

# JEREMY HOLLOWAY



10/10/2018

Technical Report: Homework 2

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CPSC-2150-001

Fall 2018

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# 1. REQUIREMENT ANALYSIS

## User Story:

- As a user, I can choose which column to place a token to win the game.
- As a user, I will be notified when it is my turn, so I can place a marker.
- As a user, I will be notified of a win, so I can rub it in my opponent's face.
- As a user, I will be notified if I make an incorrect move, so I may take another turn.
- As a user, I can choose the size of the game board, so I can feel powerful.
- As a user, I can specify the number of markers in a row to win so I can make the game longer.

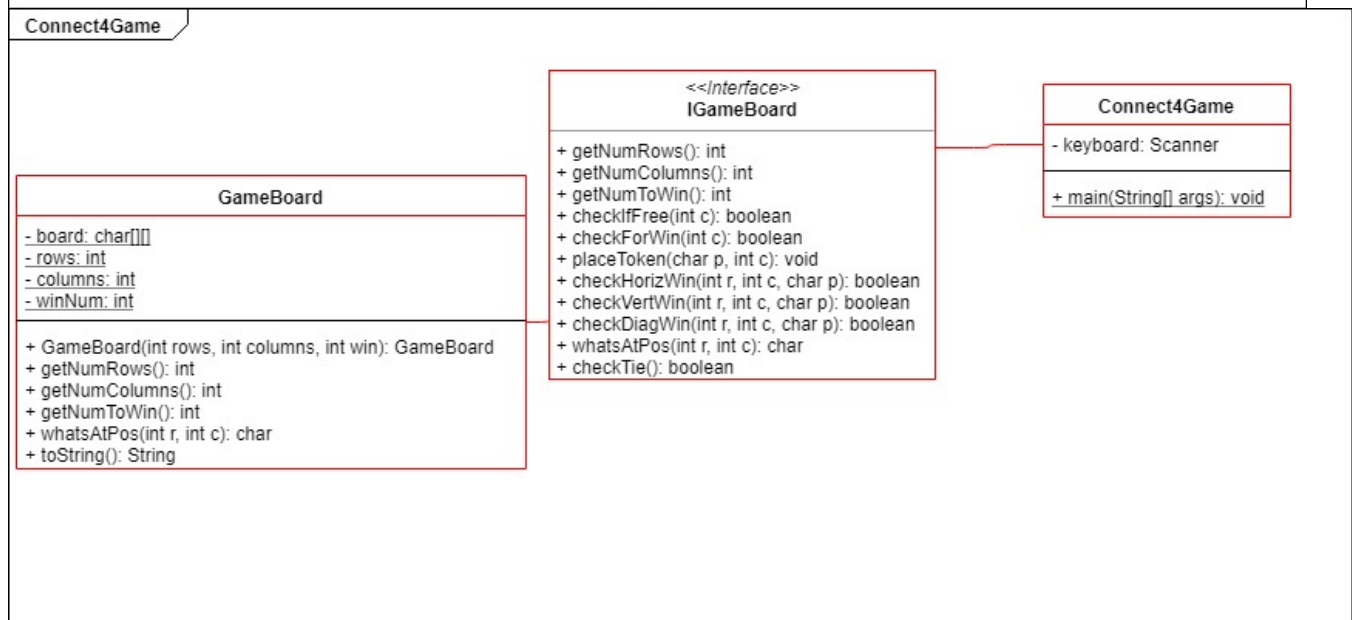
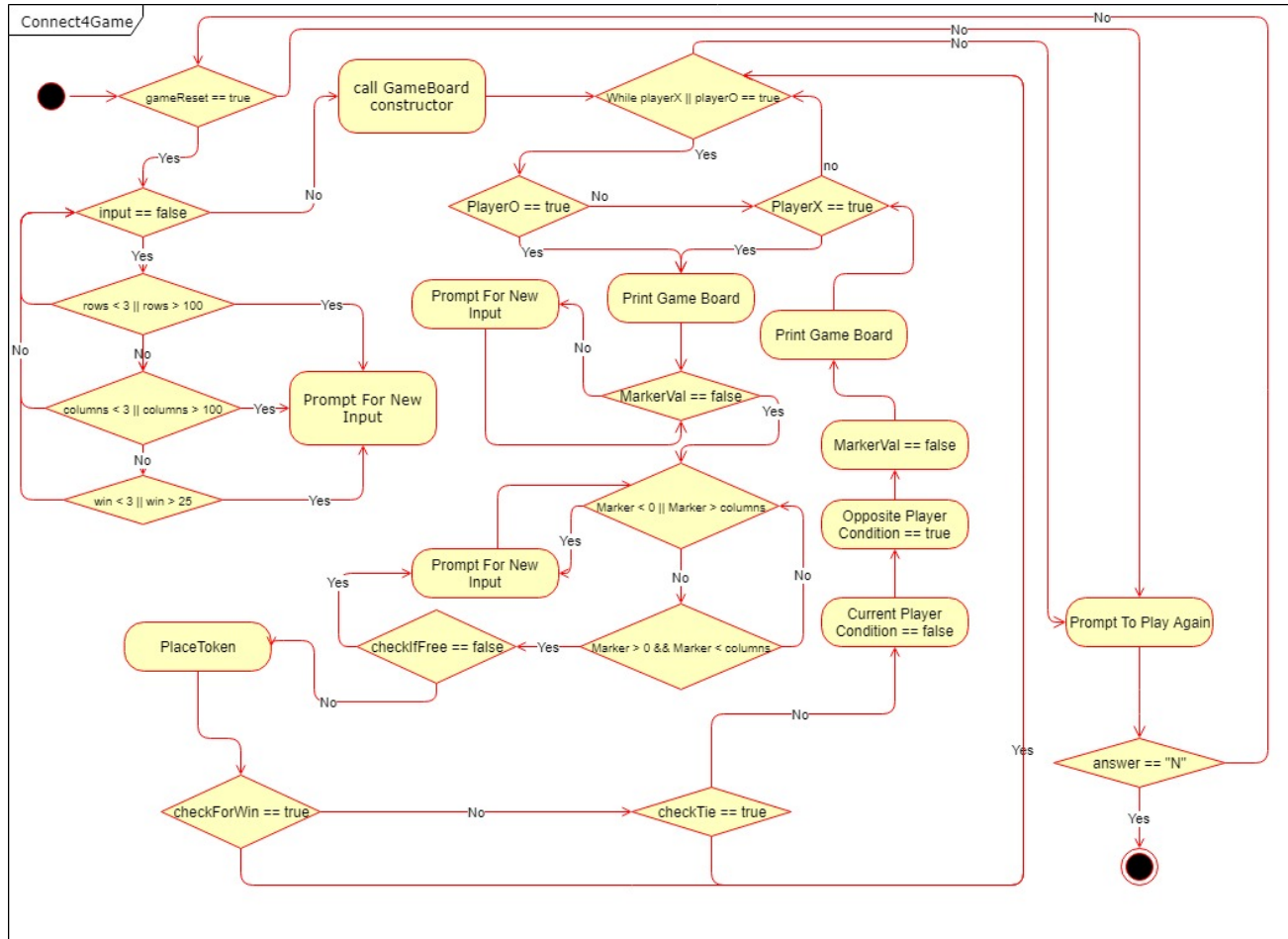
## Functional Requirements:

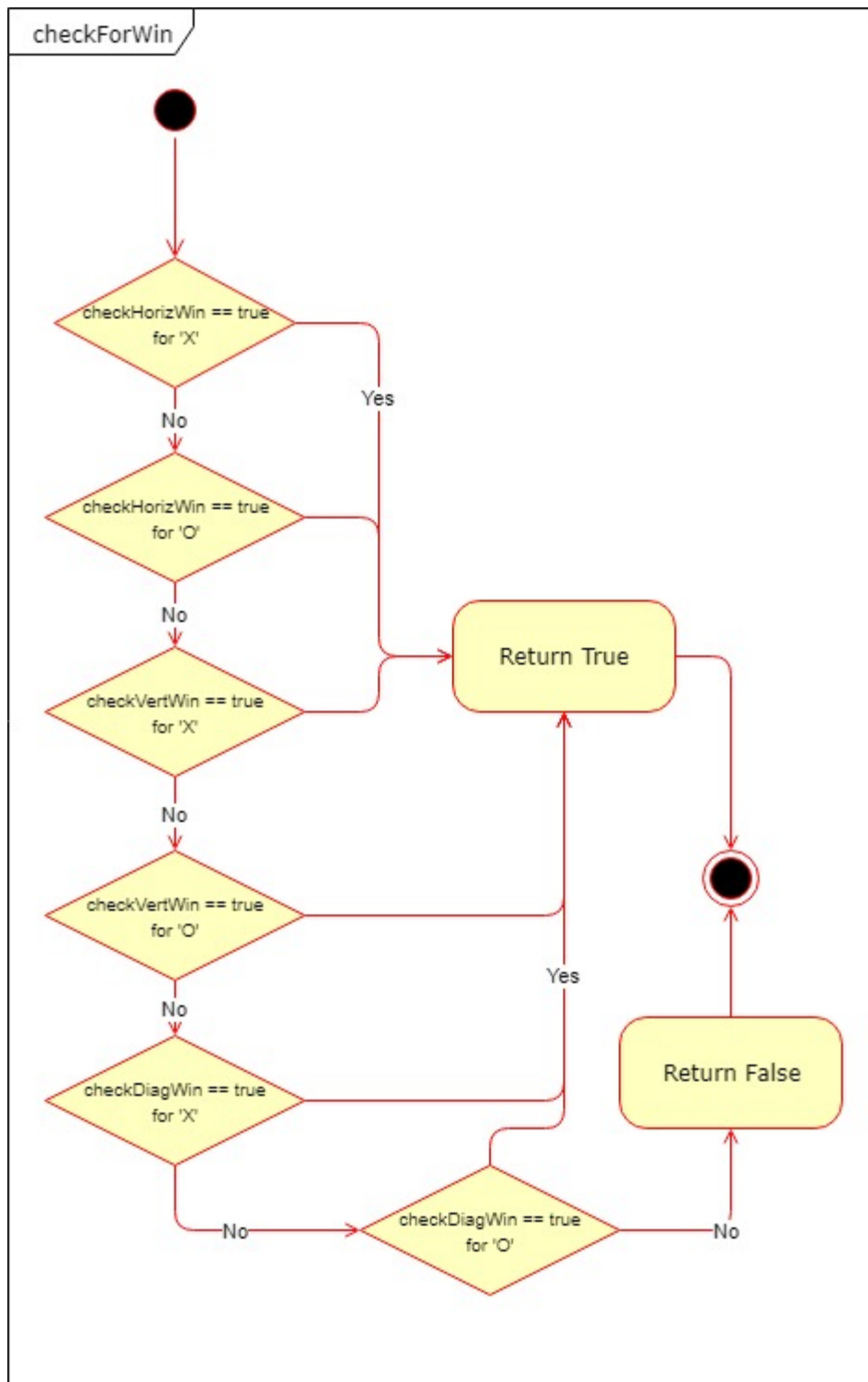
- A user will be able to choose which column to place their token.
- A user will be able to choose to play again after winning, losing, or drawing.

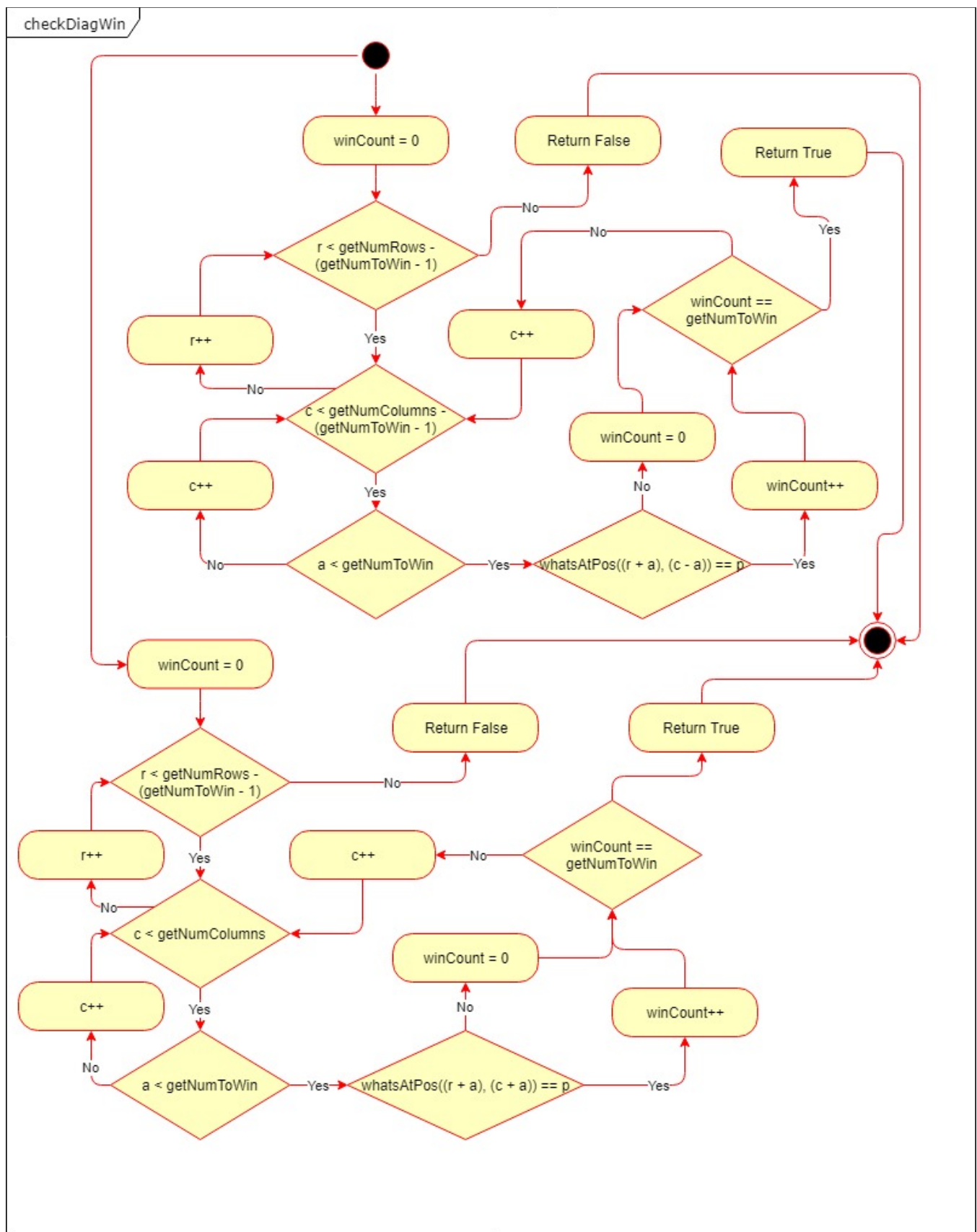
## Non-Functional Requirements:

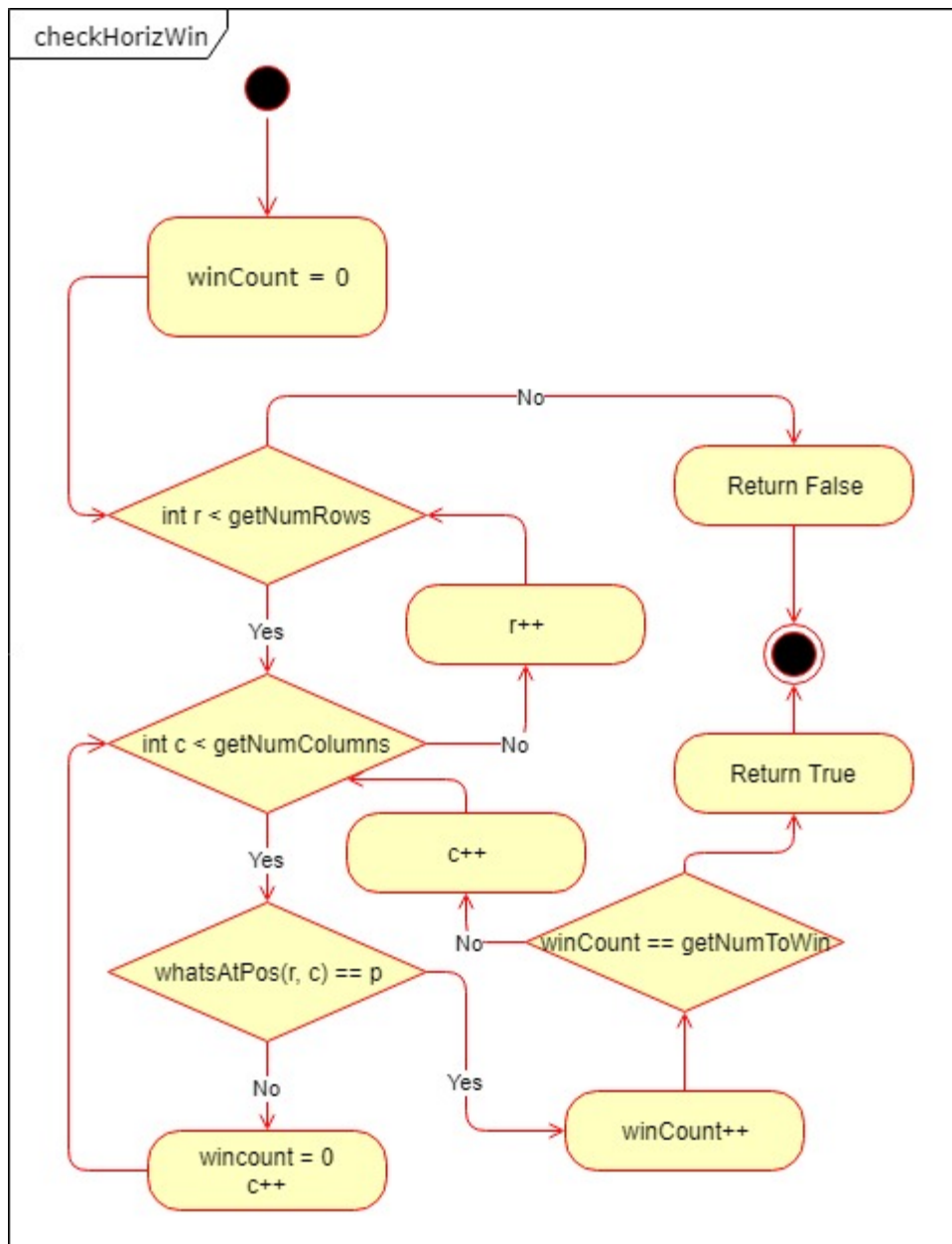
- The program will automatically determine if a winning move is made after each turn or if a draw has occurred.
- The program will be implemented using a 2D character array as the game board.
- This program will utilize an interface to call primary and secondary methods.
- The program will have an instant response time.
- The program is modular. If the client desires to remove certain functions, they may be commented out. These methods will work on any system with JDK8 installed.
- The program is written in Java. The system must have JDK8 installed.
- The program was designed for a Unix based environment.
- This program will use a makefile with the commands; make, make run, and make clean.
- All interfaces between the user and the app will be displayed via the terminal window.

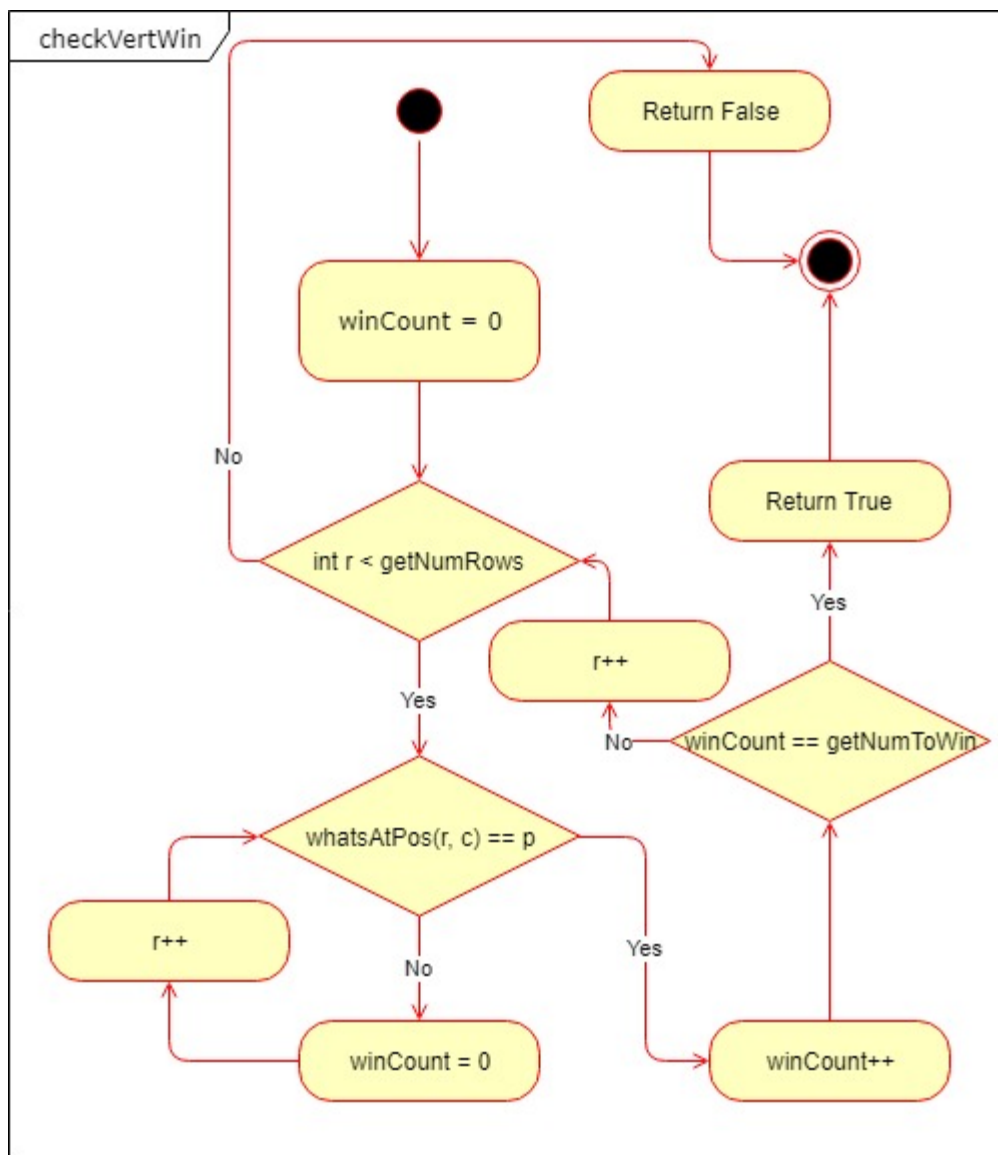
## 2. DESIGN



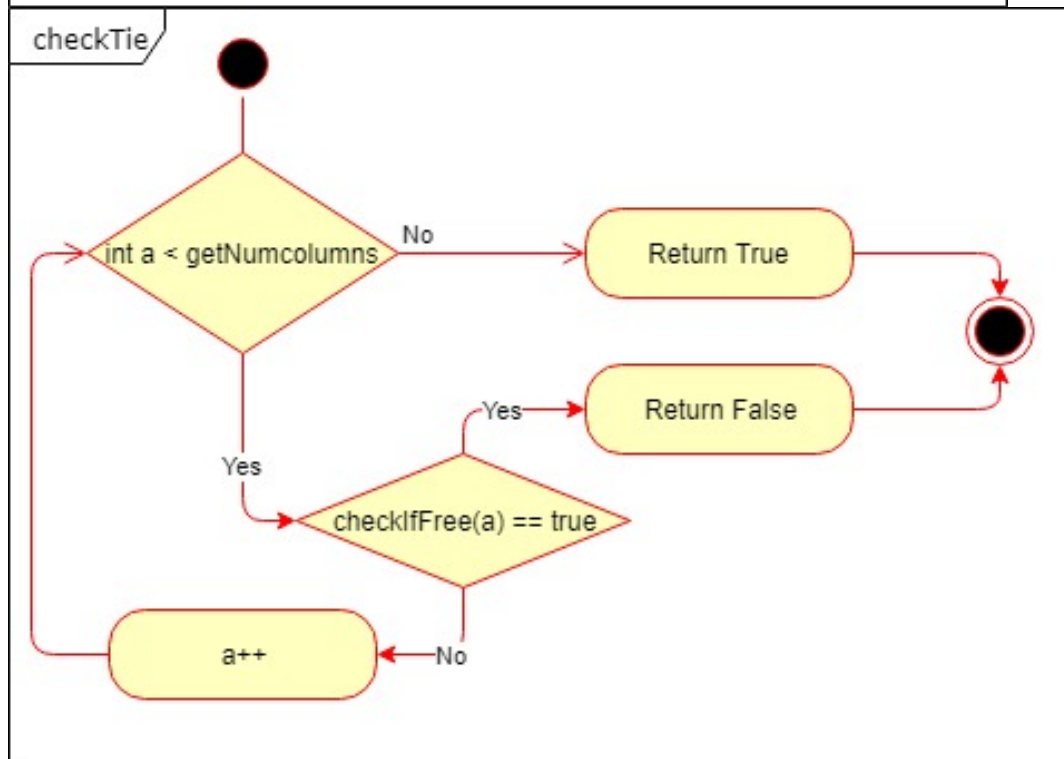
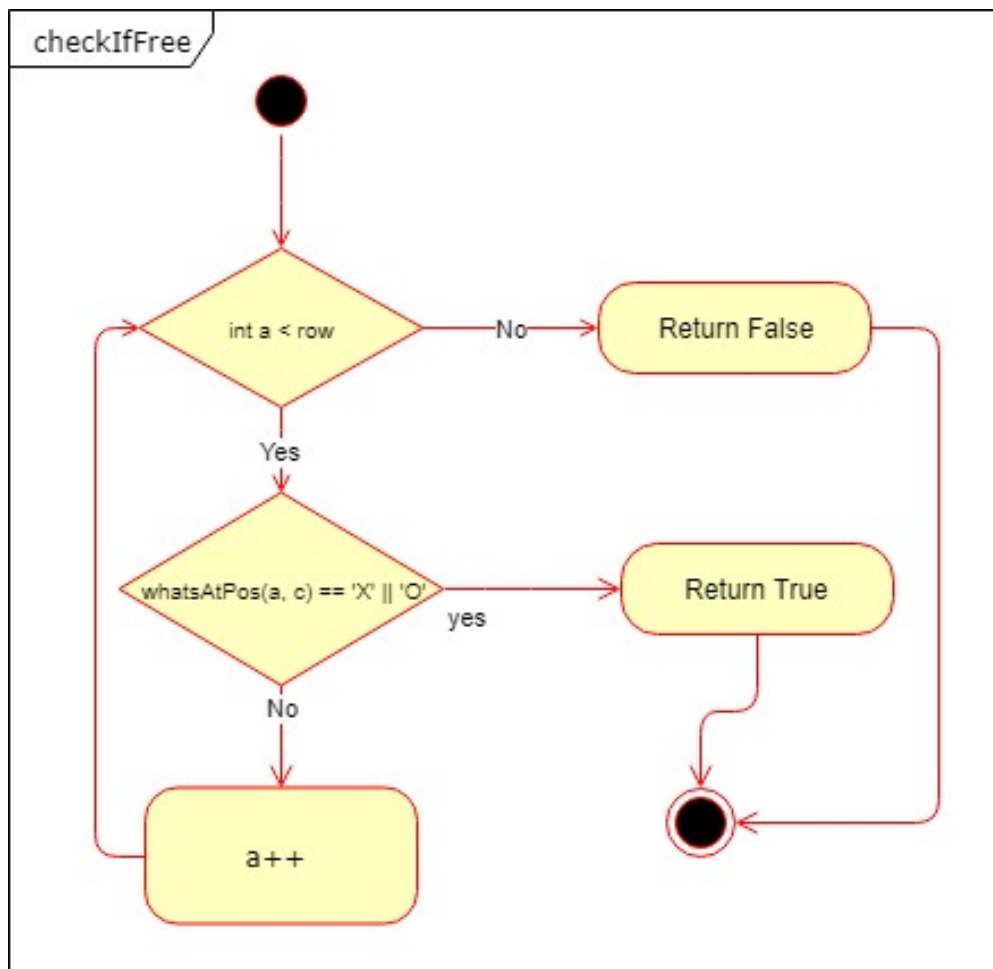


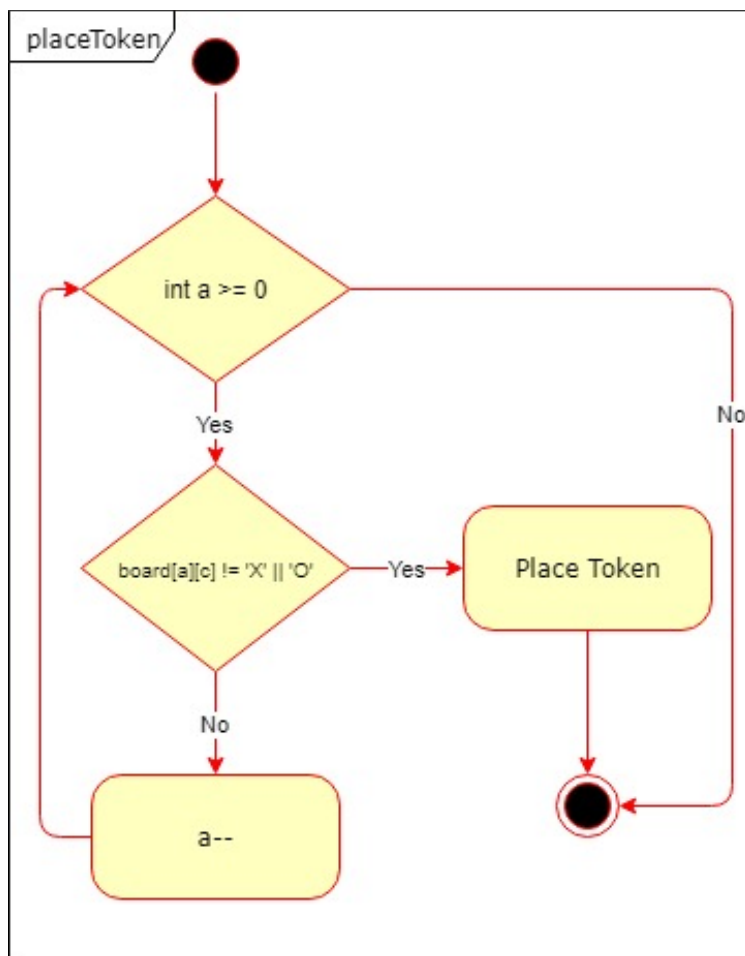


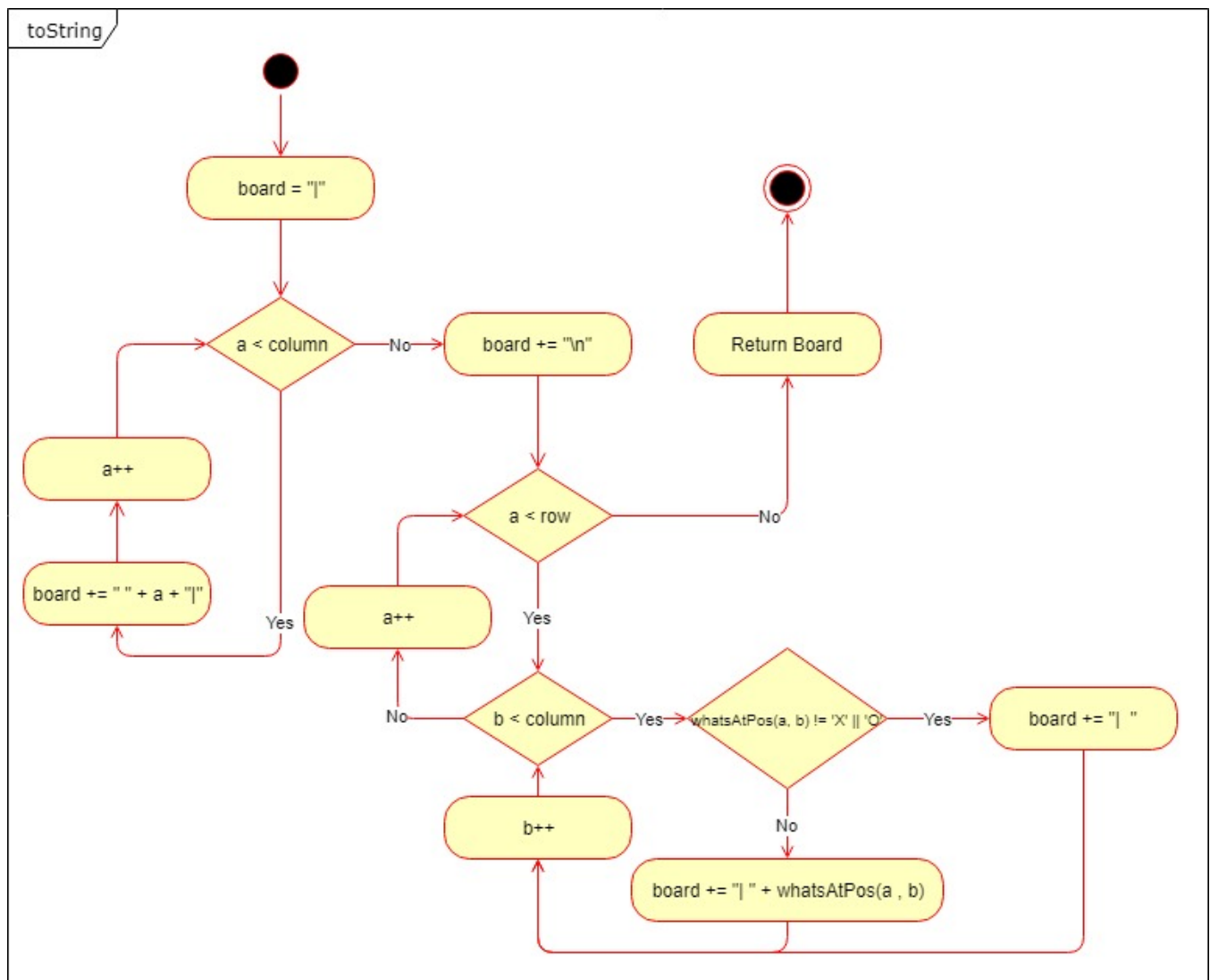












### 3. DEPLOYMENT

This program will include a make file which can be used for three operations make, make run, make clean. The makefile must be in the same folder as cpsc2150 and not inside of it or any other subfolder.

**make:**

Expected output:

```
javac cpsc2150/connectX/Connect4Game.java
```

**make run:**

Expected output:

```
java cpsc2150.connectX.Connect4Game
```

```
**start of game**
```

**make clean:**

Expected output:

```
rm -f *.class
```