

Traversal of Binary Tree

Tree Traversal: Tree Traversal refers to the process of visiting each node in a tree data structure exactly once.

Various tree traversal Algorithm are-

1. Preorder Traversal-

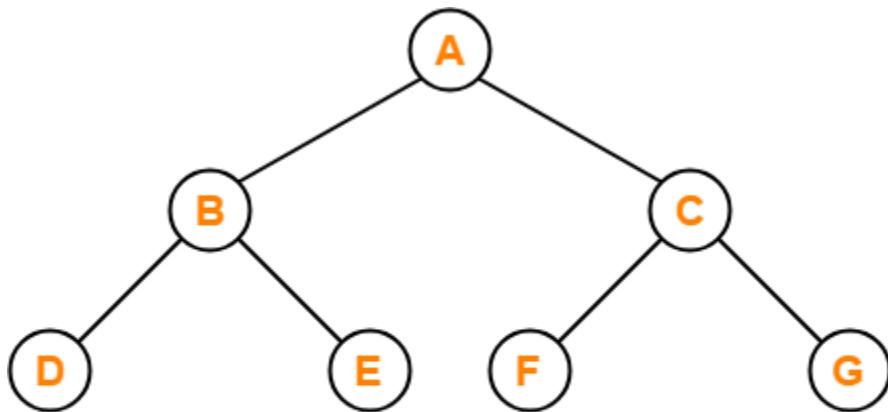
Algorithm-

1. Visit the root
2. Traverse the left sub tree i.e. call Preorder (left sub tree)
3. Traverse the right sub tree i.e. call Preorder (right sub tree)

Root → Left → Right

- **Example**

Consider the following example-



Preorder Traversal : A , B , D , E , C , F , G

Applications-

- Preorder traversal is used to get prefix expression of an expression tree.
- Preorder traversal is used to create a copy of the tree.

2. Inorder Traversal-

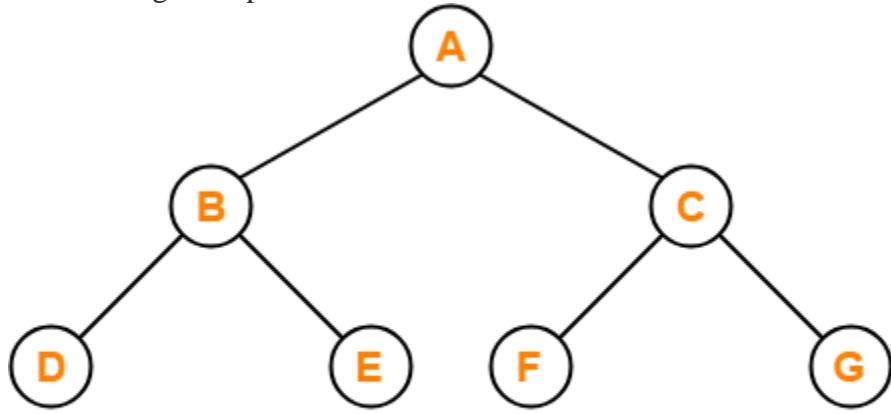
Algorithm-

1. Traverse the left sub tree i.e. call Inorder (left sub tree)
2. Visit the root
3. Traverse the right sub tree i.e. call Inorder (right sub tree)

Left → Root → Right

- **Example**

Consider the following example-



Inorder Traversal : D , B , E , A , F , C , G

Application-

- Inorder traversal is used to get infix expression of an expression tree.

