Chapter 9

Heaps, Priority Queues, and Heap Sort

After studying this chapter, you should be able to

* Describe a priority queue at the logical level and implement a priority queue as a list
* Show how a binary tree can be represented in an array, with implicit positional links between the elements
* Define the terms full binary tree and complete binary tree
* Describe the shape and order properties of a heap, and implement a heap using a tree represented by implicit links in an array
* Implement a priority queue as a heap
* Compare the implementations of a priority queue using a heap, a linked list, and a binary search tree
* Sort a set of values using a heap