Purpose: The Fifteen Puzzle

Details:

LISTEN
I’ll go over the sample program that you’ll be modifying and explaining the new features.

THE PUZZLE
Given a four-by-four array consisting of a “hole” and moving tiles labelled with the integers from one to fifteen, the goal of the “Fifteen Puzzle” is to put the tiles into order by sliding one tile at a time to fill the hole (and leaving a hole in the place where the tile used to be). To play, go to the class Web page and click the “FifteenPuzzle.html” link.

The purpose of this lab is to familiarize you with applet design in preparation for the final project in the course. Today you will just fill in a couple of methods for the FifteenPuzzle class. For the final project you will implement a puzzle very similar in design.

THE ASSIGNMENT
This puzzle has several non-working buttons. The “Reset” button and the “Scramble” button have no effect. Your job is to complete the two methods “reset()” and “scramble()” so that they do the appropriate things.

The “reset()” method should set all the labels on the tiles back to their original configuration (i.e., all fifteen numbers in order across the rows and down the columns; score equal to zero). The “scramble()” method should randomly rearrange the labels on the tiles and set the score to zero.

That’s it! Hand in a hard copy of the program and also submit it electronically on the class Web site.

Checklist:

☐ All requirements met as described above
☐ Javadoc-style header comments
☐ Correctly indented code; no wrapped lines
☐ Hard copy (printed using a2ps) of program
☐ Electronic submission of program