Problem 2175: The Change in Global Rankings

Problem Information

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

Problem Description

Table:

TeamPoints

+-------------+---------+ | Column Name | Type | +-------------+---------+ | team_id | int | | name | varchar | | points | int | +-------------+---------+ team_id contains unique values. Each row of this table contains the ID of a national team, the name of the country it represents, and the points it has in the global rankings. No two teams will represent the same country.

Table:

PointsChange

+---------------+------+ | Column Name | Type | +---------------+------+ | team_id | int | | points_change | int | +---------------+------+ team_id contains unique values. Each row of this table contains the ID of a national team and the change in its points in the global rankings. points_change can be: - 0: indicates no change in points. - positive: indicates an increase in points. - negative: indicates a decrease in points. Each team_id that appears in TeamPoints will also appear in this table.

The

global ranking

of a national team is its rank after sorting all the teams by their points

in descending order

. If two teams have the same points, we break the tie by sorting them by their name

in lexicographical order

.

The points of each national team should be updated based on its corresponding

points_change

value.

Write a solution to calculate the change in the global rankings after updating each team's points.

Return the result table in

any order

.

The result format is in the following example.

Example 1:

Input:

TeamPoints table: +---------+-------------+--------+ | team_id | name | points | +---------+-------------+--------+ | 3 | Algeria | 1431 | | 1 | Senegal | 2132 | | 2 | New Zealand | 1402 | | 4 | Croatia | 1817 | +---------+-------------+--------+ PointsChange table: +---------+---------------+ | team_id | points_change | +---------+---------------+ | 3 | 399 | | 2 | 0 | | 4 | 13 | | 1 | -22 | +---------+---------------+

Output:

+---------+-------------+-----------+ | team_id | name | rank_diff | +---------+-------------+-----------+ | 1 | Senegal | 0 | | 4 | Croatia | -1 | | 3 | Algeria | 1 | | 2 | New Zealand | 0 | +---------+-------------+-----------+

Explanation:

The global rankings were as follows: +---------+-------------+--------+------+ | team_id | name | points | rank | +---------+-------------+--------+------+ | 1 | Senegal | 2132 | 1 | | 4 | Croatia | 1817 | 2 | | 3 | Algeria | 1431 | 3 | | 2 | New Zealand | 1402 | 4 | +---------+-------------+--------+------+ After updating the points of each team, the rankings became the following: +---------+-------------+--------+------+ | team_id | name | points | rank | +---------+-------------+--------+------+ | 1 | Senegal | 2110 | 1 | | 3 | Algeria | 1830 | 2 | | 4 | Croatia | 1830 | 3 | | 2 | New Zealand | 1402 | 4 | +---------+-------------+--------+------+ Since after updating the points Algeria and Croatia have the same points, they are ranked according to their lexicographic order. Senegal lost 22 points but their rank did not change. Croatia gained 13 points but their rank decreased by one. Algeria gained 399 points and their rank increased by one. New Zealand did not gain or lose points and their rank did not change.

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 global_ratings_change(team_points: pd.DataFrame, points_change:
pd.DataFrame) -> pd.DataFrame:
```

Solutions

MySQL Solution:

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

MS SQL Server Solution:

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

PostgreSQL Solution:

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

Oracle Solution:

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

Pandas Solution:

```
import pandas as pd

def global_ratings_change(team_points: pd.DataFrame, points_change:
pd.DataFrame) -> pd.DataFrame:
```