2701. Consecutive Transactions with Increasing Amounts Premium

Hard Topics Companies

SQL Schema > Pandas Schema >

Table: `Transactions`

```
+------------------+------+
| Column Name      | Type |
+------------------+------+
| transaction_id   | int  |
| customer_id      | int  |
| transaction_date | date |
| amount           | int  |
+------------------+------+
transaction_id is the primary key 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 an SQL query to find the customers who have made consecutive transactions with increasing `amount` for at least three consecutive days. Include the `customer_id`, start date of the consecutive transactions period and the end date of the consecutive transactions period. There can be multiple consecutive transactions by a customer.

Return *the result table ordered by* `customer_id` *in* ***ascending*** *order.*

The query 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
10	105	2023-05-04	300
11	105	2023-05-12	250
12	105	2023-05-13	260
13	105	2023-05-14	270

Output:

customer_id	consecutive_start	consecutive_end
101	2023-05-01	2023-05-03
105	2023-05-01	2023-05-04
105	2023-05-12	2023-05-14

Explanation:
- customer_id 101 has made consecutive transactions with increasing amounts from May 1st, 2023, to May 3rd, 2023
- customer_id 102 does not have any consecutive transactions for at least 3 days.
- customer_id 105 has two sets of consecutive transactions: from May 1st, 2023, to May 4th, 2023, and from May 12th, 2023, to May 14th, 2023.

customer_id is sorted in ascending order.

Seen this question in a real interview before? 1/5

Yes No

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