

# Read Me

## Application

The application has the following classes and interfaces:

- **LeagueTable**: this is the façade class that receives the match and return a list with the league classification. Intenally contains the **OrderedTreeLeague** class that is responsible to order the League classification.
- **OrderedTreeLeague**: this class receives as input 2 object in the constructor:
  - **ICalculator**: this interface defines the methods that **OrderedTreeLeague** needs to calculate the league data: Goal defference, Points, etc
  - **Comporator**: this interface define the order criteria used for ordering the league classification.
- **LeagueCalculator**: it's an implementation of **ICalculator**
- **LeagueComparator**: it's an implementation of **Compactor**. This class define the critertia for ordering the league table entries.
- **Demo**: it's a use case of **LeagueTable**.

## Execute Test

Run the unit test with gradle:

- `./gradlew test`

## Execute Application

The application can be run using gradle:

1. Compile: `./gradlew clean build`
2. Run: `./gradlew bootRun`

Use java command line:

- `Java -jar LeagueTable.jar`

## The LeagueTable Output

The output after executing the application, it will show something similar to. (Each execution throw different results):

===== League Results =====

[Team name: Team 14 points: 68 difference: 21 goals for: 102 gaols against: 81 played: 38 won: 21 lost: 12 drawn: 5  
, Team name: Team 5 points: 67 difference: 14 goals for: 111 gaols against: 97 played: 38 won: 20 lost: 11 drawn: 7  
, Team name: Team 20 points: 66 difference: 26 goals for: 117 gaols against: 91 played: 38 won: 21 lost: 14 drawn: 3  
, Team name: Team 4 points: 62 difference: 16 goals for: 98 gaols against: 82 played: 38 won: 19 lost: 14 drawn: 5  
, Team name: Team 10 points: 61 difference: 1 goals for: 101 gaols against: 100 played: 38 won: 19 lost: 15 drawn: 4  
, Team name: Team 8 points: 60 difference: 8 goals for: 96 gaols against: 88 played: 38 won: 19 lost: 16 drawn: 3  
, Team name: Team 7 points: 58 difference: -12 goals for: 98 gaols against: 110 played: 38 won: 18 lost: 16 drawn: 4  
, Team name: Team 3 points: 57 difference: 6 goals for: 99 gaols against: 93 played: 38 won: 17 lost: 15 drawn: 6  
, Team name: Team 19 points: 56 difference: 5 goals for: 93 gaols against: 88 played: 38 won: 17 lost: 16 drawn: 5  
, Team name: Team 15 points: 56 difference: 0 goals for: 97 gaols against: 97 played: 38 won: 16 lost: 14 drawn: 8  
, Team name: Team 13 points: 56 difference: -3 goals for: 94 gaols against: 97 played: 38 won: 17 lost: 16 drawn: 5  
, Team name: Team 1 points: 55 difference: -5 goals for: 91 gaols against: 96 played: 38 won: 17 lost: 17 drawn: 4  
, Team name: Team 12 points: 54 difference: 2 goals for: 102 gaols against: 100 played: 38 won: 17 lost: 18 drawn: 3  
, Team name: Team 9 points: 52 difference: -1 goals for: 104 gaols against: 105 played: 38 won: 14 lost: 14 drawn: 10  
, Team name: Team 2 points: 48 difference: -1 goals for: 94 gaols against: 95 played: 38 won: 14 lost: 18 drawn: 6  
, Team name: Team 17 points: 48 difference: -4 goals for: 93 gaols against: 97 played: 38 won: 15 lost: 20 drawn: 3  
, Team name: Team 16 points: 45 difference: -14 goals for: 79 gaols against: 93 played: 38 won: 14 lost: 21 drawn: 3  
, Team name: Team 11 points: 41 difference: -22 goals for: 91 gaols against: 113 played: 38 won: 10 lost: 17 drawn: 11  
, Team name: Team 6 points: 40 difference: -10 goals for: 94 gaols against: 104 played: 38 won: 11 lost: 20 drawn: 7

, Team name: Team 18 points: 36 difference: -27 goals for: 80 gaols against: 107 played: 38  
won: 10 lost: 22 drawn: 6