CS 154 Introduction to Automata and Complexity Theory		Handout 3
Winter 1996	R. van Glabbeek	January 17, 1996

Problem Set 2 Date Due: January 22, 1996

Reading: Floyd and Beigel, Chapter 0-3.3 to be read by Wednesday January 24'th.

Homework: Do the following exercises (FB refers to Floyd and Beigel *The Language of Machines*). Each problem must be submitted on a separate sheet. The homeworks must be solved without any collaboration.

1. (10 points) 1.3-6 (page 86)
2. (10 points) Construct a 2-UCM program accepting $\{a^n b^n a^n \mid n \geq 0\}$.
3. (10 points) Construct an SM program accepting $\{a^n b^m a^m b^n \mid m, n \geq 0\}$. Hint: First try to construct an SM program accepting $\{a^n b^m a^m b^n \mid m > 0, n \geq 0\}$, then derive a non-deterministic version.
4. (15 points) 2.10-4 (page 152). Hint: read exercise 0.6-29 before solving (c).

Extra Credit problem (optional) Solve 2.9-7 (page 151).