⊘ **Milestone 1** | YouTube Trending Videos

INTRODUCTION: Welcome to your first Milestone. Milestones are a great opportunity for you to practice your skills, both in using SQL, but also in interpreting the information that comes out of the queries you write.

In this Milestone, you will practice the fundamentals of making queries into a SQL database, including using keywords to specify how much data is retrieved and whether or not it is sorted. We will focus on a real-world data set capturing popular YouTube videos (the same one Dr. Alvarez used in his applied lesson). You will pull out information about these videos' views, likes, dislikes, and comments and use the query outputs to make some observations about what separates the top videos from the rest.

HOW IT WORKS: Follow the prompts in the questions below to investigate your data. Post your answers in the provided boxes: the **yellow boxes** for the queries you write, and **blue boxes** for text-based answers. When you're done, export your document as a pdf file and submit it on the Milestone page – see instructions for creating a PDF at the end of the Milestone.

RESOURCES: If you need hints on the Milestone or are feeling stuck, there are multiple ways of getting help. Attend Drop-In Hours to work on these problems with your peers, or reach out to the HelpHub if you have questions. Good luck!

PROMPT: You've been hired by a YouTube content creator to analyze trends on YouTube. Your employer is interested in the patterns of views, likes, dislikes, and comments earned by YouTube videos that make the top trending list.

SQL App: [Here's that link](#) to our specialized SQL app, where you'll write your SQL queries and interact with the data.

— Data Set **Description**

The YouTube Trending Videos (`youtube.trending`) consists of 6351 videos that were listed in the Trending Videos in the United States, recorded between November 2017 and June 2018. There are 16 columns in the dataset; we'll be working with the following columns in this skill builder: `title`, `channel_title`, `views`, `likes`, `dislikes`, and `comments`.

— **Task 1:** Top User Engagement

To start, you've been asked to look at the videos with the highest levels of user engagement, in terms of likes, dislikes, and comments.

A. Write a query that returns these columns: title, channel_title, views, likes, dislikes, and comment_count. Run your query then copy the query into the box below

```
SELECT
    title,
    channel_title,
    views,
    likes,
    dislikes,
    comment_count
FROM
    youtube.trending
```

B. Add `ORDER BY` to find the video that has the highest number of likes. What is the name of that video? Post your query into the yellow box, and the name of the most-liked video in the blue box.

```
SELECT
  title,
  channel_title,
  views,
  likes,
  dislikes,
  comment_count
FROM
  youtube.trending
ORDER BY
  likes DESC
```

BTS (방탄소년단) 'FAKE LOVE' Official MV

C. What is the name of the video with the highest number of dislikes? (a query goes in the yellow box, a text answer in the blue box.)

```
SELECT
   title,
   channel_title,
   views,
   likes,
   dislikes,
   comment_count
FROM
   youtube.trending
ORDER BY
   dislikes DESC
```

So Sorry.

D. What is the name of the video with the highest number of comments?

```
SELECT
   title,
   channel_title,
   views,
   likes,
   dislikes,
   comment_count
FROM
   youtube.trending
ORDER BY
   comment_count DESC
```

So Sorry.

— Task 2: Comments Counts Large and Small

Your employer wants to go further into the patterns of user engagement via comments on top trending videos.

A. Continuing from the queries of the previous task, modify the query to return only the top 10 videos in terms of comment count.

```sql
SELECT
   title,
   channel_title,
   views,
   likes,
   dislikes,
   comment_count
FROM
   youtube.trending
ORDER BY
   comment_count DESC
LIMIT
   10
```

B. How many comments are on the 10th-most-commented video? What is the ratio of this comment count to the top commented video (from Task 1D)? (The ratio is obtained by dividing the first number by the second. This should be done with a calculator outside of SQL using what was returned from the part A query, and not with a new SQL query.)

```
371864 Comments on the 10th Most Commented Video. The
Ratio of the 10th Highest to the 1st Highest is 371864 /
1361580 = is about 27/100



The top-10-most-commented video got 27 comments for every
100 comments that the number-1-commented video got.
```

C. Let's dig deeper down the rankings. What is the number of comments on the 100th-ranked video? Use the `OFFSET` keyword to skip past the top 99 videos so that the first row returned will be the 100th rank. (In other words, don't just change the `LIMIT` to 100 and check the last row returned.)

```
SELECT
    title,
    channel_title,
    views,
    likes,
    dislikes,
    comment_count
FROM
    youtube.trending
ORDER BY
    comment_count DESC OFFSET 99
```

```
53665   Comments
```

D. Okay, let's take one more step down the rankings. What is the number of comments on the 1000th-ranked video?

```
SELECT
    title,
    channel_title,
    views,
    likes,
    dislikes,
    comment_count
FROM
    youtube.trending
ORDER BY
    comment_count DESC OFFSET 999
```

```
7155
```

— Level Up

A. Let's reflect on the data we just looked at. In each step from part B through D, we looked at the 10th, 100th, and 1000th most-commented videos, a 10–fold increase in rank number. How different are the videos from one another at the top rankings compared to those in the middle rankings in terms of comment count? Write a sentence or two to summarize what your takeaways are. (Feel free to run extra queries on your own if it will help build your understanding or intuition of the trends in the data!)

Logan Paul Vlogs is has more popularity in terms of viewership than much of the other channels at the top 100, or top 1000 comments.

Also, just having a high view count on your video, does not mean that your video will also have a high comment count.

Spiderman into the Spider-verse trailer has ~22M views & 45K comments
RIP Angry Grandpa has ~7.7M views & 210K comments.

488 Views per comment for "Spiderman"
33 Views Per Comment for "RIP Angry"

However "The YIAY Book (YIAY #378) earned 1.3M Views and 53K comments for a View-to-Comment ratio of:
 24 views per comment.

Thus, my conclusion is that if you want more comment engagement, Movie Trailers are a terrible way to achieve that goal.

— Submission

Great work completing your first Milestone! To submit your completed Milestone, you will need to download / export this document as a PDF and then upload it to the Milestone submission page. You can find the option to download as a PDF from the File menu in the upper-left corner of the Google Doc interface.