

Lab 9: File IO

Due: 11:59PM 10/24/12

To do

You will write a program that prompts the user to enter the name of a text file containing a bunch of double values.

Upon opening the file, read in the values, and write the following information to a file called `summary.dat`.

- minimum value
- maximum value
- average value
- number of values

If the file cannot be opened, make sure to print out a meaningful error message and then exit the program. If the file contains non-numeric data, print out a meaningful error message and then exit the program.

How to do it

Do the “numerical stuff” in an object-oriented way. Create a `ValueStatistics` class that has the following methods:

```
void addValue(double d);
double getMinimum();
double getMaximum();
double getAverage();
int getCount();
```

You will not get full credit if your class uses any kind of container (array, `ArrayList`, etc.). You do not need to store all entered values to do this. See Lab 1!

What happens if you call one of the `get` methods without having entered any values?

With this class written, all you need is a `main` method that figures out what file to process, instantiates a `Scanner`, and reads in the values, passing them to the `ValueStatistics` object.

Test your program running on `stats1.txt`, `stats2.txt` and `bad-stats.txt` available on blackboard. You should get the same answers as me (available in `answers.txt`).

Turn In

All `.java` files should be in a directory named `YourName_1110_lab9`, zipped up, and submitted to blackboard.

Bonus

10 points: Use a `javax.swing.JFileChooser` to select the file containing the numeric data. (Check out the documentation – it's easy!)

50 points: Implement the ability to process multiple columns of data. See `multi-column-stats.txt` on blackboard. Each column should get its own statistics at the end of processing. This program should also work for the one-column files.

Assignments turned in late are not eligible for bonus credit. This bonus credit is only applicable to the lab portion of your final grade.