Problem 1841: League Statistics

Problem Information

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

Problem Description

Table:

Teams

+----------------+---------+ | Column Name | Type | +----------------+---------+ | team_id | int | | team_name | varchar | +----------------+---------+ team_id is the column with unique values for this table. Each row contains information about one team in the league.

Table:

Matches

+-----------------+---------+ | Column Name | Type | +-----------------+---------+ | home_team_id | int | | away_team_id | int | | home_team_goals | int | | away_team_goals | int | +-----------------+---------+ (home_team_id, away_team_id) is the primary key (combination of columns with unique values) for this table. Each row contains information about one match. home_team_goals is the number of goals scored by the home team. away_team_goals is the number of goals scored by the away team. The winner of the match is the team with the higher number of goals.

Write a solution to report the statistics of the league. The statistics should be built using the played matches where the

winning

team gets

three points

and the

losing

team gets

no points

. If a match ends with a

draw

, both teams get

one point

.

Each row of the result table should contain:

team_name

- The name of the team in the

Teams

table.

matches_played

- The number of matches played as either a home or away team.

points

- The total points the team has so far.

goal_for

- The total number of goals scored by the team across all matches.

goal_against

- The total number of goals scored by opponent teams against this team across all matches.

goal_diff

- The result of

goal_for - goal_against

.

Return the result table ordered by

points

in descending order

. If two or more teams have the same

points

, order them by

goal_diff

in descending order

. If there is still a tie, order them by

team_name

in

lexicographical order

.

The result format is in the following example.

Example 1:

Input:

Teams table: +---------+-----------+ | team_id | team_name | +---------+-----------+ | 1 | Ajax | | 4 | Dortmund | | 6 | Arsenal | +---------+-----------+ Matches table: +--------------+--------------+----------------+----------------+ | home_team_id | away_team_id | home_team_goals | away_team_goals | +--------------+--------------+----------------+----------------+ | 1 | 4 | 0 | 1 | | 1 | 6 | 3 | 3 | | 4 | 1 | 5 | 2 | | 6 | 1 | 0 | 0 | +--------------+--------------+----------------+----------------+

Output:

+-----------+---------------+--------+----------+-------------+-----------+ | team_name | matches_played | points | goal_for | goal_against | goal_diff | +-----------+---------------+--------+----------+-------------+-----------+ | Dortmund | 2 | 6 | 6 | 2 | 4 | | Arsenal | 2 | 2 | 3 | 3 | 0 | | Ajax | 4 | 2 | 5 | 9 | -4 | +-----------+---------------+--------+----------+-------------+-----------+

Explanation:

Ajax (team_id=1) played 4 matches: 2 losses and 2 draws. Total points = 0 + 0 + 1 + 1 = 2. Dortmund (team_id=4) played 2 matches: 2 wins. Total points = 3 + 3 = 6. Arsenal (team_id=6) played 2 matches: 2 draws. Total points = 1 + 1 = 2. Dortmund is the first team in the table. Ajax and Arsenal have the same points, but since Arsenal has a higher goal_diff than Ajax, Arsenal comes before Ajax in the table.

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 league_statistics(teams: pd.DataFrame, matches: pd.DataFrame) ->
pd.DataFrame:
```

Solutions

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