Notes

CSC301 Algorithms and DataStructures

31 March 2015

- guarantee logarithmic performance.

- impossible to maintain perfect balance.

- 2-3 search tree

    - either has 2 nodes with 1 key or 3 nodes with 2 keys
    - a perfectly balanced two three tree is one whose null links are the same distance from the root.
    - if the key in which i am searching greater than or equal to the node? left if less than, right if greater than, and the middle link if it is inbetween the values.
    - Insert into a 2-node: turn the 2-node into a 3-node.
    - Insertion into a 3-node: three cases: no node parent, 2-node parent, 3-node parent.
    - 4-node:(temporary data structure) made to preserve order balance.
    - note: six transformations in diagram page:428
    - grow from bottom up.
    - height is between $\log_2 N$ & $\log_3 N$