CS302 Data Structures
Spring 2010 – Dr. George Bebis
Homework 3 - Due Date: 3/2/2010

1. Exercise 12 (page 329)

2. Exercices 19, 20 (page 331 – the problems refer to piece of code given right above them)

3. Exercice 30 (page 335)

4. Exercise 4 (page 252). The precondition says that the input lists do not contain any common elements. To make the problem more interesting, assume that the lists might contain common elements.

5. Which is faster and by how much, a linear search of only 1000 elements on a 5-GHz computer or a binary search of 1 million elements on a 1-GHz computer. Assume that the execution of each instruction on the 5-GHz computer is five times faster than on the 1-GHz computer and that each iteration of the linear search algorithm is twice as fast as each iteration of the binary search algorithm.