

Assignment 0: Method Contract

Due: 10:10am, Mon. Oct. 1.

Purpose. This assignment is to give you practice doing and submitting an assignment. It will not be counted towards your final mark.

Take Note of any Vital Rules. Throughout this course a “vital rule” means something that you must follow if you are to get any marks at all for the question. If you break a vital rule, you will automatically get a mark of zero on the corresponding part of the assignment. This might seem overly strict, but we want you to practice doing things a certain way. We use these vital rules to make sure you don’t work around the main point of the question. We have listed the vital rules for this assignment further below.

Preparation. Make an A0 directory on your hard drive. Copy A0.zip from the course homepage to this directory. In a command prompt window, cd to this directory, and type:

```
unzip A0.zip
```

This will create several “*.java” files which contain the handout code along with a data subdirectory containing several example data files. Finally, move A0.zip out of this directory, so you don’t overwrite your work by mistake.

Browse the handout code in your A0 directory. The file SudokuBoard.java provides a class definition which stores and maintains the state of a Sudoku puzzle. If you don’t know what a Sudoku puzzle is, read about them on the link <http://www.websudoku.com/>.

If you are new to Java ignore the methods in SudokuBoard which read from the input files. You need to use these methods, but you don’t need to understand them in detail at this point.

Your Job.

Your job is to complete the method `options(int, int)` in SudokuBoard.java according to the description provided in the method’s comment. Note the method returns an object of class `java.util.ArrayList`. Read the documentation of `java.util.ArrayList` on the Java 2 (Standard Edition 6) API. This API is at <http://java.sun.com/javase/6/docs/api/>.

Vital Rules. Do not break these three rules:

1. You cannot change or move any of the Java handout code other than by completing the missing method body in SudokuBoard.java. You cannot add any class or instance variables to SudokuBoard.java.
2. You may add *private* helper methods to SudokuBoard.java, if you wish.

Submitting This Assignment. Instructions for how to electronically submit your java files will be posted on the course web page on the Assignments link. You will need to submit SudokuBoard.java. The precise name of any submitted file matters for the electronic submission, including capitalization. (Also, note that to be able to submit your assignment over the web, you must have logged into a CDF machine at least once before and changed your password.)