CSCE476/876 **Spring 2004**

Homework 7

Assigned on: Wed April 14, 2004.

Due: Wed April 21, 2004.

This is a pen-and-paper homework, to be returned in class
The whole homework is worth 100 points

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1. AIMA, Exercise 6.3, page 190. 20 points
2. AIMA, Exercise 7.2, page 236. 10 points
3. AIMA, Exercise 7.5, page 237. 10 points
4. AIMA, Exercise 7.6, page 237. 10 points
5. AIMA, Exercise 7.8, page 237. 10 points
6. AIMA, Exercise 7.9, page 238. 10 points
7. AIMA, Exercise 7.11, page 238. 30 points
8. Bonus problem: Programming Assignment 75 points

   Implement the minimax method for playing Tic-Tac-Toe (3×3) against a human. The human has the option of playing first or second. You are free to define your own utility or eval functions or you may use the one in Exercise 6.1 in AIMA, page 189. Please use as much pruning techniques (alpha-beta and symmetry checking) as possible to reduce the search problem.

   Ask a classmate to play his/her program against your program (once your program goes first and once second).

   Please submit your code by handin, and then submit in class a HARDCOPY of (a) your code, (b) a transcript of a sample run of your code, and (c) the name of your classmate who played against your program and the result of the match between the two programs.