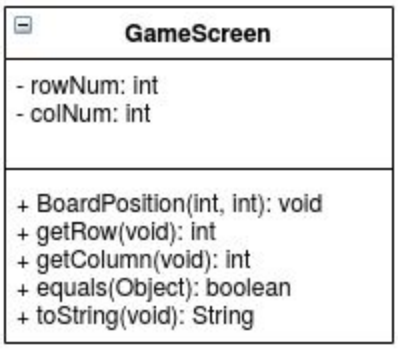
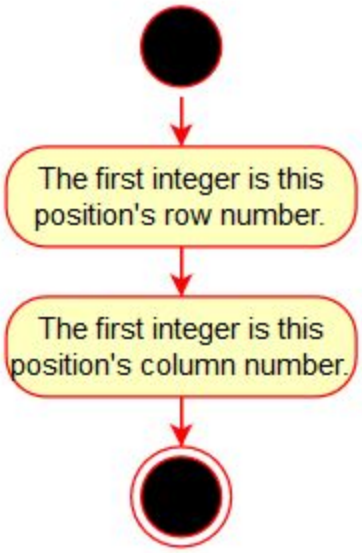
Requirements Analysis:

- ➢ Functional Requirements:
  - As a player, I need to know whether I am ‘X’s or ‘O’s to be able to play the game.
  - As a player, I need to be able to place a token in a column of my choice to try and beat my opponent.
  - As a player, I need to be able to see the current state of the game board to determine my next move.
  - As a player, I need the game to tell me if I select a column that is already full so that I don’t break the rules.
  - As a player, I need the game to tell me if I select a column that is out of range so that I don’t break the rules.
  - As a player, I want the game to tell me if I won, lost, or tied with the other player so that I know the result of the game.
  - As a player, I want the option to play again if I want to play another game.
- ➢ Nonfunctional Requirements:
  - The game must be programmed using Java.
  - The game must run on a Unix system.
  - The game must run as efficiently as possible.

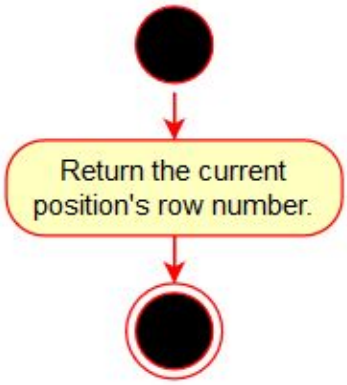
BoardPosition Class:



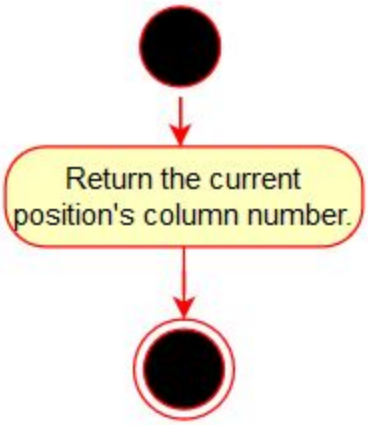
public BoardPosition(int row, int column):



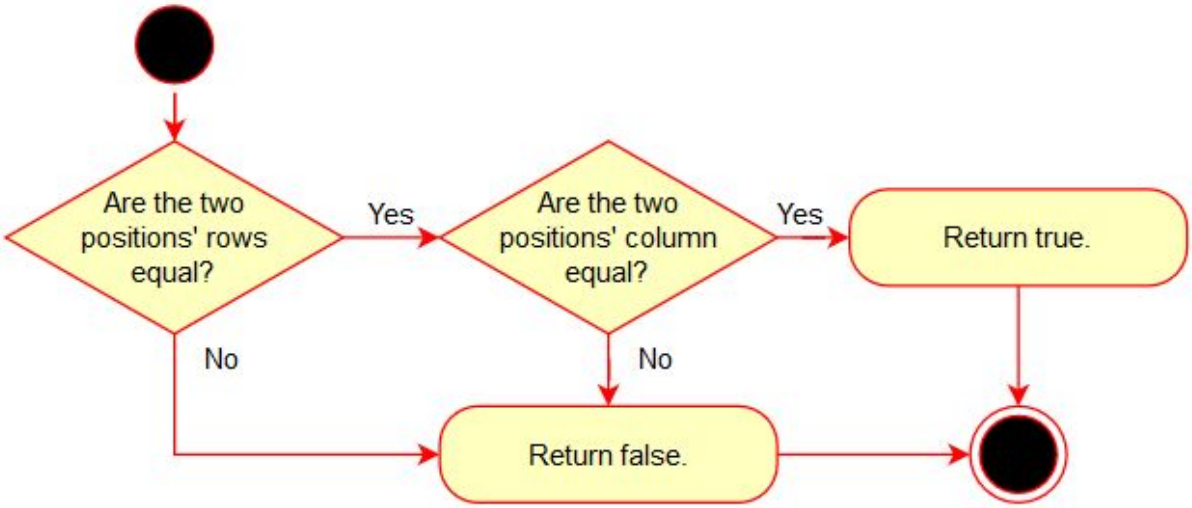
public int getRow():



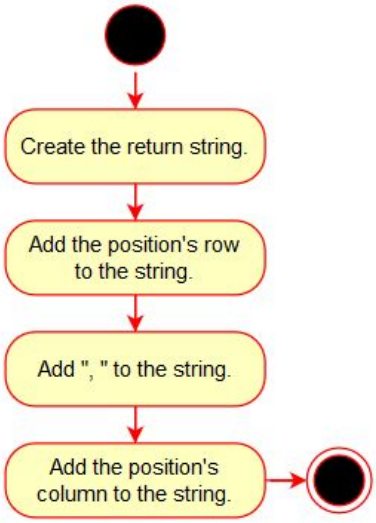
public int getColumn():



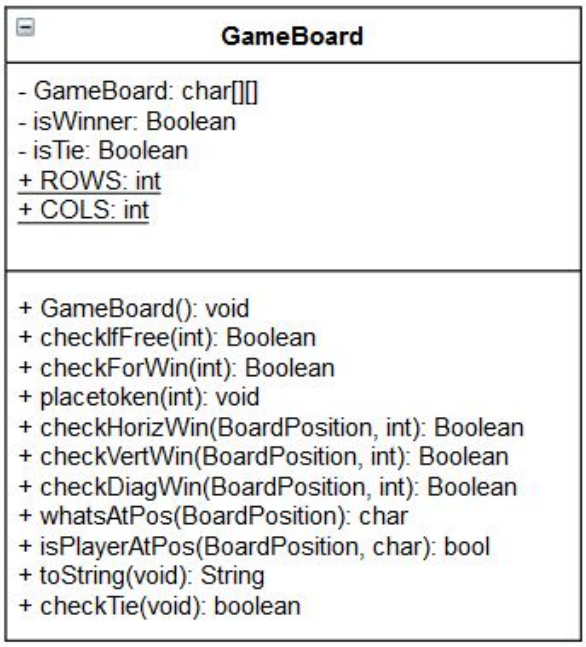
public bool equals():



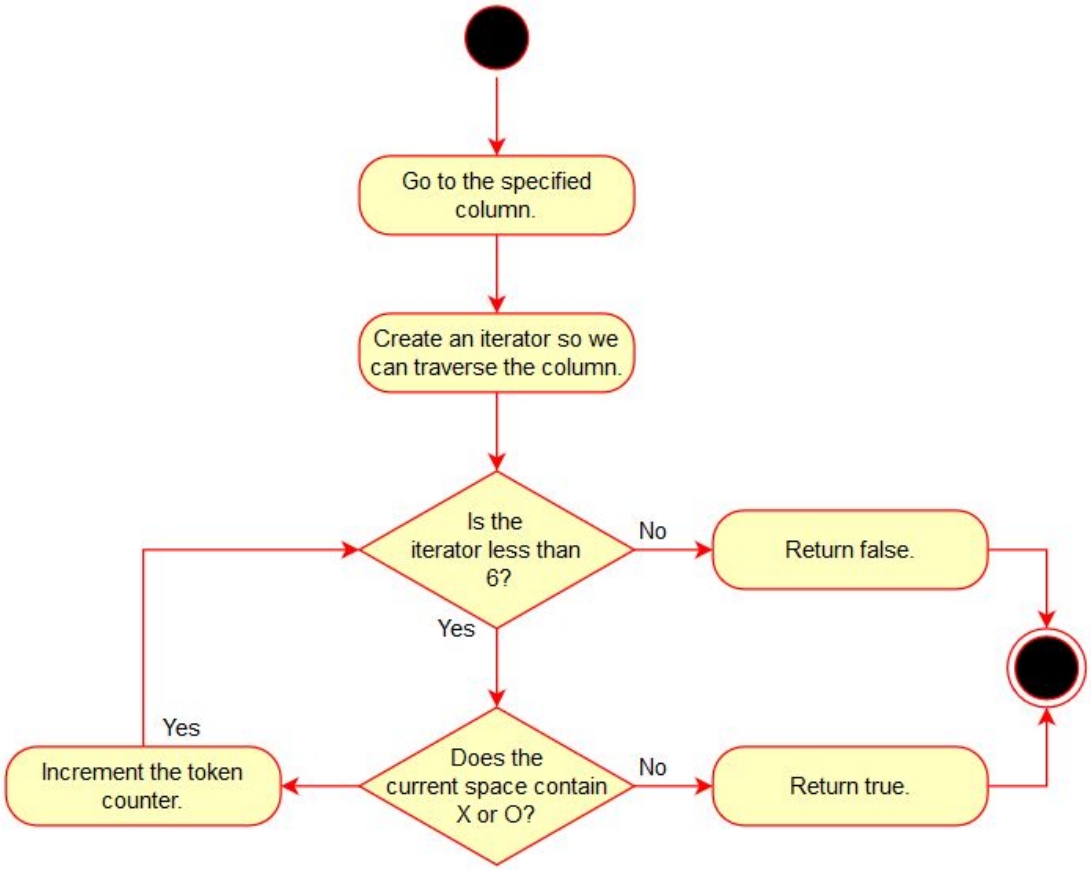
public String toString():



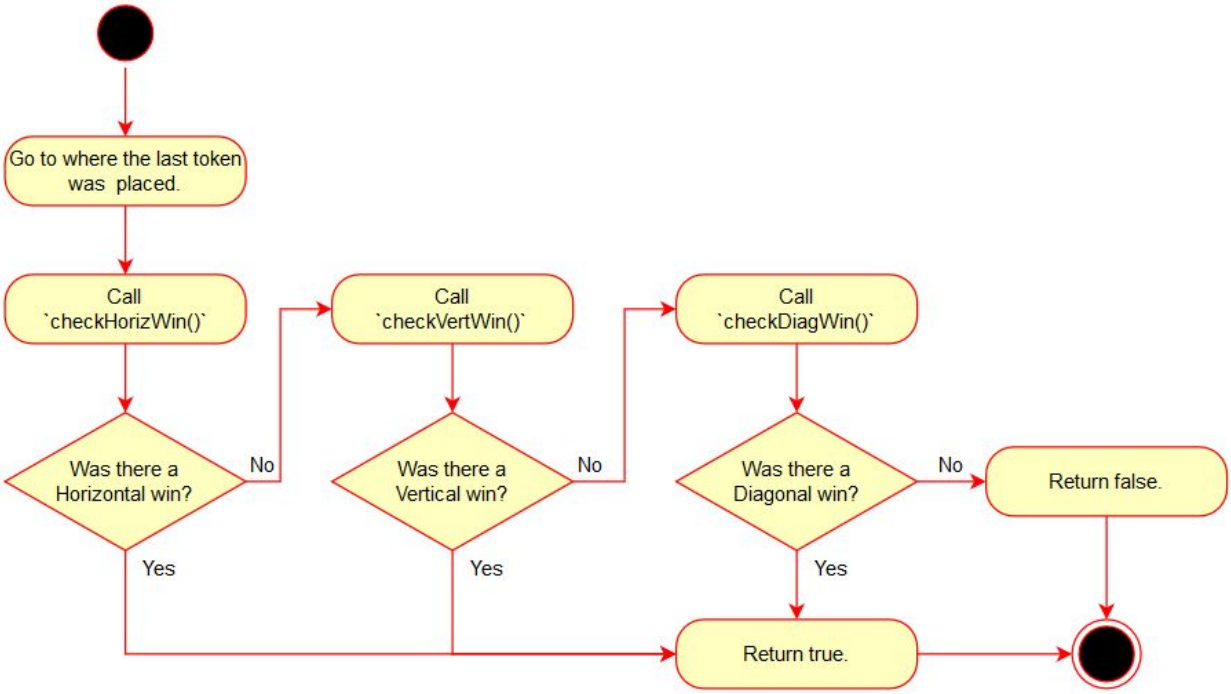
GameBoard class:



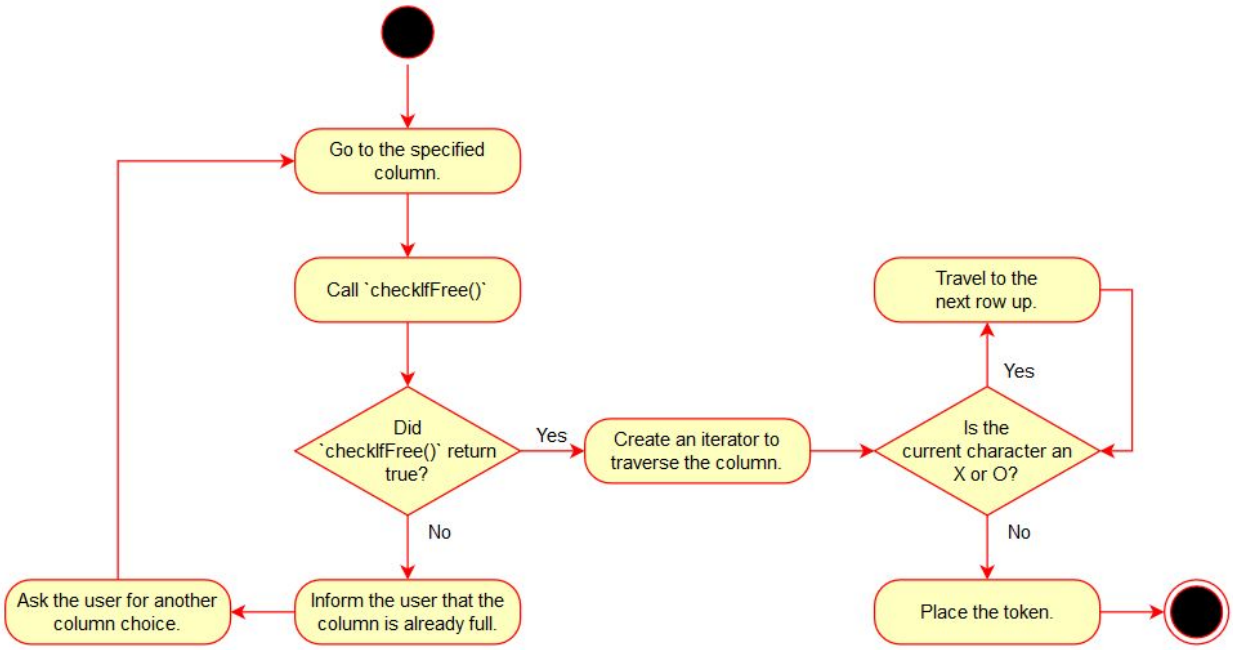
public boolean checkIfFree(int c):



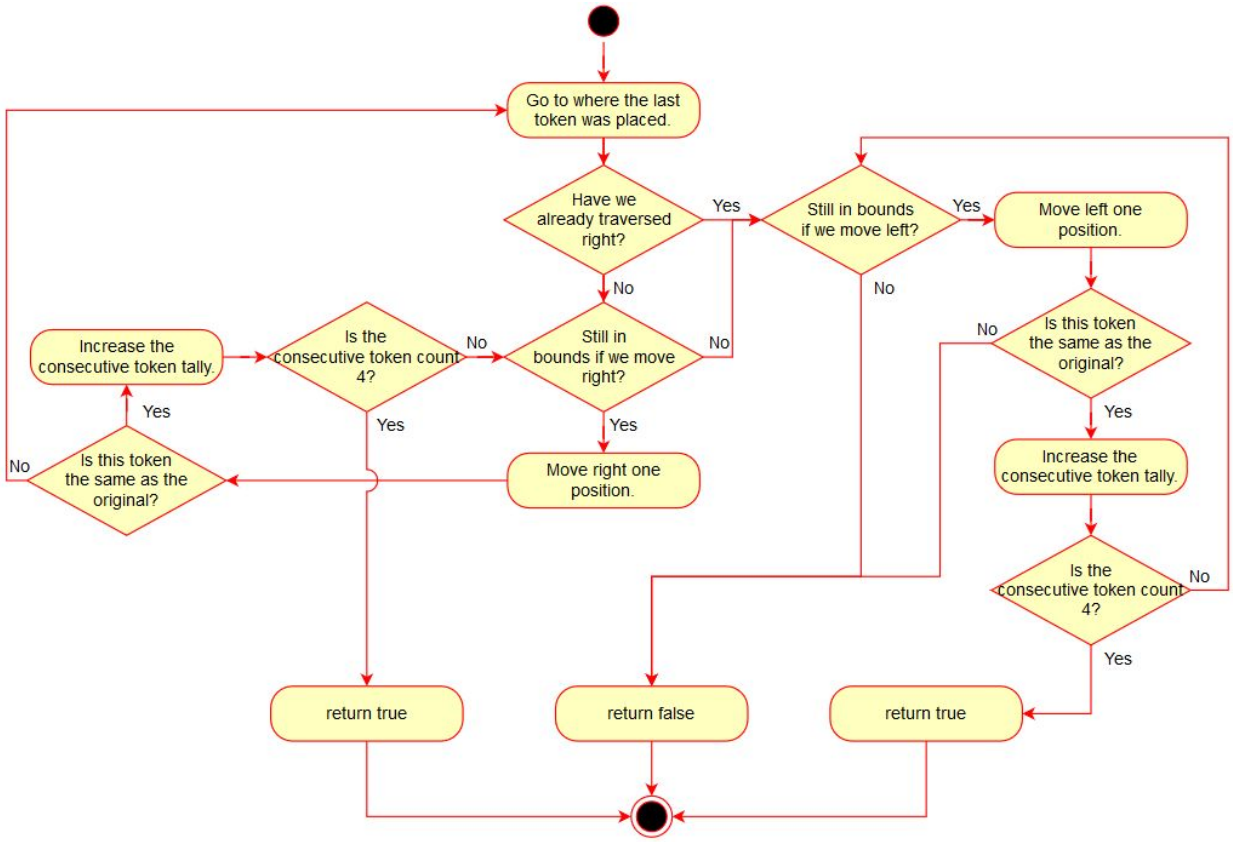
public boolean checkForWin(int c):



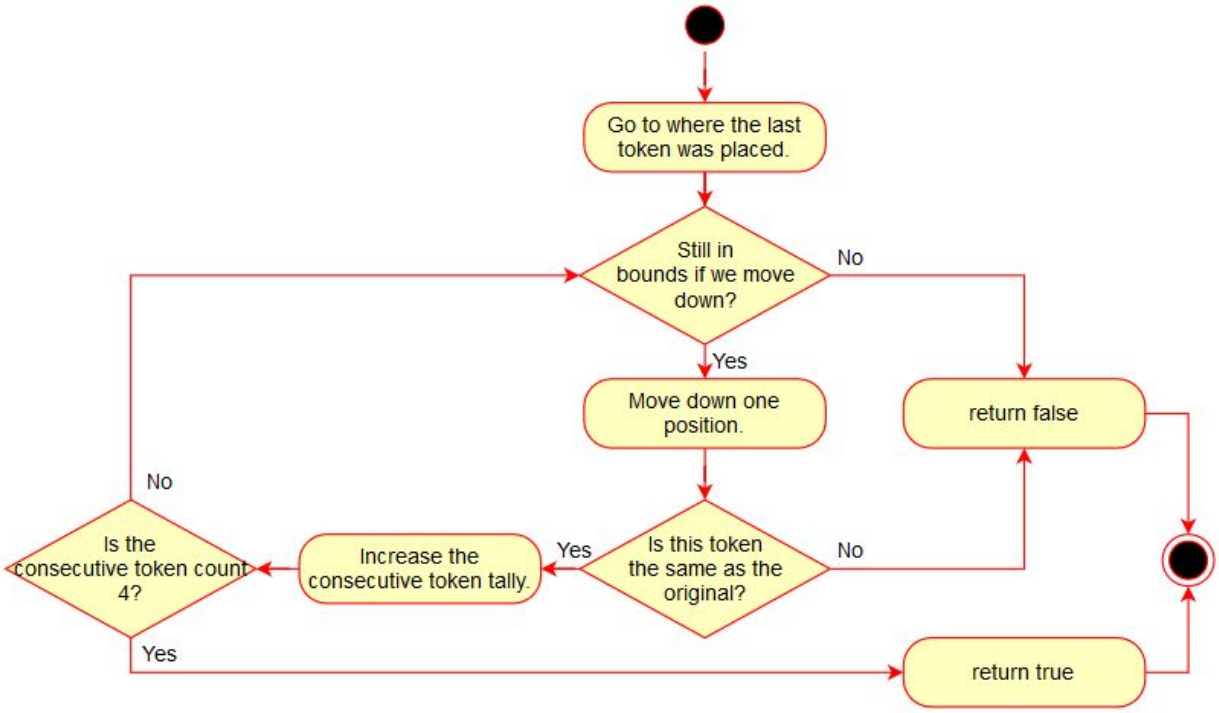
public void placeToken(int c):



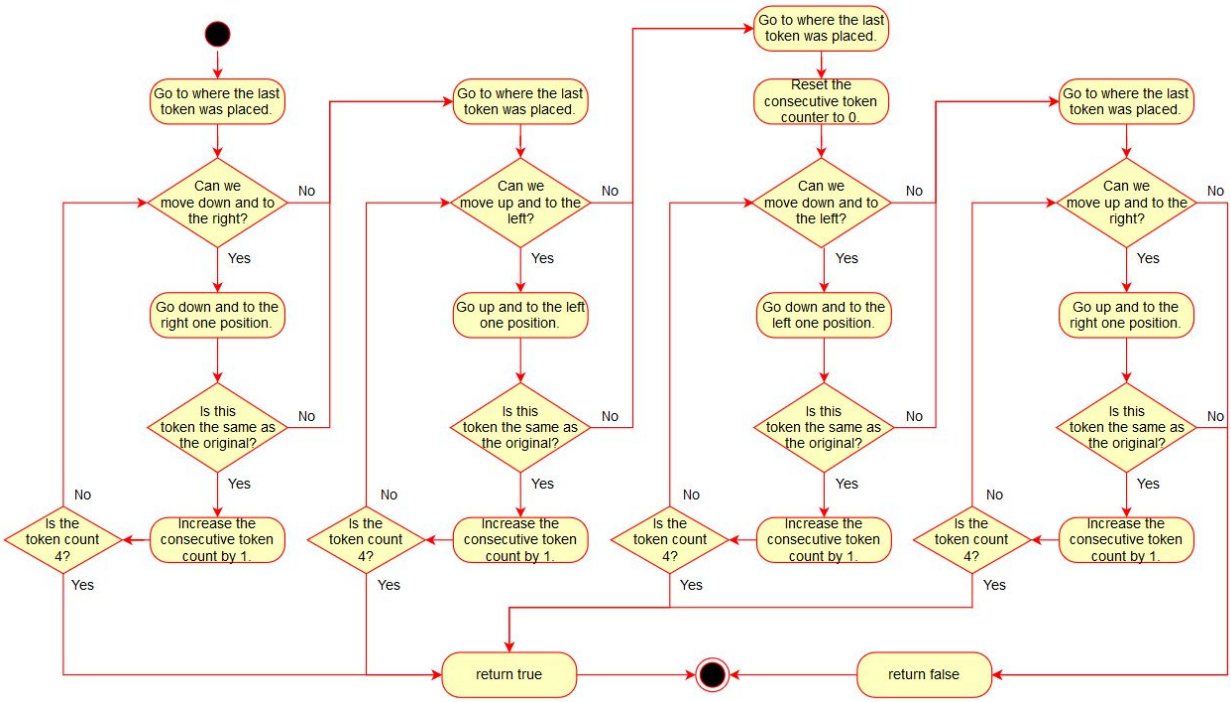
public boolean checkHorizWin(BoardPosition pos, char p):



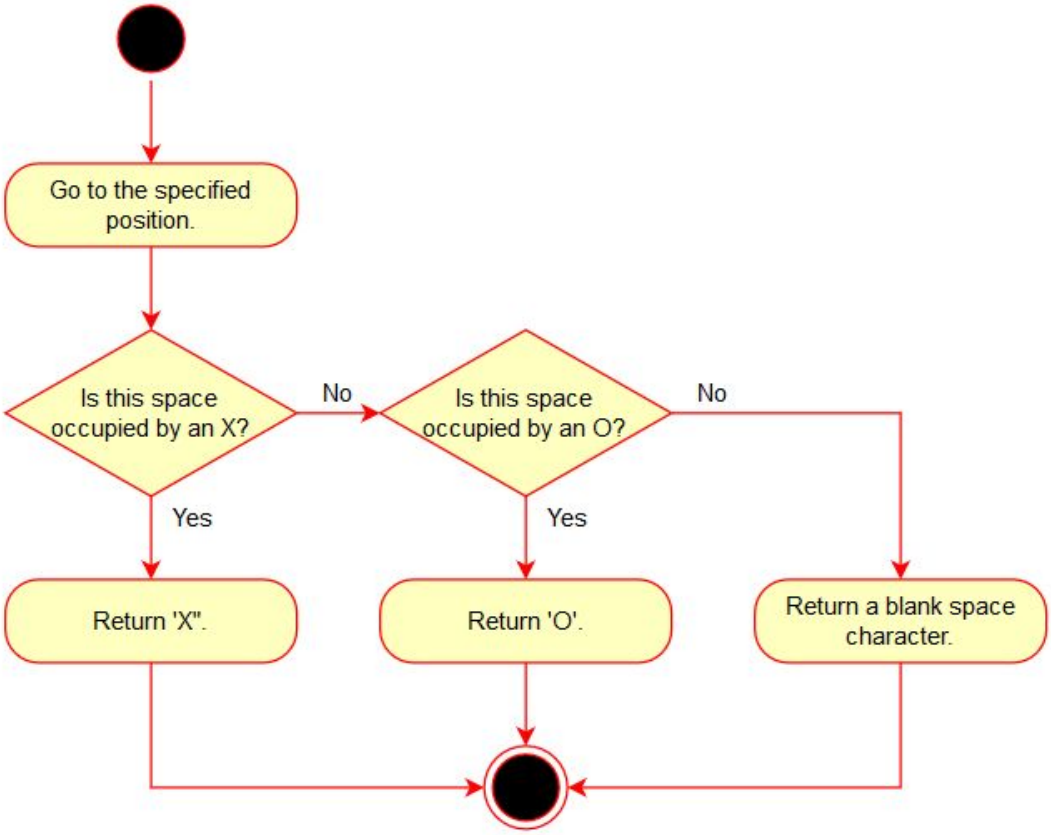
public boolean checkVertWin(BoardPosition pos, char p):



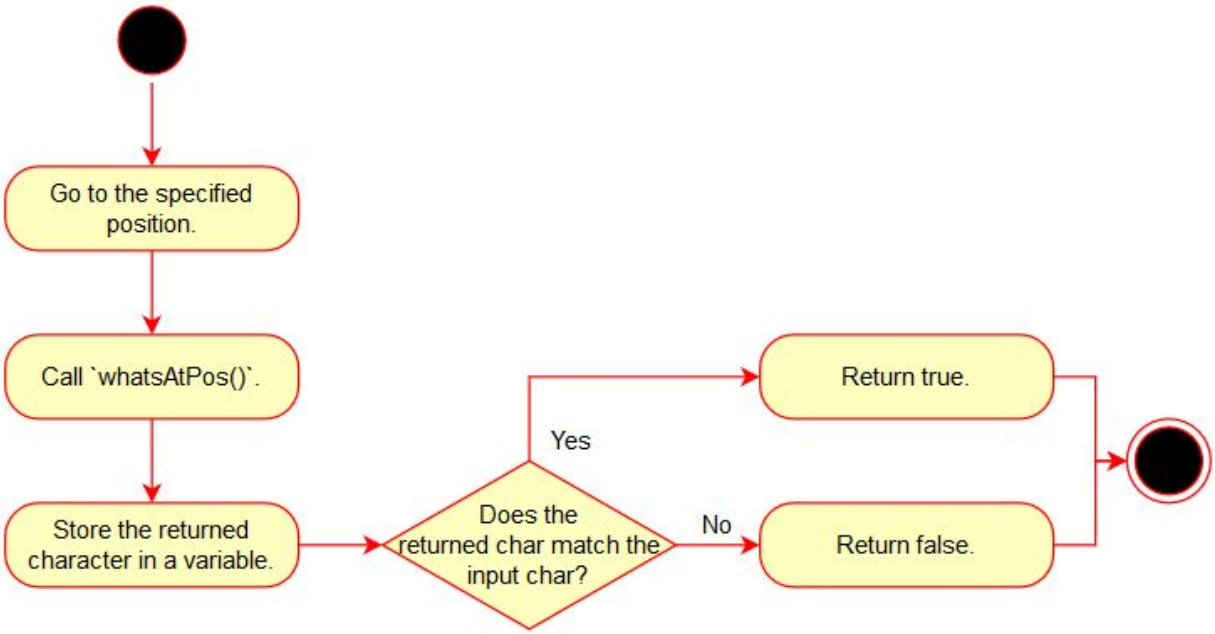
public boolean checkDiagWin(BoardPosition pos, char p):



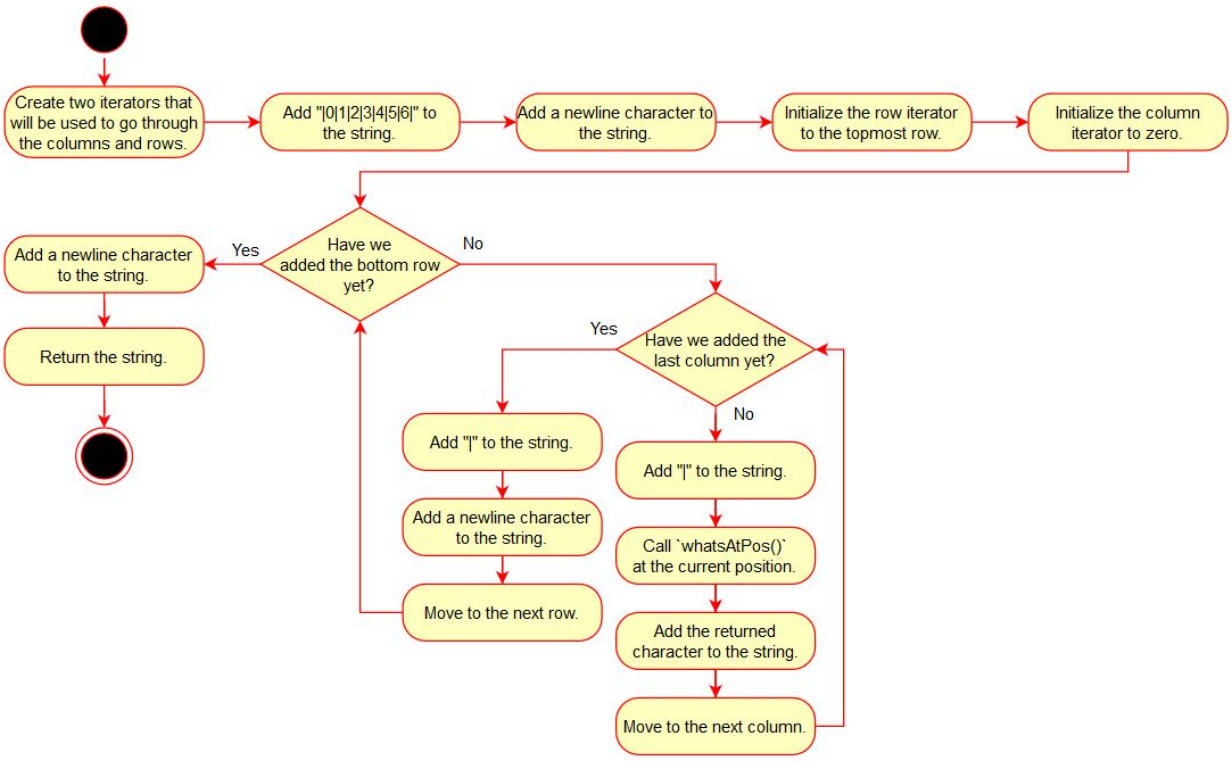
public char whatsAtPos(BoardPosition pos):



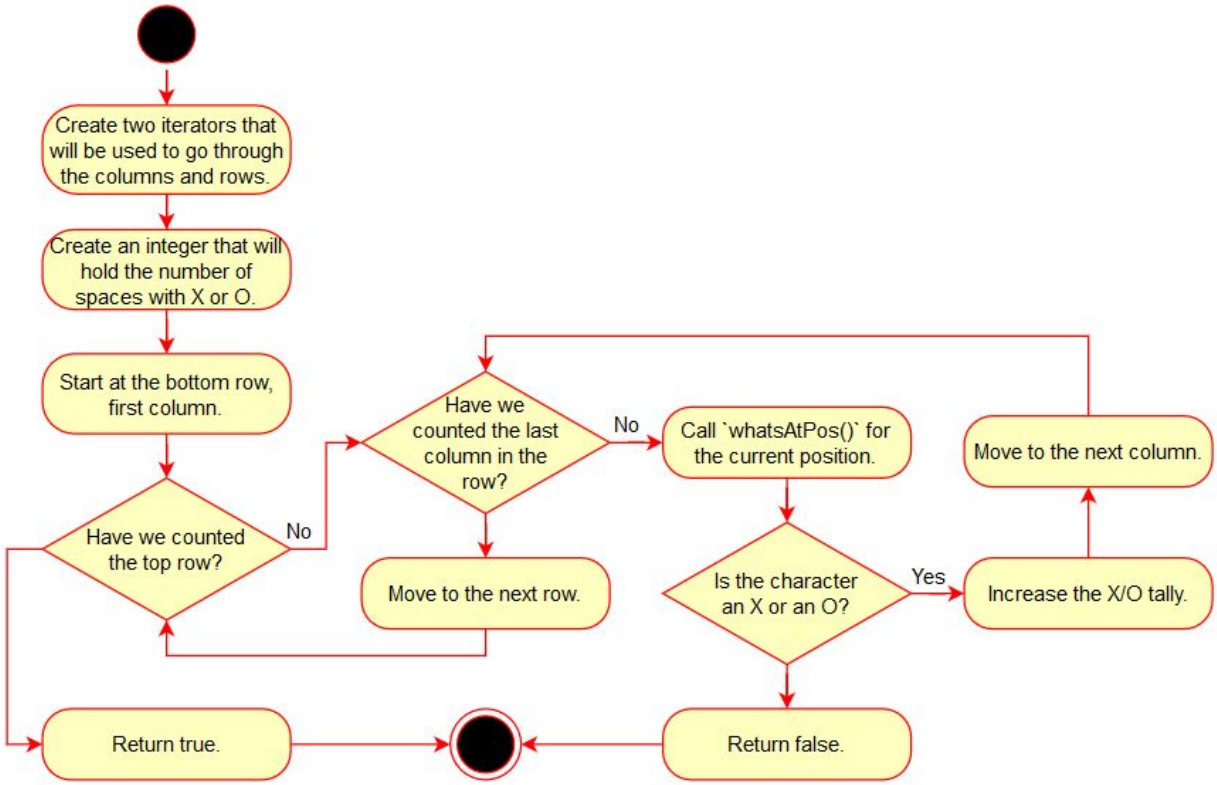
public boolean isPlayerAtPos(BoardPosition pos):



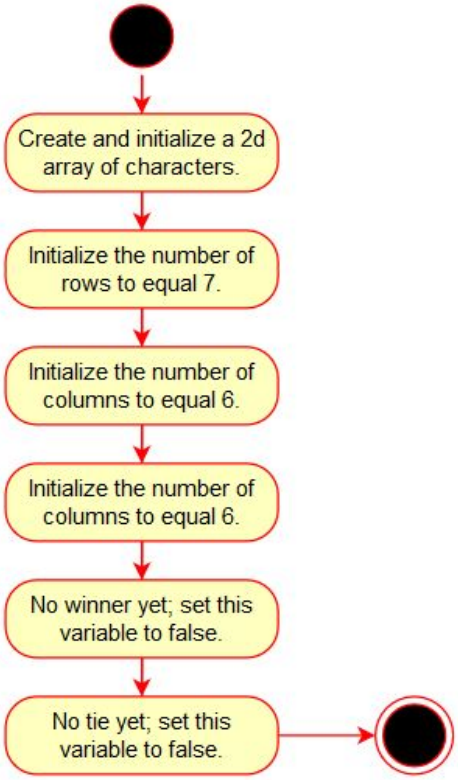
String toString():



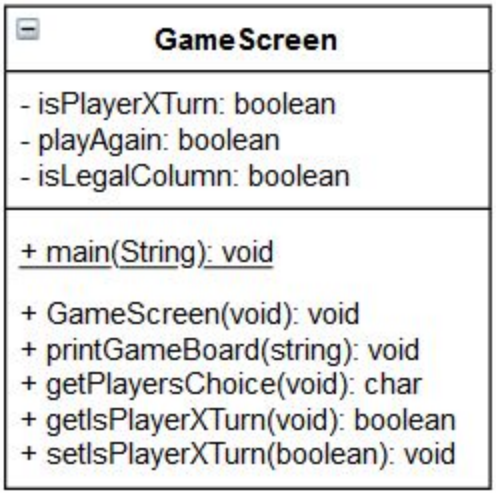
boolean checkTie():



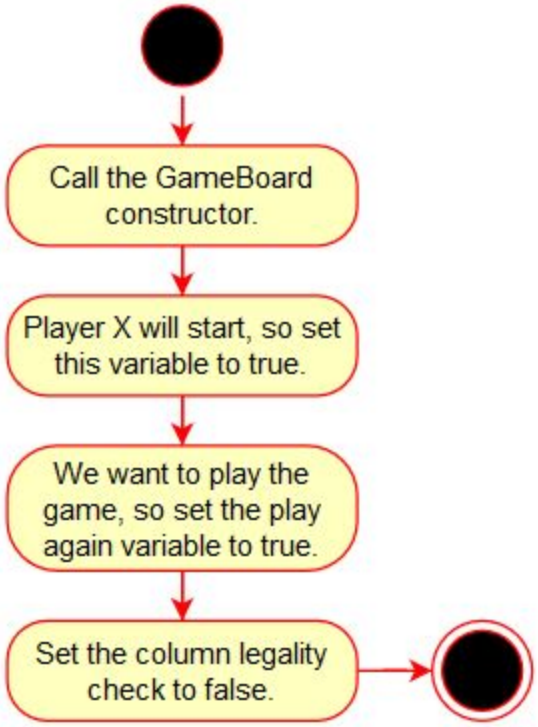
public GameBoard():



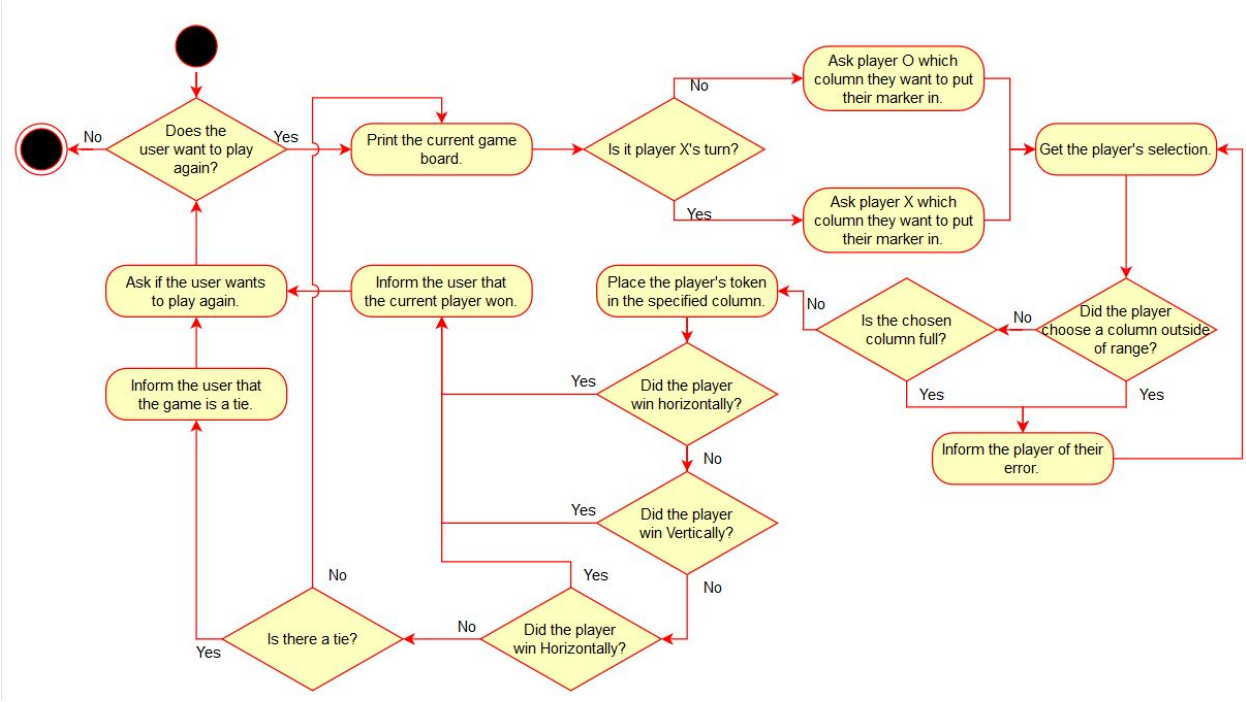
GameScreen class:



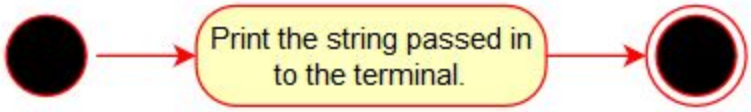
public GameScreen():



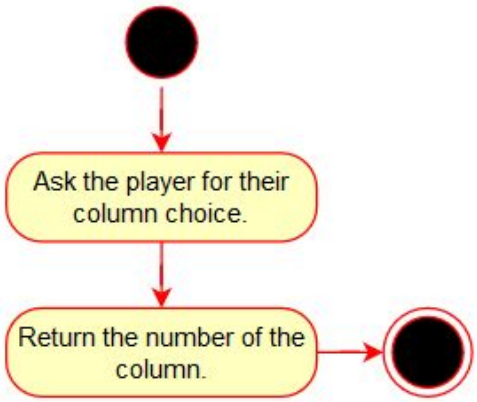
public static void main(String [] args):



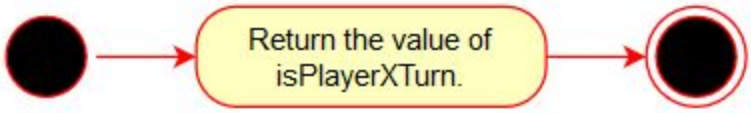
public void printGameBoard(string):



public int getPlayersChoice():



public bool getIsPlayerXTurn():



public void setIsPlayerXTurn(bool):