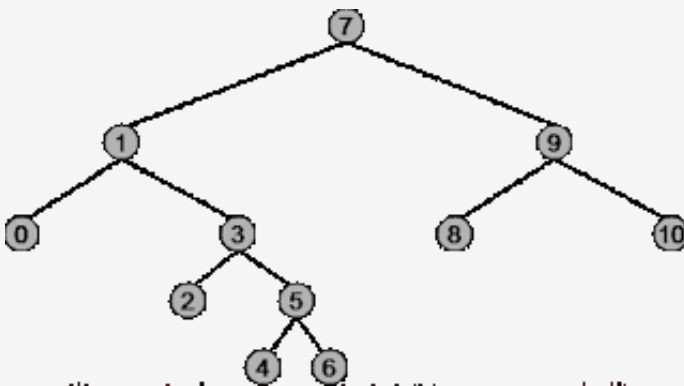# DATA STRUCTURES NOTES

Thursday, February 19, 2009

Binary tree traversal: Preorder, Inorder, and Postorder

In order to illustrate few of the binary tree traversals, let us consider the below binary tree:

Preorder traversal: To traverse a binary tree in Preorder, following operations are carried-out (i) Visit the root, (ii) Traverse the left subtree, and (iii) Traverse the right subtree.
Therefore, the Preorder traversal of the above tree will outputs:
7, 1, 0, 3, 2, 5, 4, 6, 9, 8, 10

Inorder traversal: To traverse a binary tree in Inorder, following operations are carried-out (i) Traverse the left most subtree starting at

the left external node, (ii) Visit the root, and (iii) Traverse the right

subtree starting at the left external node.

Therefore, the Inorder traversal of the above tree will outputs:

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Postorder traversal: To traverse a binary tree in Postorder, following

operations are carried-out (i) Traverse all the left external nodes starting

with the left most subtree which is then followed by bubble-up all the

internal nodes, (ii) Traverse the right subtree starting at the left external

node which is then followed by bubble-up all the internal nodes, and (iii)

Visit the root.

Therefore, the Postorder traversal of the above tree will outputs:

0, 2, 4, 6, 5, 3, 1, 8, 10, 9, 7

Posted by Nash at 12:11 PM

Labels: Binary tree, Inorder traversal, Postorder traversal, Preorder traversal,

Traversal

1 comment:

soumitra June 16, 2013 at 6:59 AM

http://deathwithjava.blogspot.in/2013/06/binary-tree-traversal-in-
zigzag-order.html

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