CSCI 212
Spring 2018
Tic Tac Toe Project

Instructions for the Tic Tac Toe GUI project.

This project has 3 parts. However, part 3 is optional.

Part 1

1. This part allows two human players playing the game.
2. Use a BorderPane for the root node and use two (or at most three) children nodes to create the GUI in the root node.
3. Set the scene using the root node, width and height (you must choose the width and the height on your own).
4. Divide scene into two.
5. In the first pane, create a 3 X 3 grid for the Tic Tac Toe board using 9 buttons.
6. Register the EventHandler with each of the buttons.
7. Use a GridPane of width at least half of the width of the scene (the display window).
8. Add the buttons to the GridPane in a 3 x 3 grid. Then set the GridPane as the center node of the root node(BorderPane).
9. Create a Restart button and a VBox.
10. Add the restart button to the top of VBox object and set the VBox object as the right node of the root node.
11. Use the bottom part of the VBox for displaying moves and declaring a winner. If the game is a draw, that should be declared too.

12. Check if the game is over and if there is a winner.
13. Imagine what should happen before a game begins or play a game against yourself to understand what you have to code.
14. For example, the symbol has to change from "X" to "O" or "O" to "X" at each move.
15. Increase the font size to fill each square of the grid with eith "X" or "O".
16. Please plan before coding.
17. Please submit the GUI screen by 5/3/2018.
18. In the second phase, you are going to code the the game.
19. The second phase is due on 5/8/2018.

Part 2

Modify the game so that a human player plays the game with a computer that uses random moves.

Part 3: (Optional extra part)

- Modify the game so that a human palyer plays the game with a computer that makes smart moves.
- What does it mean for a computer to make a smart move?
- The computer looks at the game position, then for each possible move, the computer analyzes all possible outcomes before it chooses the best move.
- So you have to write an analysis method that would enable the computer do this.
- Those of you who can do this, give it a try.
- You have until May 16th 2018 to submit this project.

- If you need help, please ask. Even if you discuss with each other, you must use independently written code.

Good luck.