CS 565 Out: September 4, 1997
Jens Palsberg Due: September 11, 1997

Homework 2:

Java Programming

Your solution to each of the exercises below should consist of a Java program with comments, and a suite of tests adequate to convince the grader that your solutions work correctly on all valid inputs. Submit also a transcript of your tests. Create the transcript manually.

1.

Solve each of the eight problems in Homework 1, but this time in Java. For each of the problems, state explicitly in the comments how you represent lists, functions, etc. Some of the problems may not be solvable in the same generality as they were stated in Homework 1. In such cases, state explicitly what assumptions you make.

2.

In Lecture Note 2, p.13, there is a Java interface for finite functions. In Lecture Note 1, p.33–34, there is a Scheme implementation of finite functions that uses the so-called abstract syntax tree representation. Program in Java an implementation of the mentioned interface for finite functions which uses the idea of the abstract syntax tree representation.

3.

In Lecture Note 1, p.36–42, there is shown a simple stack machine, programmed in Scheme. Program in Java a stack machine with the same functionality.