Problem 2752: Customers with Maximum Number of Transactions on Consecutive Days

Problem Information

Difficulty: Hard
Acceptance Rate: 0.00%
Paid Only: No

Problem Description

Table:

Transactions

+------------------+------+ | Column Name | Type | +------------------+------+ | transaction_id | int | | customer_id | int | | transaction_date | date | | amount | int | +------------------+------+ transaction_id is the column with unique values of this table. Each row contains information about transactions that includes unique (customer_id, transaction_date) along with the corresponding customer_id and amount.

Write a solution to find all

customer_id

who made the maximum number of transactions on consecutive days.

Return all

customer_id

with the maximum number of consecutive transactions. Order the result table by

customer_id

in

ascending

order.

The result format is in the following example.

Example 1:

Input:

Transactions table: +----------------+-------------+------------------+--------+ | transaction_id | customer_id | transaction_date | amount | +----------------+-------------+------------------+--------+ | 1 | 101 | 2023-05-01 | 100 | | 2 | 101 | 2023-05-02 | 150 | | 3 | 101 | 2023-05-03 | 200 | | 4 | 102 | 2023-05-01 | 50 | | 5 | 102 | 2023-05-03 | 100 | | 6 | 102 | 2023-05-04 | 200 | | 7 | 105 | 2023-05-01 | 100 | | 8 | 105 | 2023-05-02 | 150 | | 9 | 105 | 2023-05-03 | 200 | +----------------+-------------+------------------+--------+

Output:

+-------------+ | customer_id | +-------------+ | 101 | | 105 | +-------------+

Explanation:

- customer_id 101 has a total of 3 transactions, and all of them are consecutive. - customer_id 102 has a total of 3 transactions, but only 2 of them are consecutive. - customer_id 105 has a total of 3 transactions, and all of them are consecutive. In total, the highest number of consecutive transactions is 3, achieved by customer_id 101 and 105. The customer_id are sorted in ascending order.

Code Snippets

MySQL:

```
# Write your MySQL query statement below
```

MS SQL Server:

```
/* Write your T-SQL query statement below */
```

PostgreSQL:

```
-- Write your PostgreSQL query statement below
```

Oracle:

```
/* Write your PL/SQL query statement below */
```

Pandas:

```
import pandas as pd


def find_customers(transactions: pd.DataFrame) -> pd.DataFrame:
```

Solutions

MySQL Solution:

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