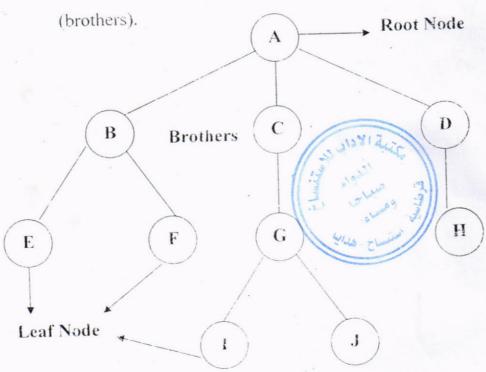# Tree ③

1. Introduction

A tree is a directed graph (kind of network structure) which has the following characteristics:

- There is a unique first node, called the root node and may have many successors.
- There may be many nodes that have no successors. There nodes are called leaf node, and each of them has a unique predecessor.
- Each node that is neither the root node nor a leaf node has a unique predecessor and at least one successor.
- There is an edge between each node and its successors or predecessor.
- The predecessor of a node is said to be that nodes parent.
- A successors of node is said to be that's node is child.
- Every node (except the root) has a unique parent.
- A node that has no children is called a leaf node.
- Tow nodes that have the same parent are said to be siblings (brothers).