MSc Software Development

CSC7051 Programming 2

Practical 8

**Java Collection Framework**

Given the results for the first number of weeks of a football league season write a program that will process the scores and output the statistics for each team (ordered by Team name) and the current league standings (ordered by points). The results are provided in a text file (***Results.text*** – available on QOL).

The result for each match is guaranteed to be in the format:

<***Team1******Team1Score******Teams2Score******Team2***>

e.g. Arsenal 4 Spurs 0.

Note : Each team name is one string (i.e. no spaces).

**Development suggestions**

1. Develop a class to store the details for each team to support the application output, e.g. Team name, Played, Goals For, Goals Against, Win, Draw, Loss and Total Points.
2. Read each line (match result) in the text file (*use BufferedReader or similar*).
3. Use a Collections **Map** implementation.   
   E.g. private static HashMap<String, Team> teams = new HashMap<String, Team>();

**(String being the *team name* and Team being the class developed in step 1.)**

1. Process the results – (There are 3 points for a win, 1 for a draw and 0 for a loss.)
2. To output the individual team statistics order the values (alphabetically), hint use a TreeSet.
3. To output the League tables convert the **values** in the **HashMap** to a **List** implementation. Develop and use a **comparator** to order (sort) by Points.

Example output…

Team statistics League table

