

## CSci 3501 Assignment 2

Due Monday, September 13 in class

Previously modified: Sept. 8th (removed problem 3 and changed the due date)

Last modified: Sept. 10th (corrected the page number for the first problem)

**Problem 1 (8 points).** Exercise 2.1-2 p. 22. Write pseudocode for the procedure (minor differences from the book in pseudocode notations, such as adding brackets, are OK).

**Additionally,** please write the loop invariant for the outer loop of the new procedure and show that it holds. You may assume the needed property of the inner loop, as we did in class.

**Problem 2 (10 points).** Exercise 2-2 p. 40. As a hint for question **a**, take a look at the loop invariant for the insertion sort. For part **d** prove the worst-case efficiency similarly to the proof for the insertion sort (see pp. 26-28).