Lecture Outline (CS 303, Dong Xu, 2/13/04)

• Things to start…
  – Quiz on 2/16, get familiar with pseudocode.
  – Other questions?

• Outline
  – Review on maintaining the heap property (6.2)
  – Building a heap (6.3)
  – Heapsort (6.4)
  – Priority queues (6.5)
• Maintaining heap property
  – MAX-HEAPIFY()
  – Example
  – Computing time

• Build a heap
  – BUILD-MAX-HEAP
  – Example
  – Loop invariant
  – Computing time
• Heapsort
  – HEAPSORT()
  – Example
  – Computing time

• Priority queues
  – Concept
  – HEAP-EXTRACT-MAX()
  – HEAP-INCREASE-KEY()
  – MAX-HEAP-INSERT ()
  – Computing times
• **Reading**
  – Chapter 6.3
  – Chapter 6.4
  – Chapter 6.5

• **Homework**
  – Ex. 6.4-1, 6.4-2
  – Ex. 6.5-1, 6.5-2, 6.5-3
  – Problems 6-2, 6-3
  – Programming: Implement a priority queue and test it using sample data (optional).