CS 451
Programming Assignment #5,6
Object-Oriented Programming
OO Trees
Due 4/9 (java) 4/16 (Smalltalk)/18, by 6:00am sharp!

Introduction

The goal of Assignments 5 and 6 is to do some Object-Oriented Programming in Smalltalk (but first Java!).

Requirements Analysis

The analysis (“what is the problem”) is simple. Mr. Crabs, your client, needs an ordered binary tree of integers. The tree need not be balanced.

Design

The design (“how to solve the problem”) includes the constraint that you include the class BinaryTree for the binary tree of integers. The tree should include methods to insert numbers and to print the tree inorder, preorder, and postorder. Write a main routine to test your code.

What to hand in

1. (for the Java version) Add to your nicely formatted code a comment that includes the output from some well chosen representative test inputs. Email me the result as an attachment named <your name>-tree.java.
2. (for the Smalltalk version) Email me your nicely formatted code and the output from some representative test inputs as an attachment named <your name>-tree.st with the output added to the bottom of the code as a comment.

Notes

1. Put some thought into not writing the imperative version from 212, but writing a truly Object-Oriented version.
2. Doing the Java version first lets you think about the design before worrying after Smalltalk syntax. Post writing the Smalltalk code, consider redoing the Java version to see if learning some Smalltalk has influenced your thinking!