

For Wednesday

- Read Weiss, chapter 7, sections 1-3
- Homework:
 - Weiss, chapter 6, exercises 2-3. Do 3 only for 2a. Note that the correct answers for 2a and 2b are different.

Programming Assignment 1

- Any questions?

Heap Operations

- Insert
- DeleteMin
- DecreaseKey
- IncreaseKey
- Remove
- BuildHeap

Sorting

- Importance of sorting
- Three basic simple sorts
 - bubble (or exchange)
 - selection
 - insertion

Bubble Sort

- Concept is to bubble the largest to the top (or the smallest to the bottom)
- Also called exchange sort.
- Naïve vs. improved bubble sort.

Selection Sort

- Basic concept to the find the smallest (or largest) remaining element and put it in place.

Insertion Sort

- Basic concept:
 - Conceptually split the list to be sorted into two parts: one that is sorted and one that is not
 - Repeatedly insert the first element from the unsorted part into the sorted part.

Performance of Sorting

- What is the performance?
- Each sort would be the best choice (of the simple sorts, at least) in certain situations—what situations?
- What's the space cost of these sorting algorithms?