

## **3-ways to solve a consecutive streak question**

(Most preferred window function approach!)

### **1.) Reg. With window function**

- a.) Lag() for prev\_date
- b.) Remember this: → grouping by user\_id, and created group(for streak)
  - i.) Refer to existing consecutive q's already solved on github for this (Using row number or sum() over(unbounded preceding and current row to create streak groups)
- c.) Don't use Min and Max initially for identifying start streak and end streak

### **2.) Reg. W/o window function**

- a.) Not Exists logic + end\_date >= start\_date (to arrive at streak length)
- b.) Edge case missed: multiple streaks per user will generate cross-join; should use row\_number to eliminate those

### **Consecutive Streak solved with Approach 1:**

With revised\_txn\_data AS(

```
select
User_id,
dt,
LAG(dt) OVER(PARTITION BY user_id ORDER BY dt) AS prev_dt
From txn_data),
Created_diff_cnt AS(
Select
dt,
user_id
Case when DATEDIFF('day', prev_dt, curr_dt) = 1 then 1 else 0 end AS diff_count
From revised_txn_data)
Grouped AS(
Select
User_id,
dt,
sum(diff_count) OVER(PARTITION BY user_id order by curr_dt) AS streak_grp
from Created_diff_cnt)
Select
User_id,
MIN(dt) AS start_streak,
MAX(dt) AS end_streak,
count(*) AS streak_length or (end_streak - start_streak + 1) AS streak_length
from grouped
Group by user_id, streak_grp
```

**See example below to understand this in detail**

dt	diff_count	streak_grp
01-01	1	1
01-02	0	1
01-03	0	1
01-06	1	2
01-07	0	2