You have a table of in-app purchases by user. Users that make their first in-app purchase are placed in a marketing campaign where they see call-to-actions for more in-app purchases. Find the number of users that made additional in-app purchases due to the success of the marketing campaign.

The marketing campaign doesn't start until one day after the initial in-app purchase so users that only made one or multiple purchases on the first day do not count, nor do we count users that over time purchase only the products they purchased on the first day.

Table: marketing\_campaign

user\_id: int

created\_at: datetime

product\_id: int

quantity: int

price: int

*Solution:*

-- What is defined as the marketing campaign?

--> show call-to-actions in-app purchases and customers successfully made in-app purhcases

-- What do we want to calculate?

--> Looking for user\_ids who NOT:

-- purchased things on their first day

-- users which purchased products same as the products they took first day

--> I.e. we need to find unique products purchased by the users after their first day.

--> How to find the first day per user?

-- take the min(created\_at) group by user\_id

--> we want to find out the products customer bought on first day

WITH cte AS (

SELECT

MIN(created\_at) AS first\_login

FROM marketing\_campaign

GROUP BY

user\_id),

first\_day\_products AS (

SELECT

t2.created\_at,

t2.user\_id,

t2.product\_id

FROM cte t1

JOIN marketing\_campaign t2

ON

t2.created\_at::date = t1.first\_login::date)

SELECT count (DISTINCT

--mc.created\_at,

mc.user\_id)

--,mc.product\_id

FROM

marketing\_campaign mc

WHERE

mc.product\_id NOT IN (

SELECT

product\_id

FROM

first\_day\_products fdp

WHERE

fdp.created\_at = mc.created\_at

AND

fdp.user\_id = mc.user\_id)

*True Solution:*

SELECT count(DISTINCT user\_id)

FROM marketing\_campaign

WHERE user\_id in

(SELECT user\_id

FROM marketing\_campaign

GROUP BY user\_id

HAVING count(DISTINCT created\_at) >1

AND count(DISTINCT product\_id) >1)

AND concat((user\_id),'\_', (product\_id)) not in

(SELECT user\_product

FROM

(SELECT \*,

RANK() over(PARTITION BY user\_id

ORDER BY created\_at) AS rn,

concat((user\_id),'\_', (product\_id)) AS user\_product

FROM marketing\_campaign) x

WHERE rn = 1 )