

Tictactoe Project

How to run the project

This is a simple java project including three different types of tictactoe games – Basicttt, Superttt and Ultimatett. In the zip file, I split the three types of game into 3 zips and users can choose which one they want to play. In all three parts, I use the same structure to run the game.

1. The tictactoe class is used for game entrance and so you can just run this class to start the game. The code will automatically prompt user to input choices and hint them about the computer actions. In this part, you need to choose what kind of player you want to be? X or O. you should input number 1(X) or 0(O) to make a choice, other data is invalid. The X is default to move first.
2. Game class and GameTree class include the methods which are playing function in the game process, you don't need to check them if you just want to play the game. During the game, user and computer will alternating move and the terminal will display message about when user should move, the move of computer, and situation of the whole game. You can judge after observing the board which will display too.

How to meet requirements

In the Basicttt, I successfully make my computer to always win or draw with people by using mixmax algorithm in eval() method of GameTree class. In the Superttt, I adapt a-b pruning and limit-depth strategy into the GameTree class, meanwhile you can adjust the intelligence of computer by simply change the number of a variable called maxdepth. In the Ultimatett, I realize the 3-D structure to run the game, computer also apply the required ideas as above. In the end all games can keep computer have enough intelligence to play with users.

Notes

The details and design thinkings about the methods and classes are declared in writerup.pdf.

I hope this doc is useful to you! Thank you for reading.

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