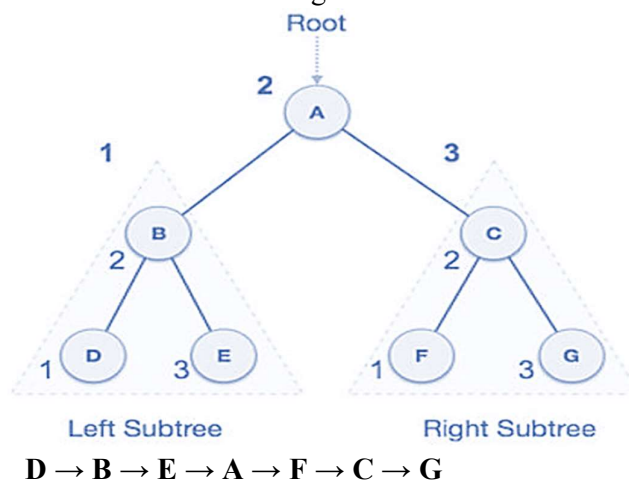## ➢ Tree Traversal: -

Traversal is a process to visit all the nodes of a tree and may print their values too. Because, all nodes are connected via edges (links) we always start from the root (head) node. That is, we cannot randomly access a node in a tree. There are three ways which we use to traverse a tree

- In-order Traversal
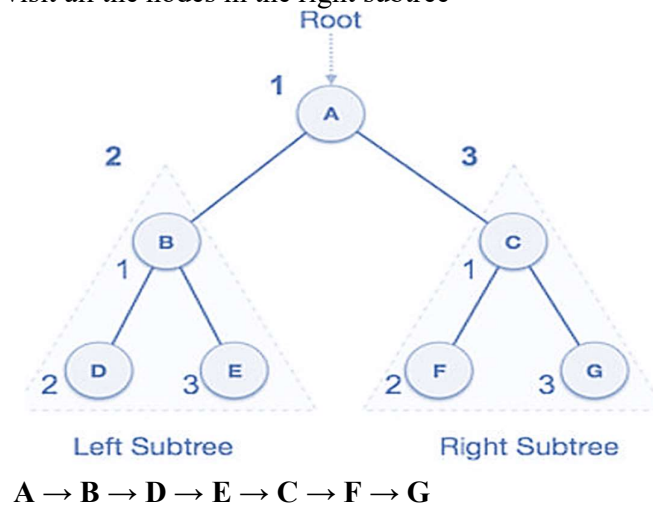- Pre-order Traversal
- Post-order Traversal

1. In-order Traversal: -
   a. First, visit all the nodes in the left subtree
   b. Then visit the root node
   c. Finally visit all the nodes in the right subtree

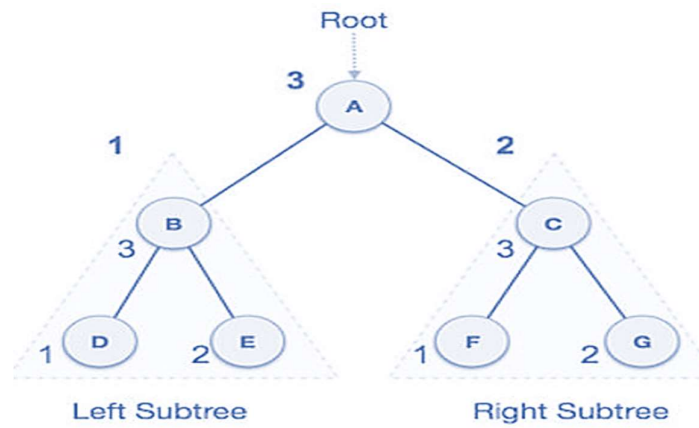$$D \rightarrow B \rightarrow E \rightarrow A \rightarrow F \rightarrow C \rightarrow G$$

2. Pre-order Traversal: -
   a. First visit root node
   b. Then visit all the nodes in the left subtree
   c. Finally visit all the nodes in the right subtree

$$A \rightarrow B \rightarrow D \rightarrow E \rightarrow C \rightarrow F \rightarrow G$$

3. **Post-order Traversal: -**
   a. First visit all the nodes in the left subtree
   b. Then visit all the nodes in the right subtree
   c. Finally visit the root node

$$D \rightarrow E \rightarrow B \rightarrow F \rightarrow G \rightarrow C \rightarrow A$$