Introduction

The goal of Assignments 6 and 7 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) Email me your code (formatted nicely) and the output from some representative test inputs as an attachment named `<your name>-tree.java` with the output added to the bottom of the code as a comment.

2. (for the Smalltalk version) Email me your 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 301, 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!