

Sports Leaderboard Sorting Application

Overview:

This project focuses on sorting a sports leaderboard where each team's statistics are provided in CSV format. Each line contains a team's name along with the number of wins, losses, draws, no result/abandoned matches, and points. The sorting is based on a custom comparator that applies the following rules:

1. **Points (Descending):** Teams with higher points are ranked higher.
2. **Wins (Descending):** If points are the same, the team with more wins ranks higher.
3. **Losses (Ascending):** If wins are the same, the team with fewer losses ranks higher.
4. **Draws (Descending):** If losses are the same, the team with more draws ranks higher.
5. **No Result/Abandoned (Ascending):** Finally, if draws are the same, the team with fewer no result/abandoned matches ranks higher.
6. **Team Name (Alphabetical):** As a last resort, teams can be sorted alphabetically.

Implementation Details:

- **Input:** A CSV file or list of CSV lines where each line follows the format:
`TeamName,wins,losses,draws,noResult,points`
- **Processing:**
 - Parse the CSV data.
 - Create an internal representation (e.g., an object or record) for each team.
 - Sort the list using a custom comparator that applies the sorting criteria in the specified order.
- **Output:** The sorted leaderboard which is then printed or written back to a file.

Test Cases:

1. Basic Test Case:

- **Input:**

```
TeamA,10,2,3,1,33
TeamB,9,3,4,0,31
TeamC,10,2,2,2,32
```

- **Expected Order:**

- a. **TeamA:** 33 points, 10 wins, 2 losses, 3 draws, 1 no result
- b. **TeamC:** 32 points, 10 wins, 2 losses, 2 draws, 2 no result
- c. **TeamB:** 31 points, 9 wins, 3 losses, 4 draws, 0 no result

2. Tie-Breaker Test Case (Multiple Ties):

- **Input:**

TeamX, 8, 4, 3, 0, 27

TeamY, 8, 4, 2, 1, 27

TeamZ, 8, 3, 2, 2, 27

TeamW, 8, 3, 2, 0, 27

- **Sorting Explanation:**

- All teams have 27 points.
- All teams have 8 wins.
- For losses, **TeamZ** and **TeamW** (with 3 losses) rank higher than **TeamX** and **TeamY** (with 4 losses).
- Between **TeamZ** and **TeamW**, since losses are equal, check draws: both have 2 draws. Next, compare no result matches where **TeamW** (0) should rank higher than **TeamZ** (2).
- Finally, **TeamX** and **TeamY**: although they both have 4 losses, **TeamX** has more draws (3 vs. 2) and/or a better no result score.

- **Expected Order:**

- a. **TeamW**
- b. **TeamZ**
- c. **TeamX**
- d. **TeamY**