CS 170 Section 002
HW 5 - Spring 2013

Due Monday, Mar. 29 at the beginning of class

Honor Code:

For all programming assignments, you must write comments at the top of each file which include the following information:

/* THIS CODE IS MY OWN WORK. IT WAS WRITTEN WITHOUT CONSULTING CODE WRITTEN BY OTHER STUDENTS OR MATERIALS OTHER THAN THIS SEMESTER'S COURSE MATERIALS. _Your_Name_Here_ */

Homework submission

Submit (Newmethod.java, Sorting.java and Deduplication.java) by **Mar. 29th** at the beginning of class.

Using the terminal, turn in your homework:

Put all three files in the folder CS170 or a subfolder (perhaps CS170/hw5/)

You can create a folder by running the following command (1 line per step):

1) mkdir ~/cs170/hw5

2) copy your files to the folder /home/yourNetID/cs170/hw5

Using the terminal, run:

3) ***cd ~/cs170/*** or ***cd ~/cs170/hw5*** (depending on where you stored your 3 files)

4) /home/cs170002/turnin-hw Sorting.java hw5a

5) /home/cs170002/turnin-hw Deduplication.java hw5b

You can submit each of the files as many times as you wish; only the last submitted version will be graded.

Problem 1: Sort arbitrary numbers (50 pts)

Create a Java program and name it **Sorting.java**.

This program read arbitrary integers from command line. Every time the system prompts message "Enter a number", and then read **one** number from command line. When user enters 0, the program find, sort and output first all **odd** integers in **ascending** order and then find, sort and output all **even** integers in **descending** order (Assume all inputs are positive integers).

Example 1:

java Sorting

Enter a number = 3

Enter a number = 2

Enter a number = 9

Enter a number = 7
Enter a number = 8
Enter a number = 6
Enter a number = 0
Odd numbers = 3 7 9
Even numbers = 8 6 2

Hints:

You may reuse example codes and create methods to handle different tasks.
We learned how to make a program read arbitrary inputs. (hw4-problem1)
It is possible to extend a fixed array:
http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/09/copy-array.html
You can reuse the code of selection sorting algorithm.
http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/09/sel-sort.html

Problem 2: Deduplication (50 pts)

Create a Java program and name it **Deduplication.java**.
This program reads a list of strings (delimited by a comma) as **command line arguments** (http://www.mathcs.emory.edu/~cheung/Courses/170/Syllabus/09/command-args.html) of the program. System outputs the deduplicated list, which doesn't contain repeated strings.

Example:

(on your command line:)
javac Deduplication.java

Example 1:

java Deduplication ABC abc AB AA bb abc AA
output = ABC abc AB AA bb

Example 2:

java Deduplication hello world hi what is there book store book world
output = hello world hi what is there book store