Project 2: ConnectX

Author: Kevin Mody

Class: CPSC 2150/2151

**User Story:**

Functional Requirements:

1. As a user, player 1 goes first as ‘X’ and second player as ‘O’.
2. As a user, I can start from any given columns.
3. As a user, I can only enter one integer at a time from 0 to 8 because gameboard only contains 6 rows and 9 columns.
4. As a user, I need 5 in row horizontally, vertically, or diagonally to win.
5. As a user, I can place ‘X’ token in any columns.
6. As a user, I can place ‘O” token in any columns.
7. As a user, I can try to stop other player winning by placing the token in the columns.
8. As a user, I make a move right after second player ‘O’ or ‘X’ makes the move.
9. As a user If I win, I get decide to play again or exit the game.
10. As a user if the game ties, I have an option to play it again or close it.
11. As a user, if I opted in to play again than I should start as player X.
12. As a user, if I put a token in a column(s) that is/are already full, it will inform me an error and ask me to choose again.
13. As a user if I don’t have any free space than game will be tie.

Non-Functional Requirements:

1. The program must be coded in Java.
2. The program starts with only Player X.
3. The program must be able to run on Unix, Windows and MacOS computers.
4. The program must be able to run SoC servers/computers.
5. Time for printing game board bust be quick.
6. Time for inputting tokens must be efficient and fast.
7. Tokens can only be placed inside the gameboard.
8. Time to check which player has won or Tie must be efficient and fast.
9. When its Tie, program must ask user if they want to play again, if yes time to load a new game must be quick.

UML Class Diagrams

Diagram

Description automatically generated

UML Activity Diagrams

Diagram

Description automatically generatedDiagram

Description automatically generatedDiagram

Description automatically generated

Diagram

Description automatically generated

Diagram

Description automatically generatedDiagram

Description automatically generatedDiagram

Description automatically generatedDiagram

Description automatically generatedDiagram

Description automatically generatedDiagram

Description automatically generated

Diagram

Description automatically generated

Diagram

Description automatically generated