

21.4 Summary

Priority Queue. A Max Priority Queue (or PQ for short) is an ADT that supports at least the insert and delete-max operations. A MinPQ supports insert and delete-min.

Heaps. A max (min) heap is an array representation of a binary tree such that every node is larger (smaller) than all of its children. This definition naturally applies recursively, i.e. a heap of height 5 is composed of two heaps of height 4 plus a parent.

Tree Representations. Know that there are many ways to represent a tree, and that we use Approach 3b (see lecture slides) for representing heaps, since we know they are complete.

Running times of various PQ implementations. Know the running time of the three primary PQ operations for an unordered array, ordered array, and heap implementation.

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