CSCI 133
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Connect Four Lab Design

Upon startup
Prompt user to select the mode(2P, Computer)
If user chooses computer, prompt user to choose a difficulty(Easy, Medium, Difficult)
Then choose a board size(Small, Medium, Large)
Then a line with whoever is currently playing, and print the empty board

Board representation:
2D Array
Pieces are 0, 1, or 2 in the array (empty, player 1, player 2)
Board array example

```
[0][0][0][0][0][0][0]
[0][0][0][0][0][0][0]
[0][0][0][0][0][0][0]
[0][0][0][0][0][0][0]
[0][1][2][0][0][0][0]
[0][1][2][2][0][1][0]
```

Display ' ', 'X', or 'O' for empty, player 1, or player 2
Board display example

```
 0  1  2  3  4  5  6
[ ][ ][ ][ ][ ][ ][ ]
[ ][ ][ ][ ][ ][ ][ ]
[ ][ ][ ][ ][ ][ ][ ]
[ ][ ][ ][ ][ ][ ][ ]
[ ][X][O][ ][ ][ ][ ]
[ ][X][O][O][ ][X][ ]
```

Print out board with updated player moves after every player's turn

Can choose length and width of array (or have 3 predetermined size S,M,L)
Small: 6x5
Medium (default): 7x6
Large: 8x7

Playing:
2 Player mode(local)
Print out which player is currently making their move

Example: “Player 1’s move.”
“Computer’s move.”
Prompt which column to put a piece into
Check if either player won after each move

Computer vs person(easy, med, hard)
Easy: Randomly place pieces-no specific order, not attempting to win
Med: If the player has 3 pieces in a row, block it off. If the computer has 3 pieces in a row, complete the 4.
Hard: Computer actively attempts to win (attempt to get 4 in a row by adding on to the number of tokens in a row, if comp has 2 tokens, attempt to make 3 etc), however, the computer will attempt to predict a player’s move as well(stop 3 in a row)

Winning condition: get 4 pieces in a row, column, or diagonal out of (3?) games
Keep track via “scoreboard” that is displayed after every game
Counter increments when a player wins

Example:

Scoreboard

Player 1	Player 2
0	2