

# CMSI 182

## INTRODUCTION TO COMPUTER SCIENCE

Fall 2006

### Assignment 1130

The purpose of this assignment is mainly to give you a taste of a more conventional programming model — the edit-compile-execute cycle. For this exercise, we will use the Java programming language. Despite the name similarity, Java and JavaScript are actually significantly different from each other.

### Not for Submission

We have selectively covered material from Chapters 6 and 8 from the Brookshear book. If you are unable to read through these chapters in their entirety, then focus on Sections 6.1, 6.2, 6.4, and 8.1.

### Not for Submission (Yet)

A quick head's up — your programming portfolio is due on December 14, in approximately 3 weeks. It will consist of fixed-up, improved, and overall better versions of the following assignments:

- Assignment 1019 (the Web pages)
- Assignment 1026, with all three algorithms now “packaged” within standalone Web pages
- Assignment 1121, also with the three JavaScript algorithms within standalone Web pages

Now is a good time to start reviewing your work, making improvements (especially if I marked it up previously), and generally putting your personal stamp on these pages and programs.

### For Submission

The provided *Mystery.java* program contains two algorithms, named *mystery1* and *mystery2*, respectively, that take a piece of text and produce another piece of text (or string) as a result. You are asked to figure out, through a combination of reading the source code and running the program, what exactly these algorithms do.

You will need the Java Development Kit (JDK) for this assignment. Check the *Java Crib Sheet* handout for detailed instructions on downloading, installing, and using the JDK.

1. Type in the *Mystery.java* program that was given out in class. Try to be as exact as possible — the slightest divergence may result in errors.
2. Compile the program (again refer to the *Java Crib Sheet* for details); you should now see a file called *Mystery.class*.

3. Run the program by entering *java Mystery* from the command line. You need to add two items to the command invocation after *java Mystery*:
  - Specify *1* or *2* to indicate whether you want to perform *mystery1* or *mystery2*.
  - Follow the *1* or *2* with the double-quoted text that you wish to use as input into the algorithm. For example, *java Mystery 1 "hello world"* will perform *mystery1* on *hello world*; *java Mystery 2 "the quick brown fox"* will perform *mystery2* on *the quick brown fox*.
  - In case you forget, *java Mystery* by itself should print a help message.
  - *Mystery* will then respond with the result of the algorithm — do this as many times as you wish; experiment with different strings, particularly those with 2 or more words.
4. On hardcopy, state what each algorithm does, and provide “transcripts” of your interactions from the command line (a straight copy-paste into your submission will do) to show that you successfully compiled and ran the program.

Getting a program up and running in Java requires a bit more of a learning curve than JavaScript did, so don't hesitate to ask if you get stuck.