if the platform is crowded with fake and dummy 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.
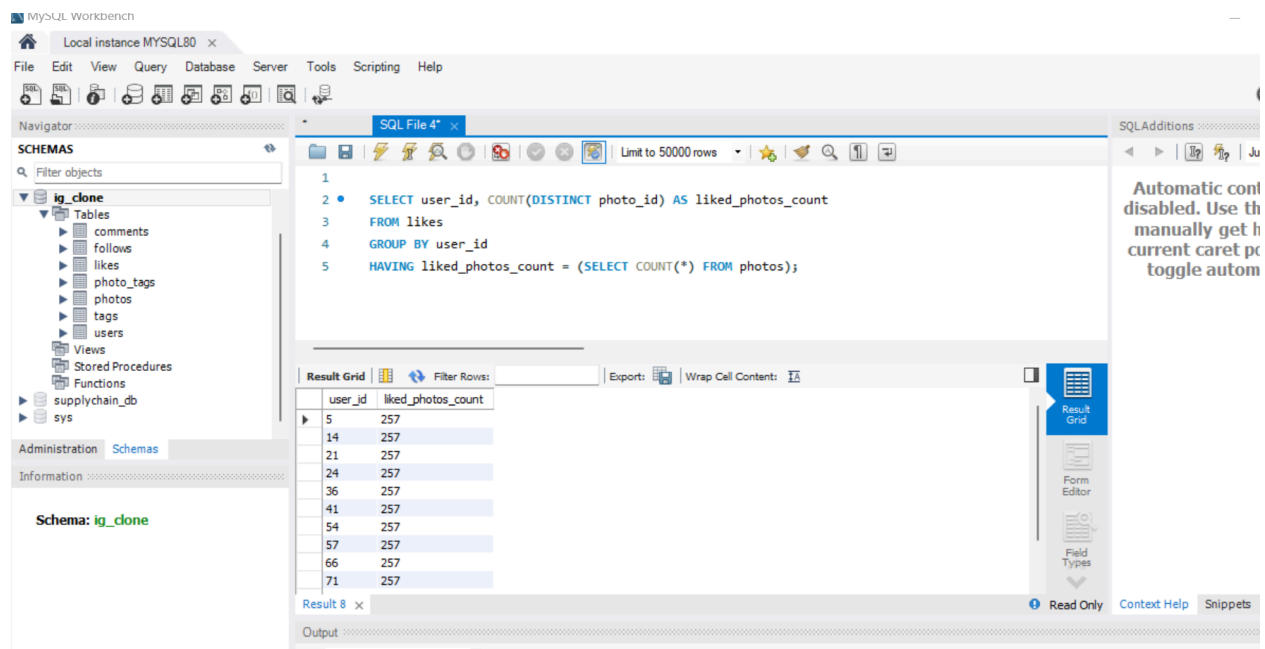
Insights:

- Identifying the oldest users to reward them for loyalty can foster positive engagement.
- Targeting inactive users with promotional emails can encourage them to become more active on the platform.
- Determining the winner of the contest based on the most likes on a single photo enhances user engagement.
- Identifying the top five most commonly used hashtags helps partner brands reach a wider audience.
- Determining the best day of the week to launch ads based on user registration patterns optimizes ad campaign performance.

Results:

- By analyzing user interactions and engagement with the Instagram app, actionable insights were provided to the product team. These insights, such as identifying loyal users, encouraging inactive users, and determining the best day to launch ad campaigns, can guide strategic decision-making and enhance user experience on the platform.
- The insights derived from the analysis can help the product team make informed decisions regarding feature development, marketing campaigns, and user engagement strategies. For example, understanding user behavior can lead to targeted marketing campaigns and improved retention strategies.
- By identifying loyal users and encouraging inactive users to become more active, the analysis can improve overall user engagement on the Instagram app. This can increase user satisfaction, retention, and ultimately, business growth.
- Ultimately, the insights derived from this project have the potential to positively impact the growth and success of Instagram as a social media platform.