Homework 4

Due February 16th 11:00 AM

100 points

CS 2235

Data Structures and Algorithms

1. Using the Scoreboard and GameEntry classes from the lecture (these will be posted to Moodle), create a Scoreboard that can contain up to 20 GameEntry objects.
2. Now, create 20 new GameEntry objects with a name (Player 1, Player 2, etc.) and a random score between 0 and 1000, and add them to your Scoreboard array using the add method. Hint: The easiest way to create your GameEntries is to use a loop.
3. Create a method inside the Scoreboard class that prints all the elements inside the array to the screen. Then create another method which displays a summary of the array. This method must include: the number of elements inside the scoreboard, the highest and lowest values, range of scores and the average value of the scoreboard. Demonstrate that both methods work.
4. Use the remove method to remove a random element from the array and once again, print the elements inside the array and the summary of the values remaining in the array.

Scoring

1. 10% - Code compiles without errors.
2. 20% - Scoreboard created with the correct number of elements.
3. 20% - Scoreboard properly populated with GameEntry objects.
4. 20% - Both print methods created and demonstrated.
5. 20% - 1 element removed from scoreboard and print methods used to demonstrate.
6. 10% - Meaningful comments and header.

Sample Output: