SQL Practice - Day-24 - 20250218

Problem Statement:

A subscription-based streaming platform wants to analyze churn patterns. You are given a table SUBSCRIPTIONS with the following columns:

Task:
Write an SQL query to find the retention rate for each subscription plan in the past 6 months. The retention rate is defined as:

$\text{Retention Rate} = \text{Active Users at End of Month}/\text{Total Users at Start of Month} * 100$

Count active users as those whose END_DATE is NULL or greater than the last day of that month.

Consider only the last 6 months from today.

Output should have columns: MONTH, PLAN_TYPE, RETENTION_RATE.

** QUERY:

```
WITH USER_METRICS AS(
SELECT MONTH(START_DATE) AS MONTH,
PLAN_TYPE,
COUNT(USER_ID) AS TOTAL_USERS,
SUM(
CASE
WHEN END_DATE IS NULL
OR
END_DATE > LAST_DAY(START_DATE)
THEN 1 ELSE 0 END
) AS ACTIVE_USERS
FROM  SUBSCRIPTIONS
WHERE START_DATE > DATE_FORMAT(DATE_ADD(CURRENT_DATE(), INTERVAL -180
DAY), '%Y-%m-01')
GROUP BY MONTH, PLAN_TYPE
)
SELECT MONTH, PLAN_TYPE, (CAST(ACTIVE_USERS AS FLOAT) /TOTAL_USERS)*100
AS RETENTION_RATE
FROM USER_METRICS
;
```