

3. Binary Tree – Data Structure

♦ Definition:

A **Binary Tree** is a tree data structure in which each node has at most **2 children**: left and right.

♦ Types:

- **Full Binary Tree**
 - **Complete Binary Tree**
 - **Perfect Binary Tree**
 - **Skewed Tree**
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♦ Traversals:

- **Inorder (Left, Root, Right)**
 - **Preorder (Root, Left, Right)**
 - **Postorder (Left, Right, Root)**
 - **Level Order (BFS)**
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♦ Applications:

- Expression trees
- Decision trees
- Parsing syntax trees
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