

Homework 5 for CSE 216: Java Programming Practice

Due date: Due on **Mar 16th (Monday) 10am in class.**

- *Objective.* To refresh your memories as to how to program in Java and in particular, how to use the NetBeans IDE.
- *Description.* Create two Java classes, one that represents a matrix of integers and another that inherits from the matrix class and implements a Sudoku puzzle grid. If you're not familiar with Sudoku, please refer to the Wikipedia article on the topic: <http://en.wikipedia.org/wiki/Sudoku>.
- *Instructions.* In this homework assignment, you need to create two Java classes. The first is named Matrix and implements a data structure for a matrix, i.e. a two dimensional array of integers. The second class is named SudokuGrid. It extends Matrix and adds certain functionality to it, in particular the ability to access the individual boxes in the grid and the ability to evaluate a grid to see if it is a valid Sudoku puzzle. The actual definition of the classes and their methods is contained in the Javadoc files that are provided with this assignment.
- *Details.*
 1. Create a new project in NetBeans of type Java — Java Application. Use the project name Sudoku. Leave the “Create Main Class” box checked.
 2. Rename the “sudoku” Source Package to edu.lehigh.cse216.sudoku.
 3. Create a new Java class Matrix and implement the functionality described in the Javadocs.
 4. Create a new Java class SudokuGrid that extends Matrix and implement the functionality described in the Javadocs.
 5. Use the Main class to implement some code to test each of the methods in the Matrix and SudokuGrid classes. Feel free to implement any private auxiliary methods you find helpful.

6. Put a comment at the beginning of each file that includes your name.
7. Zip up your entire project directory and upload it to Blackboard.