

**Introduction to Computer Science Theory (4003-380-01)**  
**Prof. Richard Zanibbi (20103, Spring 2011)**  
**Homework 5, Due 4pm, Tuesday April 19, 2011**

For written questions, submit them through myCourses or on paper before the start of class. For the JFLAP questions, submit a .zip archive through MyCourses; make sure to include a README file that indicates which file is for which question. If you work in a group of two, submit your answers only once, and make sure to include both your names on your submitted work.

All questions are from the course textbook (Sipser).

**Questions (50 points in total)**

1. (Use JFLAP) Question 2.4 (parts c and f)
2. (Use JFLAP) Question 2.5 (parts c and f)
  - provide a brief description of each PDA in your README file
3. (Use JFLAP) Question 2.11 (construct the PDA yourself, then use JFLAP to build and test your machine)
4. Question 2.9
5. Question 2.17 (note that we already covered the answer to Question 2.16 in lecture)
6. Question 2.24
7. Question 2.27