* Combition of nodes through edges(used to represent

Hierarchical data)

**TREE**

Height of tree: 4

0 – Depth of node

DEPTH

Edge



Edge

**Root**

Degree of tree: 3

Siblings

1

Degree: 2

2

3

4

Leaf

Degree = 0

**Root**: Node which do not have any parent node.

**Parent**: Any node which have a node below is known as parent.

**Child**: Any node which have a node above is known as child.

**Siblings**: Nodes with same parent.

**Leaf/ External Node**: Any node which do not have any child is known as LEAF or External Node

**Internal Node**: Any node which have a child is known as Internal node

**Depth**: No. of edges above a node is known as its depth.

**Height**: No. of edges below a node is known as its height.

**\*\*\* Height of tree: No. of edges in longest branch of tree. \*\*\***

**Ancestors**: nodes before a node are called its ancestors.

**Descendants:** Nodes after a node are called its Descendants.

**Degree: No. of Childs a node have is known as its degree.**

**\*\*\* Degree of tree: The highest degree of all nodes is known as degree of tree \*\*\***

Root(Example)

**CEO**

**Binary Tree**

**N nodes = N -1 edges**

Head

Head

Head

Head

COO

CTO

*A Tree with at most 2 degree is known as Binary Tree. A binary tree always follows, hum 2 humaare 2. (1 aur 0 bhi ho skta h.)*

Heads of different departments

This is also a binary tree

with degree 1

**It’s not a Binary Tree**

**As its tree degree is 3.**