CSC 383, Sections 401 and 410
Fall, 2011
Assignment 1
Due 11:59pm CST, Friday, September 9th

Requirements. You are to write a program that reads from standard input a sequence of exam scores, each of which is in the range 0 to 100. It then computes and prints the following descriptive statistics:

- the maximum value;
- the minimum value;
- the average value;
- the median;
- the standard deviation

The program will be run from the command line. Do NOT print any prompts. Instead, redirect standard input to read from the test file I will provide.

The output should provide enough text to make it clear what is being printed.

Your program must be modular. Each statistic must be computed in a separate method, each of which is invoked from the main method. Write a separate method for collecting the input and use an array list, not an array.

There must be a block of comments at the top that includes:

- the program's name (call this one **`DescriptiveStats.java`**)
- your name
- your e-mail address
- the course number and section (CSC 383-401 or CSC 383-410)
- a brief description of the program consisting of two or three sentences

Every method must have a comment block ahead of it that describes what the function is doing.

The code must be indented to show structure.

Use descriptive variable and method names. As is customary in Java, these names should begin with a lower-case letter and following words in the name should be capitalized, for example, a good variable name is **`averageScore`** and a good method name is **`computeMedian`**. As with these examples variable names are almost always nouns and method names are almost always verb phrases.

For this first assignment, any program not meeting all of the specifications mentioned above will be returned for correction.

Grading rubric: This assignment is worth 50 points, with points assigned as follows:

- There are individual methods for computing each statistic (3 points each; 4 for standard deviation)
- There is a method for reading the input into an array list (4 points)
- Variable and method names descriptive and mnemonic (4 points)
- Comment block with information specified (4 points)
- Program computes and prints each statistic correctly and clearly (20 points)
- Code is properly indented (2 points)

Beyond the above rubric, 2 points will be deducted for each missed requirement. If I say to do something a certain way, do it that way.