**Part 1:** Calculating Longest Streak

**Step 1: Understand the Data Structure**

This first step is to familiarize yourself with the structure of the data. Run the following command in your SQL environment to view how the table **user\_streaks\_sql** is organized:

DESCRIBE user\_streaks\_sql;

Now, you have information about each table column such as name, data type, default values, and whether it can be NULL or not.

After you've viewed the structure, select a few rows to understand the data in them:

SELECT \* FROM user\_streaks\_sql LIMIT 10;

Review your selected region and make sure to look closely at what each row represents.

**Step 2: Initialize the Variables**

Before calculating the user streaks, you need to initialize some user-defined variables with the **SET** command as follows:

SET @streak\_count := 0;

SET @prev\_user\_id := NULL;

SET @prev\_streak\_active := NULL;

The variables  @streak\_count  ,  @prev\_user\_id  , and  @prev\_streak\_active   are initialized to 0, NULL, and NULL respectively.

**Step 3: Calculate the Streak Lengths**

Next, construct a temporary table named  streaks\_new   to calculate each user’s streak length using the **CREATE TEMPORARY TABLE** command. Here is the relevant code:

CREATE TEMPORARY TABLE streaks\_new AS (

SELECT

user\_id,

streak\_created,

streak\_active,

streak\_frozen,

(

-- Check if the same user has an active streak continuing from the previous day

CASE

WHEN @prev\_user\_id = user\_id AND @prev\_streak\_active = 1 AND streak\_active = 1

THEN @streak\_count := @streak\_count + 1

ELSE @streak\_count := 0

END

) AS streak\_length,

-- Update the values of previous row variables

@prev\_user\_id := user\_id,

@prev\_streak\_active := streak\_active

FROM

user\_streaks\_sql

ORDER BY

user\_id, streak\_created

);

Streak lengths are calculated based on whether the current user matches the previous one and if the user's streak is still active. If the conditions are met, the streak count increases; otherwise, it’s reset to 0.

longest\_user\_streaks\_part\_1.sql

**Part 2:** Ranking Top Users

**Step 4: Identify the Top Performers:**

Having identified the longest streak for each user, we can pull all streaks with length 30 or more. We will do so using the temporary table **streaks\_new** with the help of the following code:

SELECT

user\_id,

MAX(streak\_length) AS max\_streak\_length

FROM

streaks\_new

GROUP BY

user\_id

HAVING

MAX(streak\_length) >= 30

ORDER BY

max\_streak\_length DESC;

This command selects the user\_id and the maximum streak length, groups the result by the individual IDs, then selects only the users who achieved a streak of 30 days or longer, and orders them in descending order.