CSC180 – Lab #6

For this lab, you will write a program that plays tic-tac-toe (http://en.wikipedia.org/wiki/Tic-tac-toe) with the user. As in the assignment, you will use int *board to store the board, with board[i*WIDTH+j] being square (i, j), with WIDTH being 3.

Copy the functions printBoard() and play() from the assignment handout and modify them appropriately for tic-tac-toe (e.g., the pieces are ‘X’ and ‘O’ and not ‘b’ and ‘w’ in tic-tac-toe).

Now work on the functions to replace searchMax(), the function that decides which move to make.

1. The easiest way to decide how to move is to pick some empty square on the board. Implement this strategy in a function called searchMax1.

2. Implement a function that returns 1 if the crosses have won (i.e., there are three crosses in a sequence), -1 if the naughts have won, and 0 if nobody has won yet. Incorporate it into your play() function so that the game stops when somebody wins.

3. Write a better function that picks the next move. Your improvement might be small, or you might develop a strategy that wins every time.