

CSE 473: Artificial Intelligence

Assignment #1

Due: Monday, October 9, 2006 (at the *beginning* of class)

Reading Assignment: Read Chapters 1-3. Start Chapter 4.

Problems (20 points each):

1. Chapter 1, exercise 1.3. Relevant websites:
<http://www.loebner.net/Prizef/loebner-prize.html>
<http://www.jabberwacky.com/chat-joan>
<http://news.bbc.co.uk/1/hi/technology/5355838.stm>
2. Chapter 2, exercise 2.5, a and b.
3. Chapter 2, exercise 2.6, a and b.
4. (Chapter 3) Consider a state space where the start state is 1 and the successor function for state i returns three states: $3i$, $3i+1$, $3i+2$.
 - a. Draw the state space from 1 to 53, showing only states reachable from the start state.
 - b. Suppose the goal state is 37. List the order in which nodes will be visited for: (i) breadth-first search, (ii) depth-limited search with depth limit 3, and (iii) iterative deepening search.
 - c. Describe how bidirectional search would work for this problem? Does this suggest a solution for getting to a goal state from state 1 with almost no search?
5. Chapter 3, exercise 3.13.