Quickcheck 06: Heaps

Name:

Consider the following sequence of numbers:

$$5, 20, 10, 6, 7, 3, 1, 2, 7, 8, 11, 3$$

(a) Insert these numbers into a min-heap where each node has up to *three* children, instead of two.

(So, instead of inserting into a binary heap, we're inserting into a ternary heap.)

Draw out the tree representation of your completed ternary heap.

(b) Draw out the array representation of the above tree.

(c) Given a node at index i, write a formula to find the index of the parent.

(d) Given a node at index i, write a formula to find the j-th child. Assume that $0 \leq j < 3$.

Another question

Do you have any questions about this course? It could be about policy, content, instructors, TAs, etc.