

### 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