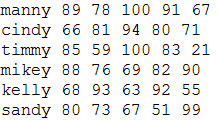
**PROGRAMMING PROBLEM #2 CS401 SPRING 2017 FINAL EXAM (Hoffman)**

**You are given these two input files**

* [studentScores.txt](http://www.cs.cmu.edu/~thoffman/CODING/Exams/studentScores.txt) **matches student's name to list of 5 exam scores i.e. exam1, exam2, exam3, exam4, exam5 respectively on the line.**  
  
* [query.txt](http://www.cs.cmu.edu/~thoffman/CODING/Exams/query.txt) **one line of numbers indicating a subset of the exams to be averaged**  
  http://www.cs.cmu.edu/~thoffman/CODING/Exams/query.txt.jpg

**You must complete this starter file**[**Exams.java**](http://www.cs.cmu.edu/~thoffman/CODING/Exams/Exams.java)**which performs the following actions in the order prescribed. You are not allowed to skip a step. Your next step will not be graded if a prior step is not done. There is no partial credit within a step. A non-compiling program gets a zero.**

**Step 1: 30% Read the studentScores file in an ArrayList of Strings and print it.**

Store each line of this file into an Array or ArrayList of strings - The output should look exaclty line the original input file.

manny 89 78 100 91 67

cindy 66 81 94 80 71

timmy 85 59 100 83 21

mikey 88 76 69 82 90

kelly 68 93 63 92 55

sandy 80 73 67 51 99

**Step 2: 30% sort that ArrayList and print it.**

Sort the ArrayList of line strings and print it such that the lines are in sorted order vertically.

cindy 66 81 94 80 71

kelly 68 93 63 92 55

manny 89 78 100 91 67

mikey 88 76 69 82 90

sandy 80 73 67 51 99

timmy 85 59 100 83 21

**Step 3: 15% using your arrayList from Step 3**

For each student compute the average of their scores for only those (3) exams listed in the query.txt file. On each line print the average of the (3) exams indicated by the query, followed by the student's name. Those lines must be sorted by average.  
*Hint: If you split each student line into an array or ArrayList, the name will be at index 0, exam1 at index 1. exam2 at index 2 etc. so you can use the indexes in the query file to directly index the i'th exam.*  
The output must look EXACTLY like this:

kelly 62.00

timmy 68.67

cindy 77.00

sandy 82.00

mikey 82.33

manny 85.33

**STEP 4: 25% Out of all 5 exams, print the exam name that the students (on average) scored the lowest.**

exam 5