CS102 Sec 02
Spring 2016

Programming Assignment #3 – Connect Four   * Work in a group of 3 or 4 students *

Due: 04/18/2016

This assignment involves creating a game called Connect Four. Your group will need to design the program from scratch. (Though, the tic-tac-toe game we built as a minilab is a great place to start.) The goal is to create the program such that:

1. It follows the rules of the game: http://www.hasbro.com/common/instruct/ConnectFour.pdf (and less officially, the simple rules as we discussed in class!).
2. The game board is displayed in a manner such that it is clearly recognizable and easy to use.
3. The game board is: 7 columns by 6 rows.
4. If you opt for the AI extra credit, make a menu to allow for player vs. player or player vs. computer.

You will receive a grade of 0 for non-compiling code. You will receive no partial credit, if the source code lacks documentation/comments.

Grading criteria is as follows:
20% - Documentation
50% - Proper functioning program (executes according to the rules of the game)
     User must enter the column number in only.
20% - Modularity and program design (use of functions)
10% - Usability and interface design (including game board display)

Advice:
Start early. Design the game with flexibility in mind. One of the first things you should do is figure out how you are going to keep track of the game state. Refer to the Tic-Tac-Toe game for hints.

** The user is NOT supposed to type in the X and Y coordinates on the board.   In Connect Four, you simply choose which column to drop in your piece, and the piece should drop to the appropriate row (again, as discussed in class).   Figure out how to get the pieces to drop to the bottom or on top of already existing pieces.

Extra Credit (+4% on final grade)
For extra credit, modify the program to allow the user to UNDO a move.

Extra Credit (+1% on final grade)
For extra credit, modify the program to play against a simple AI.

SUBMIT ASSIGNMENT USING INSTRUCTIONS FOR PREVIOUS ASSIGNMENTS VIA CANVAS IN A ZIPPLED FILE.