Problem 2986: Find Third Transaction

Problem Information

Difficulty: Medium
Acceptance Rate: 53.35%
Paid Only: Yes
Tags: Database

Problem Description

Table: `Transactions`

+------------------+----------+ | Column Name | Type | +------------------+----------+ | user_id | int | | spend | decimal | | transaction_date | datetime | +------------------+----------+ (user_id, transaction_date) is column of unique values for this table. This table contains user_id, spend, and transaction_date.

Write a solution to find the **third transaction**(if they have at least three transactions) of every user, where the **spending** on the preceding **two transactions** is **lower** than the spending on the **third** transaction.

Return _the result table by_`user_id` _in**ascending** order_ _._

The result format is in the following example.

Example 1:

Input: Transactions table: +---------+--------+---------------------+ | user_id | spend | transaction_date | +---------+--------+---------------------+ | 1 | 65.56 | 2023-11-18 13:49:42 | | 1 | 96.0 | 2023-11-30 02:47:26 | | 1 | 7.44 | 2023-11-02 12:15:23 | | 1 | 49.78 | 2023-11-12 00:13:46 | | 2 | 40.89 | 2023-11-21 04:39:15 | | 2 | 100.44 | 2023-11-20 07:39:34 | | 3 | 37.33 | 2023-11-03 06:22:02 | | 3 | 13.89 | 2023-11-11 16:00:14 | | 3 | 7.0 | 2023-11-29 22:32:36 | +---------+--------+---------------------+ **Output** +---------+------------------------+-----------------------+ | user_id | third_transaction_spend | third_transaction_date | +---------+------------------------+-----------------------+ | 1 | 65.56 | 2023-11-18 13:49:42 | +---------+------------------------+-----------------------+ **Explanation** - For

user_id 1, their third transaction occurred on 2023-11-18 at 13:49:42 with an amount of $65.56, surpassing the expenditures of the previous two transactions which were $7.44 on 2023-11-02 at 12:15:23 and $49.78 on 2023-11-12 at 00:13:46. Thus, this third transaction will be included in the output table. - user_id 2 only has a total of 2 transactions, so there isn't a third transaction to consider. - For user_id 3, the amount of $7.0 for their third transaction is less than that of the preceding two transactions, so it won't be included. Output table is ordered by user_id 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
```