

## 9 Assignment

### Portfolios: Designing Libraries

1. As usual, finish the Lab 9.

The most time consuming part is to design examples of the use of the abstractions you have designed. Make at least one reasonably long list (4 items or so), and a binary search tree with at least six items (that is because the structure here is more complex) and test the filter method for both the first solution with only a *Traversal* and then again with the wrapper classes that implement the *DataSet* interface.

Take the time to understand how all parts work together.

2. Read the section 34.3 in the textbook, then do one of the following two problems (or both, if you are ambitious):
  - Implement the IMenu example from the text (the classes with the factory method and the sort method), then develop examples that test your design. Follow up with the Exercise 34.7.
  - Add a factory method to the interface *DataSet*, then modify the wrapper classes for a list and for the binary search tree to implement this factory method - and re-run your examples from the previous exercise.

### Mini Project

#### 9.1 Problem

Read about the *Towers of Hanoi* in section 34.5 in the textbook, then do the exercises 34.11, 34.12, 34.13, and 34.15. ■