Critical difference between Count() & Sum()
1) **Count() - Count all NULL & NOT NULL values**
2) **Sum() - count 1's only or aggregate**

Worked on: Consecutive Streak
1) Count(case when active>0 then 1 else 0 end)
2) Sum(case when active >0 then 1 else 0 end)

Sum() - gives 1's summation only, Output - 2 only
Count() - gives 10 → which is the row count

```sql
with revised_data as (SELECT
    user_id,
    dt,
    LAG(dt) OVER (PARTITION BY user_id ORDER BY dt) AS prev_dt,
    (julianday(dt) - julianday(LAG(dt) OVER (PARTITION BY user_id ORDER BY dt))) AS gap_days
FROM trans_data
),
flag as(
select
*,
case when gap_days >= 2 then 'active' else 0 end as active_2d
from revised_data
)
select
sum(case when active_2d = 'active' then 1 else 0 end) as active_users,
count(case when active_2d = 'active' then 1 else 0 end) as active
from flag
```

	active_users	active
1	2	10

Revised logic → where instead of 0 : NULL is taken

```sql
with revised_data as (SELECT
    user_id,
    dt,
    LAG(dt) OVER (PARTITION BY user_id ORDER BY dt) AS prev_dt,
    (julianday(dt) - julianday(LAG(dt) OVER (PARTITION BY user_id ORDER BY dt))) AS gap_days
FROM trans_data
),
flag as(
select
*,
case when gap_days >= 2 then 'active' else 0 end as active_2d
from revised_data
)
select
sum(case when active_2d = 'active' then 1 else 0 end) as active_users,
count(case when active_2d = 'active' then 1 else null end) as active
from flag
```

	active_users	active
1	2	2