LAB – Reading from and Writing to a File

1. Work with your pair programming partner to develop an algorithm for a Java program that reads data from a file. The data involves some soccer statistics. It includes the name of the soccer team, the number of goals, and the number of shots per game. The program will read in this data, it will find the maximum and minimum number of goals scored by the teams along with the name of the team that scored those goals. It will also find the average of the shots per game. The program will then output the results to a file called soccerSummary.txt. The file's data should look like this:

   Maximum goals Scored: Monaco 15
   Minimum goals Scored: Athletic Bilbao 1
   Average shots per game: 15.565

   Please note that there are two different input files to choose from. The soccerShots.txt file contains one-word team names, goals and shots all separated by the tab key. The bonus file allows for spaces in the name of the teams. You may choose which file you would like to work with.

2. Once you agree that the algorithm is complete, implement the program using pair programming guidelines. This means whoever typed the algorithm, should move aside and let the other person type the code. As you write the Java program that you designed, use your algorithm as a guide. Place your algorithm as comments using the comment blocks in the body of the main method. Use proper indentation, and meaningful identifiers throughout the code. I have attached sample files of how to read code from file and how to output code to files for your reference.

3. Test your program thoroughly. Generate test cases as part of a test plan to exercise all branches of your program. Follow the guidelines on pages 108-9 of the textbook, Big Java, and provide complete coverage of all decision points. Use the Test Plan document to list all of your test data and the expected results.

4. Demonstrate your working program with commented algorithm and test plan to your lab TA.