Problem 2978: Symmetric Coordinates

Problem Information

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

Problem Description

Table:

Coordinates

+-------------+------+ | Column Name | Type | +-------------+------+ | X | int | | Y | int | +-------------+------+ Each row includes X and Y, where both are integers. Table may contain duplicate values.

Two coordindates

(X1, Y1)

and

(X2, Y2)

are said to be

symmetric

coordintes if

X1 == Y2

and

X2 == Y1

.

Write a solution that outputs, among all these

symmetric

coordintes

, only those

unique

coordinates that satisfy the condition

X1 <= Y1

.

Return

the result table ordered by

X

and

Y

(respectively)

in

ascending order

.

The result format is in the following example.

Example 1:

Input:

Coordinates table: +----+----+ | X | Y | +----+----+ | 20 | 20 | | 20 | 20 | | 20 | 21 | | 23 | 22 | | 22 | 23 | | 21 | 20 | +----+----+

Output:

+----+----+ | x | y | +----+----+ | 20 | 20 | | 20 | 21 | | 22 | 23 | +----+----+

Explanation:

- (20, 20) and (20, 20) are symmetric coordinates because, X1 == Y2 and X2 == Y1. This results in displaying (20, 20) as a distinctive coordinates. - (20, 21) and (21, 20) are symmetric coordinates because, X1 == Y2 and X2 == Y1. However, only (20, 21) will be displayed because X1 <= Y1. - (23, 22) and (22, 23) are symmetric coordinates because, X1 == Y2 and X2 == Y1. However, only (22, 23) will be displayed because X1 <= Y1. The output table is sorted by X and Y 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 symmetric_pairs(coordinates: pd.DataFrame) -> pd.DataFrame:
```

Solutions

MySQL Solution:

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