

# COSC 370 – Artificial Intelligence

## Project 3

Purpose: Make an agent that will play a children's classic.

Task: Create a project that will utilize one of the adversarial agent strategies noted in class to play a variation of the classic Milton Bradley game Connect Four. The typical Connect Four game has a board 6 rows by 7 columns and the goal is to get 4 in a row. We will be utilizing the following board and rules:

Board: 12 x 12

Rules: Get 5 along a row, diagonal or column.

Your program should be written in JAVA and be coded as a single class called ConnectPlayer. ConnectPlayer should not have a non-default constructor and at least one method:

```
public int getMove(int[][] board)
```

I will be using my driver class to instantiate your ConnectPlayer using the default constructor and making repeated calls to getMove() which should provide moves by returning the column value of the agent's move. You do not need to provide any driver functionality.

The board will be passed as a 2-dimensional array. Moves will be noted as a 1 for the first player, a 2 as the second player or a 0 for an empty spot. Your getMove method should detect whether it is playing as the first player or as the second player and make legal moves. The board will be checked to verify that a legal move has been made and that the board has not been tampered with in getMove.

Note: if these instructions are not followed precisely (capitalization counts) your program will not run using my driver. This means you will receive a 0 for this project.

Goal: your AI should provide me a challenge.

You are required to work in teams of 2 for this project. Team requests are due by 5pm, Monday, March 7th and you may not work with your partners from project 1 and 2. If you do not have a team request in at this point, you will be assigned a random partner.

DUE: March 28th at 11:59pm in the Digital Dropbox