**CS 401: LAB #5**

* Starter file: [Lab5.java](http://www.cs.pitt.edu/~hoffmant/401/lab-05/Lab5.java)
* input file: [input.txt](http://www.cs.pitt.edu/~hoffmant/401/lab-05/input.txt)

LAB #5 gives you a mostly written program that opens a file whose name you put on the command line. Inside the program, an array of String has been declared for you. You are to read those Strings from the file into your array - one word per array element. The problem is that your input file has more words than your array can hold.

**You are to download the Starter file as is, compile and execute it as follows.**

C:\> java Lab5 input.txt

You will see that it crashes!! Your TA will lead a discussion of exactly where/why it crashed and how you will fix it by filling in the resize method. Your job is to fill in the resize method which does these 3 steps:

* create an array twice a big as the array that just got filled up ( 1 line of code)
* copy the Strings from the old array to the bigger array. ( 2 lines of code )
* return the reference to the new bigger array ( 1 line of code )

Once your resize method is written corerctly, your program will do the following:

* print each word from the array on a separate line.
* print the capacity (length) of the array and the actual count (in use) of the array.
* call bubleSort() (you must write) to sort the strings (try adding a flag to break out of the loop if no elems are out of order on last pass)
* call trim() (you must write) to shrink the array to be exactly the count.
* print each word from the array on a separate line.
* print the capacity (length) of the array and the actual count (in use) of the array. This time count should == length

**HINT: Write resize first then test it. Then write trim then test it. Then write bubbleSort last of all**

**Here is a capture of the**[**correctOutput.txt**](http://www.cs.pitt.edu/~hoffmant/401/lab-05/correctOutput.txt)

You have till Saturday night to usee the online handin system to hand in one file named "Lab5.java". It will be script graded.