Introduction to Computer Science Theory (4003-380-01)
Prof. Richard Zanibbi (20103, Spring 2011)
Homework 3, Due 4pm, Tuesday March 29, 2011

For written questions, you may submit your answers online through myCourses (as a .txt or .pdf file), or submit your homework on paper shortly before class starts (once lecture begins, the homework is late, and will not be graded).

Please submit your answers to the JFLAP questions online through myCourses: submit a .zip archive file that contains the .jff (automaton) files, any .txt (test string) files, and a README file indicating which files correspond to which homework question, and **the name of your partner, if you complete the homework in a team of two**.

If you work in a team of two, submit only one written answer and one archive of JFLAP data, and make sure that both of the team members' names appear on all submitted work.

For this homework, all the questions are from the course textbook (Sipser).

Questions (50 points in total)

1. **(22)** Using JFLAP, construct a finite automaton (deterministic or nondeterministic, as stated in the question) that accepts each of the following languages.
   (a) (3) Question 1.8 part b
   (b) (3) Question 1.9 part b
   (c) (3) Question 1.10 part b
   (d) (5) Question 1.13
   (e) (8: 4 + 4) Question 1.17 parts a and b

   ### Written Questions (28 points)
2. Question 1.15
3. Question 1.25
4. Question 1.31
5. Question 1.32