Mathematics for Computing
Trees

1 Trees

Storing a list of records

Subtrees of a binary tree (8:3:1)

Example 8.2 Deleting a vertex from a graph

8.1.2 The number of edges in a tree. Theorem 8.3 Let T be a tree with n vertices. Then T has n-1 edges.

Spanning Trees

Spanning Subgraph of G Spanning Tree of G 8.2 Rooted Trees A balanced binary tree has 2^i nodes on all levels i apart from the highest level.

A tree in which one vertex has been singled out in this way

Let x and y be vertices of T. If the unique path from the root r to x in T passes through y, then y is called an ancestor of x and x is a descendant of y.

If the vertices y and x are adjacent on the path from r to x, then y is called the parent of x and x is called the child of y.

1.1 Binary Trees

A binary child is a rooted tree in which each internal node has exactly two children, the left child and right child respectively.

¡ page 39 ¿ Balanced Binary Tree

Storing Data in a binary tree search(8:3:2)

A tree is a connected graph that contains no cycles

A tree on n vertices has n-1 degrees