

**CS 215 - Fundamentals of Programming II**  
**Spring 2008 - Homework 4**  
**20 points**

**Out: February 13**

**Due: February 20**

Answer the following exercises from the textbook and additional questions. When a question says “implement” just write the implementations on paper. You do not need to type the code into the computer (unless you want to, of course).

1. (6 points) Exercise 9 on page 212.
2. (2 points) Exercises 10-11 on page 212.
3. (4 points) Exercises 14-16 on page 213.
4. (4 points) Exercise 17 on page 213. Note: there is a typographical error in the strategy for (a). It should say "while  $i < j$ ".
5. (2 points) Assume a vector has values {19, 13, 7, 12, 16}. Show the order of elements in the vector after each pass of the **insertion sort** algorithm.
6. (2 points) Assume a vector has values {19, 13, 7, 12, 16}. Show the order of elements in the vector after each pass of the **exchange sort** algorithm (from Project 3).