CS 415: Compilers - Problem Set 2
Due: Wednesday, March 8, beginning of lecture

1. For the grammar in exercise 4.3 of ASU, do:
   (a) Change the grammar to eliminate the left recursion
   (b) Compute FIRST and FOLLOW
   (c) Construct an LL(1) table to parse the grammar you derived in part (a)

2. Exercise 4.33, part (a), (b), and (c)

3. Construct the canonical collection of sets of LR(0) items and the SLR(1) parse table for the grammar in exercise 4.3.

4. Construct the canonical collection of sets of LR(1) items and the LR(1) parse table for the grammar in exercise 4.3.

5. Construct the LALR states and parse table from your results to problem 4.

Extra credit

1. Show that no LL(1) grammar can be ambiguous
2. Show that no LR(1) grammar can be ambiguous
3. Show that every LL(1) grammar is an LR(1) grammar