CS486 Applied Logic Assignment 1 Due Thursday, Feb 1, 2001

Reading: Please read Smullyan, Chapter 1, by Tuesday Jan 29, and Chapter 2, Section 1, by Thursday, Feb 1

Quiz: Expect an in-class multiple choice quiz on Thursday, Feb 1 on Chapter 1 and on first 3 pages of Chapter 2.

Exercises:

1. Write a data type for the class of finite unordered *trees* (Chapter 1, Section 0) and propositional *formulas*, Smullyan's definition (Chapter 1, Section 1, p.5). You can use Lisp, Scheme, Java, ML or any other programming language because we want a careful explanation of the data types and an argument that they are equivalent to Smullyan's inductive definitions (pages 1 and 5).

2. Solve Smullyan exercise 2 of Chapter 1.

3. Solve exercise 3 of Chapter 1.

4. Solve exercise 4 of Chapter 1.

Note: You may discuss these problems with fellow students, but **all written work must be entirely your own.** If you use a solution from other sources, you must cite them, including from other people who help you.