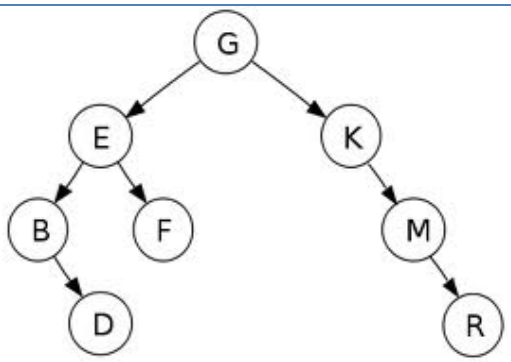
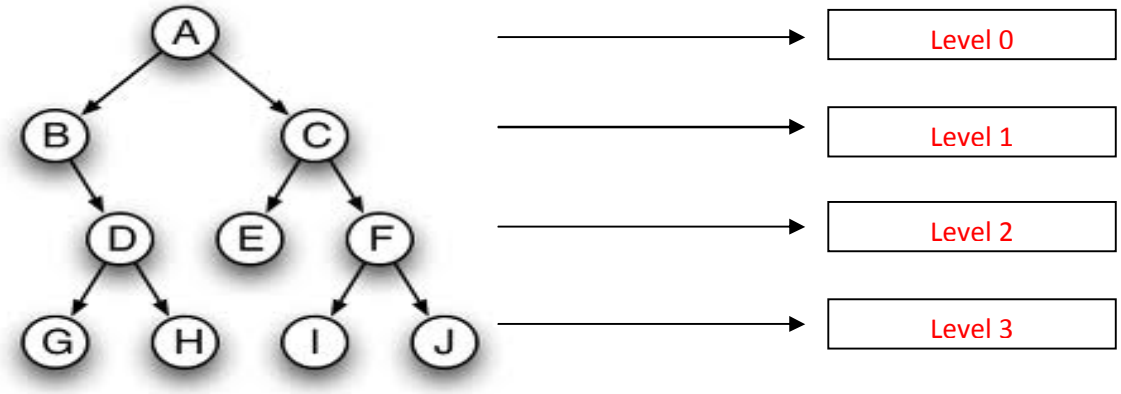
Basic Definition of Binary Tree



- **Father Node:** G is the father node
- **Leaf Nodes:** D, R are the leaf nodes
- **Ancestor:** G is the ancestor of E & K
- **Descendent:** E is the left descendent and K is the right descendent
- **Siblings:** B & F are the siblings of E
- **Degree :** Number of nodes connected to a particular node

Strictly Binary Tree



- **Hight of a tree:** max level of tree + 1

Propertise of a Binary Tree

- ✓ A tree with n nodes has exactly (n-1) edges or branches.
- ✓ Maximum no. of of nodes in a binary tree on level i is 2^i , i >= 0
- ✓ Maximum no. of nodes in a binary tree of height h is (2^h - 1) , h >= 1
- ✓ **Full Binary Tree** of height h, having (2^h - 1) nodes, h >= 0
- ✓ Every node of **Extended Binary Tree** has 0 or 2 children, is also called 2-tree