

Homework 7

75 points

Due Saturday April 20th, 11:59pm

Programming exercise 22.21

The complete solution for the Sudoku problem mentioned below, is provided on canvas as Sudoku.java, and multiple sudoku boards.

For this assignment, you will write the JavaFX GUI described below:

*****22.21** (*Game: Sudoku*) The complete solution for the Sudoku problem is given in Supplement VI.C. Write a program that lets the user enter the input from the text fields, as shown in Figure 22.15a. Clicking the *Solve* button displays the result, as shown in Figure 22.15b–c.

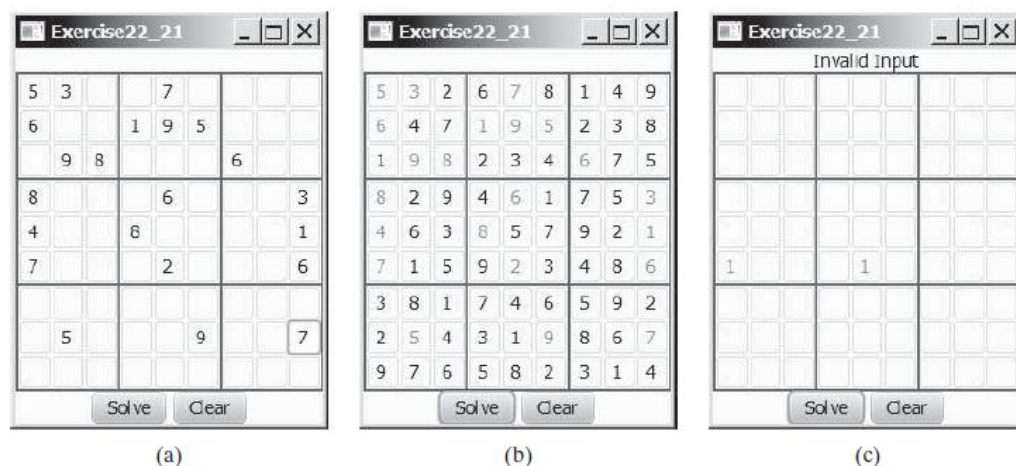


FIGURE 22.15 The program solves the Sudoku problem.

Additional Requirements:

- Your program should start by loading one of the sudoku boards from a text file.
- Allow the user to continue to enter numbers into the textfields, and continue to solve the sudoku board.
- When the user hits the "solve" button, a solution should appear. All the numbers that were entered by the user should stay black. All the new numbers that are part of the solution, should be blue.
- If the solution is invalid, the numbers that are invalid should appear in red. After the invalid numbers are displayed the board can go back to what it was before the user hit "solve", or you can automatically clear the board and start over. Either approach is fine.

-When the user hits the “Clear” button, the board should be cleared and another new sudoku board loaded from a text file.

Submit to Canvas:

Submit 1 zip file containing all the files in your src folder, and your executable file. Name all your files clearly, so the grader can easily see, and run your program.

Scoring rubric:

The following rubric will be used:

Criteria	% Point s
Program(s) fulfill all the requirements. All .java files are included and declare the necessary classes. Code is well organized, and easy to follow (especially for the grader). Coding style is well utilized, including well named variables and methods. Comments are included, well written and descriptive.	100%
Program(s) fulfill almost all of the requirements. All .java files are included and declare the necessary classes. Code is fairly well organized, and somewhat easy to follow (especially for the grader). Some comments are included.	80%
Program(s) fulfill most of the requirements. All .java files are included and declare the necessary classes. Code is fairly well organized, and somewhat easy to follow (especially for the grader). Some or no comments are included.	60%
Program(s) fulfills some of the requirements, or does not run at all. Some .java files are included and declare some of the necessary classes. Some or no comments are included.	40%
Program(s) does not run at all. Some .java files are included and declare some of the necessary classes. Some or no comments are included.	20%
Either no attempt was made, or the attempt made shows no progress toward solving the problem.	0%