

PROGRAMMING ASSIGNMENT 2: Tic-Tac-Toe

Due date: Oct 6, 2014

Overall points: 100

In this project you will be tasked with writing a tic-tac-toe game in Java. This program should be playable by two humans alternating time at the keyboard.

[70] Task:

Your program will start by displaying the empty board and letting player one make their move. The player should enter 1-9 to indicate which position they want to place their X or O, with 1-9 indicating the positions on the numpad of a keyboard. The program should continue prompting for each player move until a winner is discovered or a tie is reached. You can assume that only integers will be entered by the users. If the user enters a square that already has something in it, you should give them an error message, display the board again and reprompt for input.

Once the game has finished, you should prompt them on whether they would like to play another game. You should also keep track of the number of wins, ties and draws.

Implementation:

You must divide this task up into methods. If the majority of your code is in your main, you will receive very little credit. At a bare minimum you are going to want a method to display the board, a method to determine who is currently winning, and a method to take in input from the user.

It tends to be quite easy to have errors in the methods looking for a win or draw, so I suggest splitting this method up (checking for horizontal XXX or vertical XXX). You can also have methods that check if X has won or if O has won if you wish.

[10] Documentation:

Along with your code, I expect a document explaining how you broke up the task into methods. Explain the data structure used to store the board and why you decided to use the methods that you did. This does not have to be too indepth, but give me some reasoning on why you went the way you did.

[20] Style:

Ensure that your variable names make sense, your indentation is consistent and that your code is well commented.