Full Binary Tree

Complete Binary Tree

Height-Balanced …

Full Binary tree theorem

* The number of leaves in a non-empty full Binary Tree is one more than the number of internal nodes. Proof (Math induction)
  + Base Case: A full binary tree with 0 (zero) internal node has one left node.

Induction Hypothesis

Assumne any full binary tree T containing n-1 internal node has n leaves.

INduction step: given a full tree T with (n-1) internal nodes, => n leaves. Add two leaf nodes as children of one of its leaves => we get tree T.

Theoroem 2

* The number of empty subtrees (null links) in a non-empty binary tree is one more than the number of nodes in the tree.
* Tells: # of null inks in a tree. Linked implementation takes about half memory space.
* N pieces of data in a tree. N nodes to tal
  + N+1 null links.