Assignment IP.2

Due Nov 9, 2020 by 11:59pm **Points** 100 **Submitting** a file upload
Available Oct 22, 2020 at 12am - Nov 10, 2020 at 11:59pm 20 days

This assignment was locked Nov 10, 2020 at 11:59pm.

Complete development of project analyzed for **IP.1**

IP.2 Due Monday November 9th at 12 PM (10 Points)

In the final implementation, you must ensure that:

1. You draw empty tiles by filling color in a solid color, such as gray, with no value visible.
2. When just a single tile remains **in the center square** with a value, it must be filled with a different color (such as yellow).
3. Upon a request to close the application window, the user must be prompted with a dialog window to confirm the request.

The second deliverable contains a fully operational implementation of this project. I expect you will create an Eclipse project, in which to place your code, and you will zip up and submit the entire ~~workspace~~ **project** containing your solution.

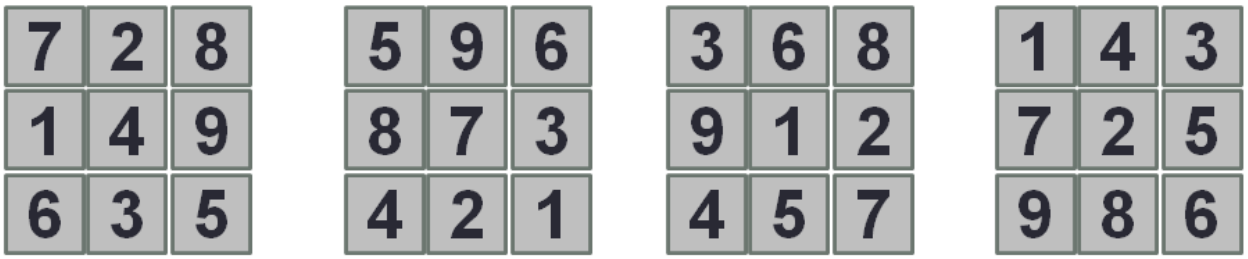
This deliverable will contain:

- Fully operational code that meets all requirements
- Fully tested using JUnit test cases that demonstrates 80% code coverage of the **src**/ folder

Initial Configuration

Based on the last digit of your student ID, select one of the four puzzles to start as your initial configuration.

Can you solve
with 11 in middle?



Final Notes

If the graders are unable to compile your code because of an incompatible Java version or operating system, they will be instructed to "try to get things to run" but only within reason. You are responsible for making sure that your code will run on a different computer. This is a useful exercise in any software engineering class! Note: if you use a different development environment, such as IntelliJ, be advised that the graders may not have this tool installed. As much as possible, try to avoid unexpected and arbitrary dependencies on special software frameworks or artifacts located only on your computer.

You may be receive a penalty if the effort to get your code to compile is too high.

Sample Solutions

Here are four possible solutions that yield "11" in the center location. The formatting is condensed, and describes the board "row by row" as I hope you can see. The final solution appears each time after eight moves.

Initial position (0 1)
[7, 2, 8][1, 4, 9][6, 3, 5]
[0, 9, 8][1, 4, 9][6, 3, 5]
[0, 1, 0][1, 4, 9][6, 3, 5]
[0, 0, 0][1, 4, 9][6, 3, 5]
[0, 0, 0][0, 5, 9][6, 3, 5]
[0, 0, 0][0, 5, 9][0, 9, 5]
[0, 0, 0][0, 5, 9][0, 4, 0]
[0, 0, 0][0, 20, 9][0, 0, 0]
[0, 0, 0][0, 11, 0][0, 0, 0]

Initial position (2 3 4)

[5, 9, 6][8, 7, 3][4, 2, 1]
[0, 14, 6][8, 7, 3][4, 2, 1]
[0, 8, 0][8, 7, 3][4, 2, 1]
[0, 8, 0][8, 7, 3][0, 6, 1]
[0, 8, 0][8, 7, 3][0, 6, 0]
[0, 8, 0][8, 4, 0][0, 6, 0]
[0, 8, 0][8, 24, 0][0, 0, 0]
[0, 0, 0][8, 3, 0][0, 0, 0]
[0, 0, 0][0, 11, 0][0, 0, 0]

Initial position (5, 6)

[3, 6, 8][9, 1, 2][4, 5, 7]
[0, 6, 8][3, 1, 2][4, 5, 7]
[0, 0, 14][3, 1, 2][4, 5, 7]
[0, 0, 14][3, 1, 2][0, 9, 7]
[0, 0, 14][3, 9, 2][0, 0, 7]
[0, 0, 14][0, 12, 2][0, 0, 7]
[0, 0, 14][0, 12, 14][0, 0, 0]
[0, 0, 0][0, 12, 1][0, 0, 0]
[0, 0, 0][0, 11, 0][0, 0, 0]

Initial position (7 8 9)

[1, 4, 3][7, 2, 5][9, 8, 6]
[0, 4, 3][7, 2, 5][9, 8, 6]
[0, 1, 0][7, 2, 5][9, 8, 6]
[0, 0, 0][7, 2, 5][9, 8, 6]
[0, 0, 0][7, 2, 5][0, 17, 6]
[0, 0, 0][7, 34, 5][0, 0, 6]
[0, 0, 0][0, 41, 5][0, 0, 6]
[0, 0, 0][0, 41, 30][0, 0, 0]
[0, 0, 0][0, 11, 0][0, 0, 0]