CSCA48 Tutorial Week #6

TUT 0006

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THIS WEEK

Heaps

Hand back Quiz #1

… and Term Test 1!

Heaps

A *heap* is a binary tree-based data structure.

The tree satisfies the heap property:
◦ Every depth level is full (contains the maximum number of nodes), except possible the deepest level, in which all its nodes appear as far to the left as possible.

◦ For Min Heaps: If a node A is the parent of a node B, then node A's data is less than or equal to node B's data.

◦ For Max Heaps: If a node A is the parent of a node B, then node A's data is greater than or equal to node B's data.

HEAPS
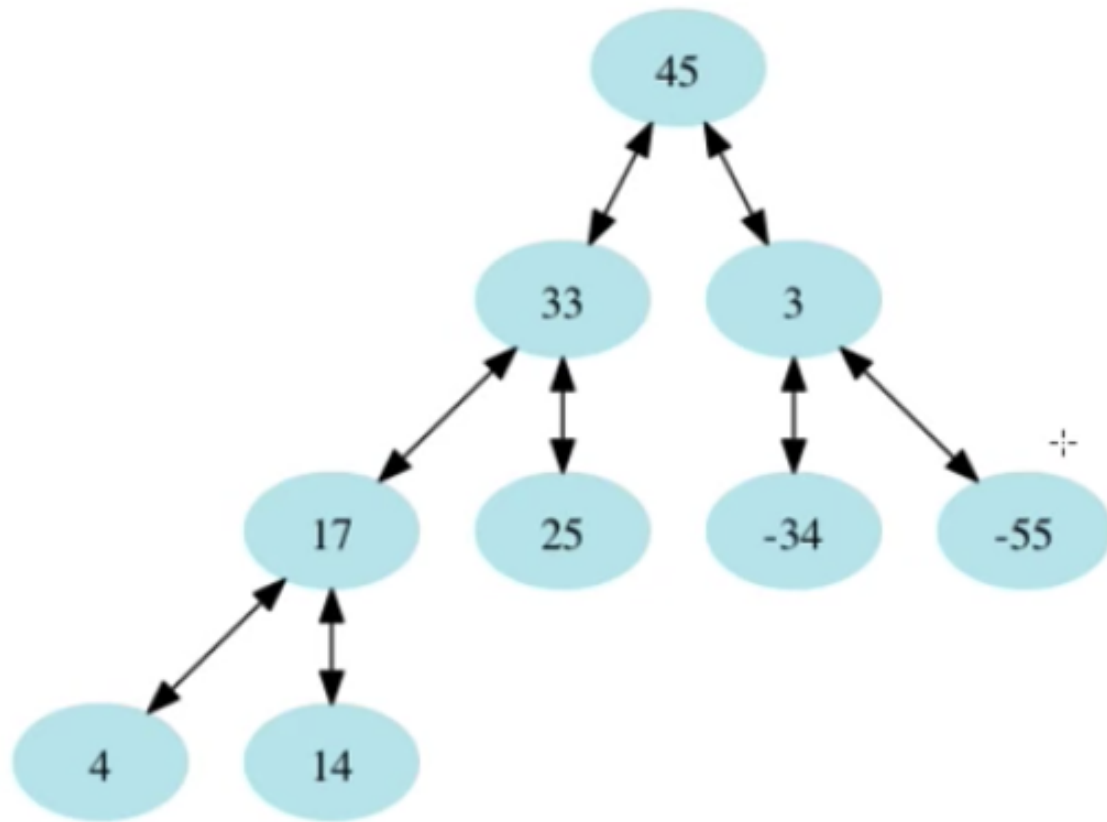
HEAPS

Example:

Insert [1, 13, 11, 14, 19, 18, 3, 16, 17] into a Min Heap.

Insert [1, 13, 11, 14, 19, 18, 3, 16, 17] into a Max Heap.

HEAPS

Exercise:

Insert [17, 16, 3, 18, 19, 14, 11, 13, 1] into a Min Heap.

Insert [17, 16, 3, 18, 19, 14, 11, 13, 1] into a Max Heap.

REMINDERS

Exercise 4 dues February 10, 2017. 5:00pm

Assignment 1 dues Sunday, February 12 EOD

Your marks are final when you leave the room