

You are to produce an implementation of the game Connect 4 using the Java language.

Points: 50

Rules of the Game:

Connect-4 is a very simple game. It is a two-player game in which one player is designated 'Red' and the other is designated 'Blue'. Each player has a stack of chips of his/her colour. A 7x6 board is placed between the two players, propped up vertically. It has seven 'slots' at the top of it, one slot for each column. When a game chip is dropped into one of these slots, it slides down until it either rests at the bottom of the board or on top of another chip. The two players take turns dropping a chip into a slot of their choice. The first player to connect four of his/her colour in a row is the winner. This connection can be vertical, horizontal or diagonal, but it must lie in a straight line and must be connected.

If there are no 4 chip sequences then the game is considered a draw.

You can use any type of interface that you desire.

I recommend using the console and first developing an interactive version, then utilizing a text file reader.

Your grade will depend upon you handling 3 different connect 4 games and producing the correct output.

Input for the games will be of the following format;

0  
3  
0  
1  
4  
2  
1

etc for one game. Each game will be in a separate file.

where each number represents a player placing his/her chip in a column.

For testing purposes, have your program utilize a batch mode so it can understand game input as a sequence of numbers. There will 3 sequences of numbers in a file that your program must process, your program needs to display the results of each game in some capacity (pop up with player one wins or draw, etc, or writes to the console window).

Your program should give an error indication if one of the players attempts to place a chip on a full column. Your error message **MUST** print out in the console window

Your program should then read the next piece of data as the valid move for that player.

**RUBRIC:**

Basic functioning Connect 4 Game attempt	30 points for reading file and placing pieces
Connect 4 functioning correctly	10 points for correctly functioning, checks wins
Test Cases with illegal moves when column full	5 points
3 Test Cases	5 points each win, draw = 15 total points

THIS PROJECT IS TO BE COMPLETED WITHOUT HELP FROM OTHER STUDENTS OR INTERNET SOURCE CODE. I \_\_\_\_\_ confirm that I completed connect 4 without aid from other people and that it is my product exclusively.

Date \_\_\_\_\_

Signed \_\_\_\_\_