More GUIs in Java Swing

This recitation requires you to make a GUI for the core implementation of Tic-Tac-Toe Plus.

Tic-Tac-Toe Plus follows the same rules as traditional Tic-Tac-Toe, but can be played on a grid of any size with any number of players. The core implementation is located in the package `edu.cmu.cs.cs214.rec08.core` and provides you with a `Player` class, a `GameChangeListener` interface, a `TicTacToe` interface, and the core implementation of the game in `TicTacToeImpl`. The `GameChangeListener` is used to create listeners that can be registered to be notified any time a square is changed on the board, the current player changes, or the game ends. The `TicTacToe` interface allows users to make a move, maintain the current game state, and allows listeners to determine whether or not someone has won or if the game has resulted in a stalemate.

Sample Application: ChatServer

You should examine the example GUI application, `ChatServer`, in the `samples` directory. This example shows a similar application to Tic-Tac-Toe and Scrabble by having separate core and GUI sections.

Pay attention to how the GUI and core interact with each other. In particular, notice the way that each `ChatPanel` is registered as a subscriber to the `ChatServer`. What design pattern is this?

Run `main` in `SimpleChatClient.java` to run the ChatServer application. It will present a screen where users can be registered, and the "Start Chat" button will open a new chat window for each user.

Instructions

- Examine and understand the sample ChatServer application.

- Skim the core implementation you were given to familiarize yourself with the code.

- Develop a GUI for Tic-Tac-Toe Plus by developing your GUI classes and placing them in the `edu.cmu.cs.cs214.rec08.gui` package. You have leeway in how you implement the GUI to take advantage of the features in the provided game core. For example, you can implement a GUI that lets a player select the size of the grid and then have each player play on the same screen, you can have each player have their own screen of a fixed size, or any other reasonable implementation you can imagine. Note that you will need to update `Main.java` in `edu.cmu.cs.cs214.rec08` to make use of your GUI.

- Write unit tests to test the Tic-Tac-Toe core implementation. You need to add more test methods to the `TicTacToeTest` class in the `edu.cmu.cs.cs214.rec08.core` package under the `test` directory.