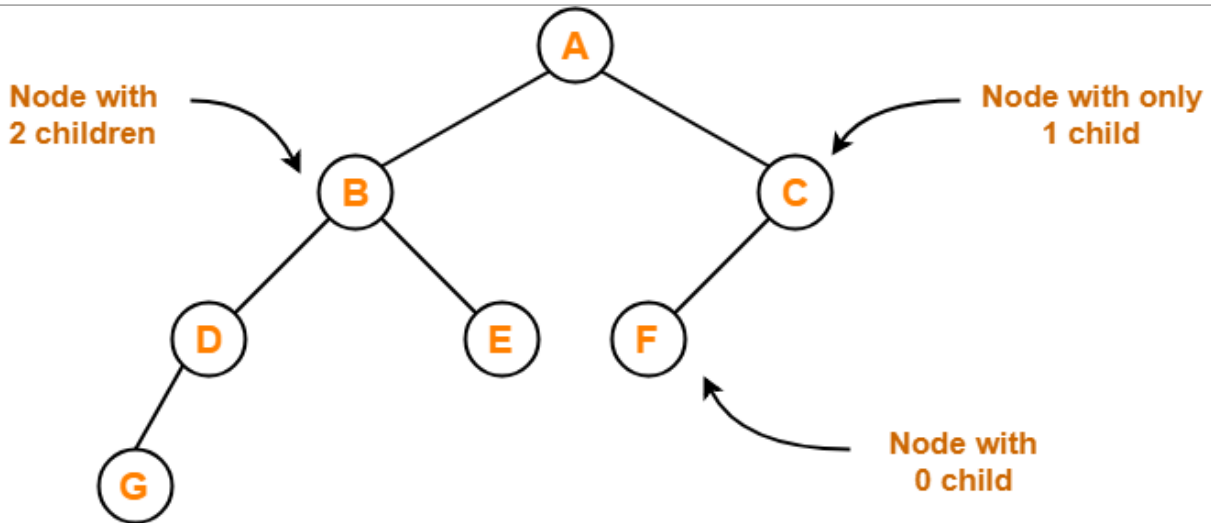


Binary Tree-

Binary tree is a special tree data structure in which each node can have at most 2 children.

Thus, in a binary tree,

Each node has either 0 child or 1 child or 2 children.



Binary Tree Example

Types of Binary Trees-

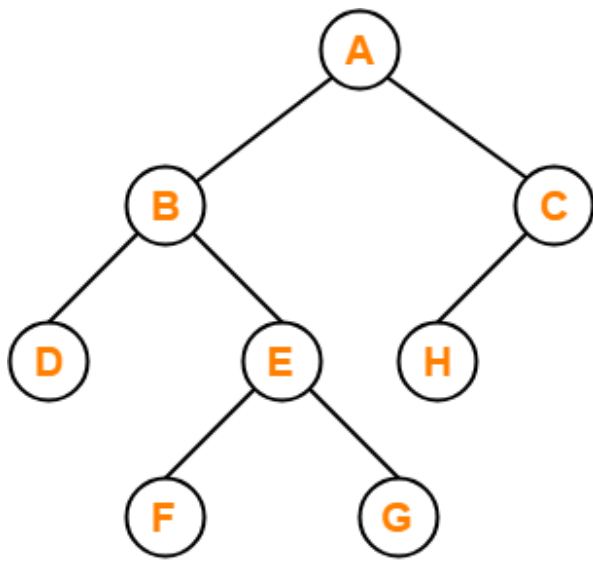
Binary trees can be of the following types-

1. Full Binary Tree
2. Complete binary Tree
3. Strictly binary tree
4. Skewed Binary Tree

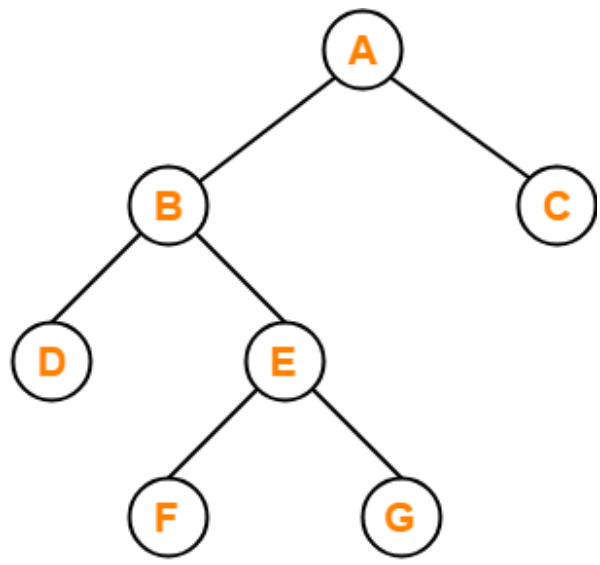
Strictly Binary Tree-

- A binary tree in which every node has either 0 or 2 children is called as a **Strictly binary tree**.

Example-



X

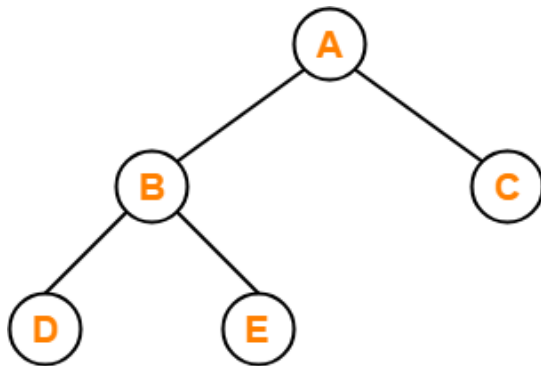


✓

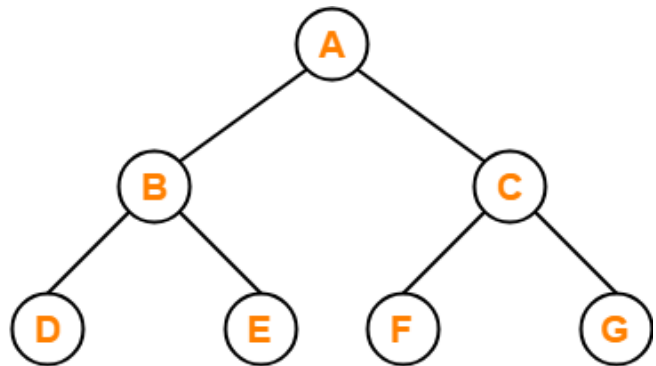
Full Binary tree

A **full binary tree** is a binary tree that satisfies the following 2 properties-

- Every internal node has exactly 2 children.
- All the leaf nodes are at the same level.



X

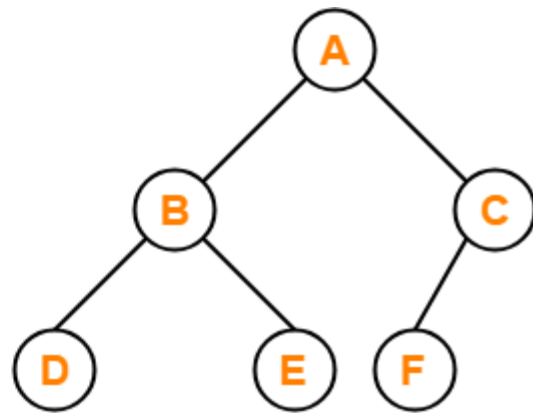
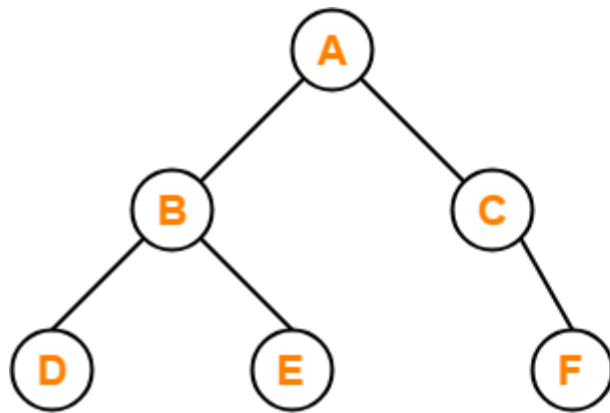


✓

Complete binary tree

An **complete binary tree** is a binary tree that satisfies the following 2 properties-

- All the levels are completely filled except possibly the last level.
- The last level must be strictly filled from left to right.



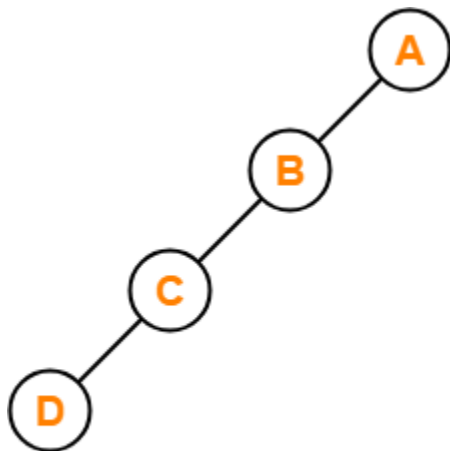
Skewed Binary Tree-

A **skewed binary tree** is a binary tree that satisfies the following 2 properties-

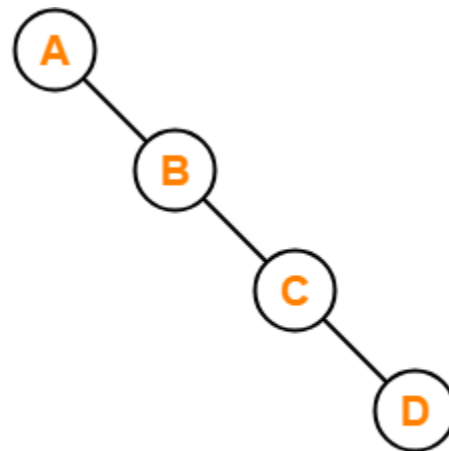
- All the nodes except one node has one and only one child.
- The remaining node has no child.

OR

A **skewed binary tree** is a binary tree of n nodes such that its depth is $(n-1)$.



Left Skewed Binary Tree



Right Skewed Binary Tree