

CSE 322 Winter 2007

Assignment #1

Due: Friday, January 12, 2007

Reading assignment: Read Sipser's book, sections 1.1 and 1.2; you should already have read Chapter 0.

Problems:

1. Sipser's text, Problem 0.11 (either edition).
2. Sipser's text, Exercise 1.3 (either edition).
3. For Example 1.11 in the 2nd edition of the text (Example 1.4 in the 1st edition), write out the sequence of states that machine M_4 goes through in computing on input string *abaabba* and for input string *bbaaba*. Which of these strings is accepted by M_4 ?
4. Sipser's text, Exercise 1.6 in the 2nd edition (Exercise 1.4 in the 1st edition), parts (b), (c), (d), (f), (j), (l). As documentation for your DFAs, for each state write a very brief description of the set of strings that reach that state.
5. Give a state diagrams of a DFA recognizing the set of binary strings of length at least 3 that have a 0 in the next-to-last position. As documentation for your DFA, for each state write a very brief description of the set of strings that reach that state.