Homework-4

**Out Date:** 09/21/2019 (Saturday)

**Due Date:** 09/30/2019 (Monday) 11:59PM

Team#: \_17\_\_

Team Member-1:\_\_\_ Ying-Yu Huang\_\_\_\_\_\_\_\_\_\_ Member’s Contribution (in %) \_50%\_

Team Member-2:\_\_\_ Chao Zhang\_\_\_\_\_\_\_\_\_\_\_\_\_Member’s Contribution (in %) \_50%\_

**Submission**

1. Work on the Problme-1.
2. Prepare your Python file for Problem-1 (e.g., HW4\_P1\_Team#.py).
3. Upload the files to blackboard.

**Problem-1**

A text file (WorldSeriesWinners.txt ) on the World Series winning teams is available in the homework folder. This file contains a chronological list of the World Series winning teams from 1903 through 2009. The first line in the file is the name of the team that won in 1903, and the last line is the name of the team that won in 2009. Note the World Series was not played in 1904 and 1994.

Write a program to open the file WorldSeriesWinners.txt, read it line by line and store the team names in a dictionary **[10 points]**. Specifically, create a dictionary in which keys are the team names (e.g., Chicago White Sox’) and values are a list of the wining years (e.g., [1906, 1917, 2005]) **[10 points]**. The year information is not available in the text file but you should be able to create it based on the year information given above **[10 points]**. Don’t hardcode the values, but compute them on the fly.

For instance, an entry for Chicago White Sox in the dictionary would look like this:

‘Chicago White Sox’ : [1906, 1917, 2005]

Display the teams in the alphabetical order with years in brackets **[20 points]**. For instance,

Team-A: [1903, 1920, 1990]

Team-B: [1910, 1923, 1982, 1991]

….

**Note** that the above display this is just a template and numbers in the brackets don’t correspond to the actual information.

Create another dictionary in which keys are the team names (e.g., Chicago White Sox’) and values are the occurrence of win (e.g., 3 for Chicago White Sox’). Display the wins per team **[20 points]. For instance,**

Teams : Total Wins

Team-A: 3

Team-B: 4

…

**Note** that this is just a template and numbers don’t correspond to the actual information.

Sort the data by the number of wins and create a bar graph of the data as shown below **[10 points]**. Each star represents one win.

New York Yankee (27): \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Team-XYZ (20): \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Team-ABC (10): \*\*\*\*\*\*\*\*\*\*

Chicago White Sox (3) \*\*\*

Please make sure your code follows the Python programing style guide available here: <https://www.python.org/dev/peps/pep-0008/> **[10 points]**.

Please make sure the code is well-commented **[10 points]**