

CSCI 1060U - Laboratory #7

Programming Connect 4

Lab Due: Sunday, Nov. 8, 2020 at 11:59pm (Canvas)

Introduction

The main purpose of this lab is to get more experience programming in C++ by completing the Connect 4 game that we built in class.

Activity #1

You should start by downloading the `connectfour_v2.cpp` program (Lecture 12). This program is almost finished but is missing most of the `isWinner()` function which you need to complete.

```
bool isWinner(bool isPlayer1, int lastCol) {
    int counter;

    //Identify which tile is used by current player
    char currTile;
    if (isPlayer1) {
        currTile = P1;
    } else {
        currTile = P2;
    }

    //Check if current player has 4 vertical tiles in a row in the current column
    counter = 0;
    for (int r = ROWS-1; r >= 0; r--) {
        if (board[lastCol][r] == currTile) {
            counter++;
            if (counter == 4) {
                return true;
            }
        } else if (board[lastCol][r] == EMP) { //an optimization to stop searching
            break; //if no more tiles in columns
        }
        else {
            counter = 0;
        }
    }

    //Check if current player has 4 horizontal tiles in a row
    //Check if current player has 4 diagonal tiles in a row

    //otherwise no winner
    return false;
}
```

You should submit your source file (.cpp) for Activity #1 through the lab drop box in Canvas.