SNS COLLEGE OF TECHNOLOGY

Coimbatore-35
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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

COURSE NAME : 19ITT201 & Data Structures

II YEAR/ III SEMESTER

UNIT – I LINEAR DATA STRUCTURES & TREES

Topic: Tree traversals

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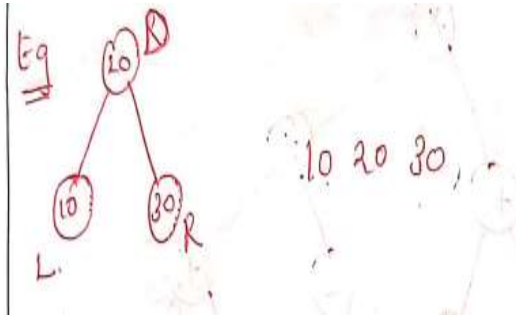
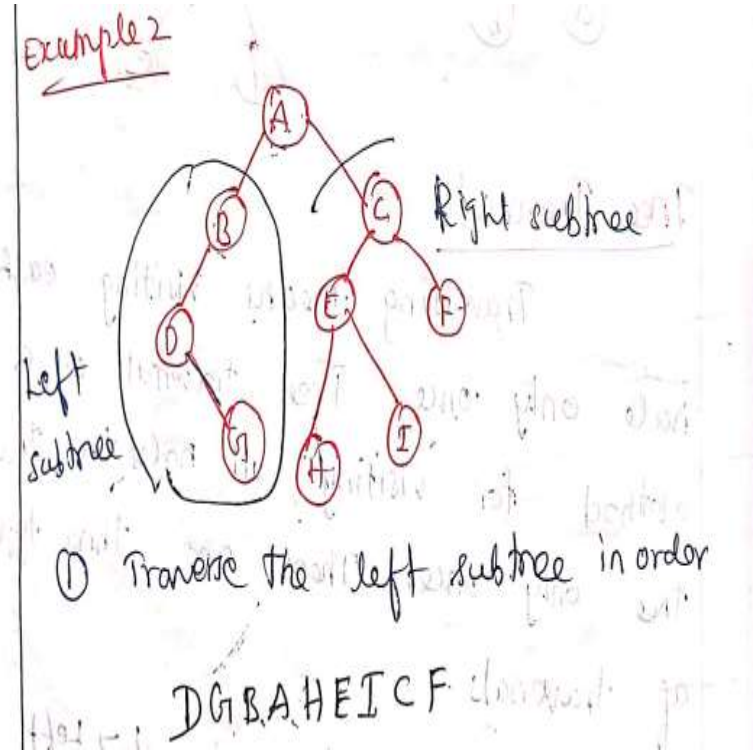
Tree Traversal

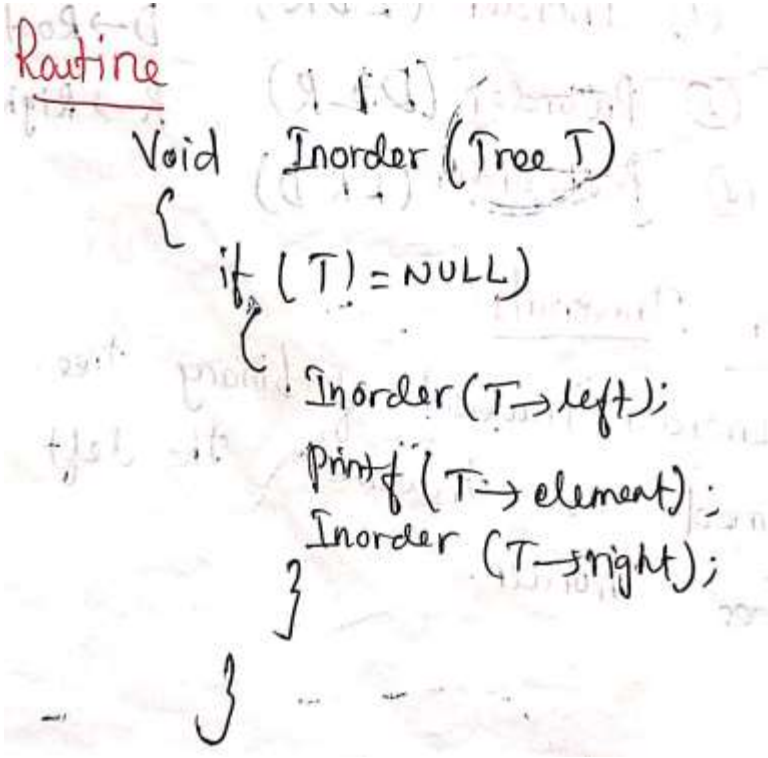
- Visiting nodes in a tree only once
- Three types of tree traversal
  - Inorder Traversal (LS,R,RS)
  - Preorder Traversal(R,LS,RS)
  - Postorder Traversal(LS,RS,R)

Inorder Traversal

- Order of tree traversal is performed as follows
  - Traverse Left Subtree
  - Root
  - Traverse Right Subtree

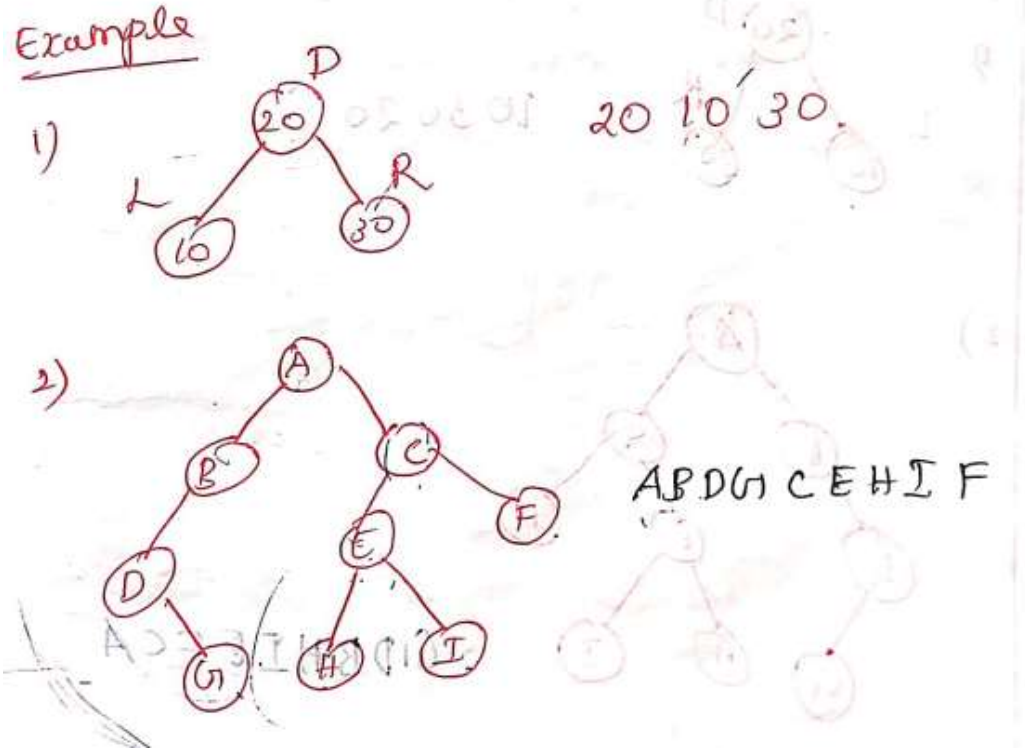


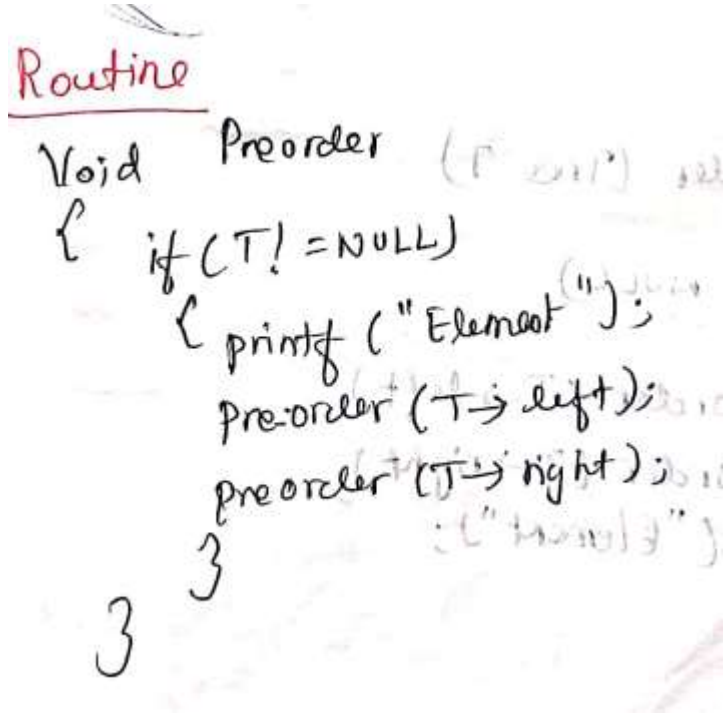




Preorder Traversal

- Order of tree traversal is performed as follows
  - Root
  - Traverse Left Subtree
  - Traverse Right Subtree

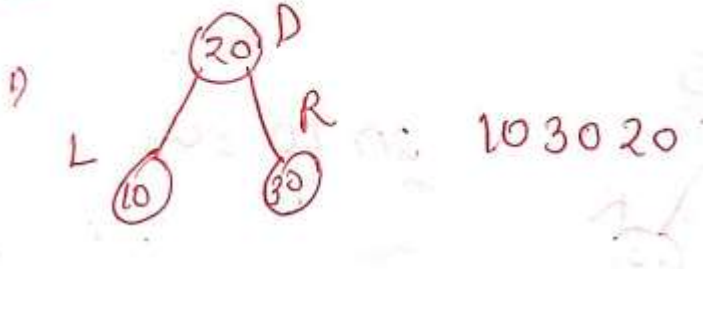


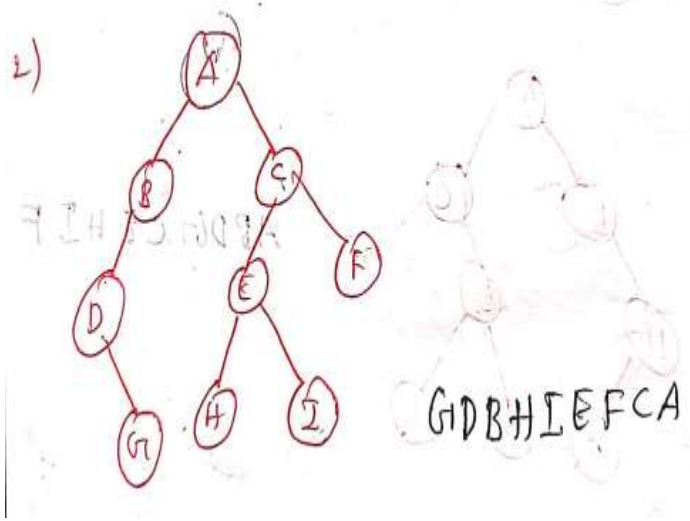


Postorder Traversal

- Order of tree traversal is performed as follows
  - Traverse Left Subtree
  - Traverse Right Subtree
  - Root

Example





Routine :-

```
Void Postorder (Tree T)
{
    if (T != NULL)
    {
        Post order (T→ left);
        Post order (T→ right);
        Print ("Element");
    }
}
```

References

- Java : the complete Reference (Eleventh Edition), Herbert Schildt, 2018.


Thank You!