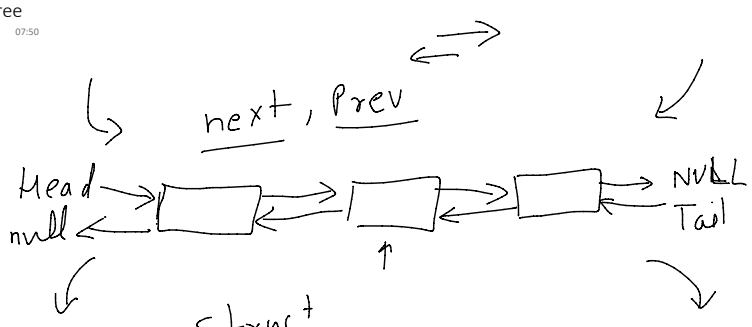
Day 26 - Tree

13 September 2022 07:50

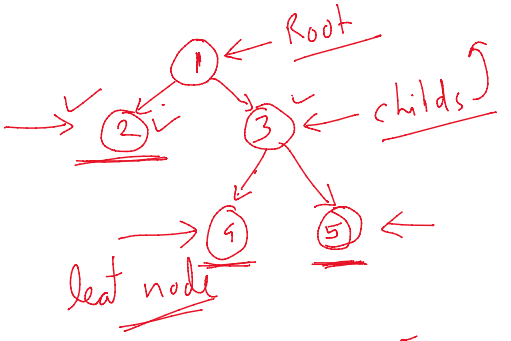


DLL
deque

```
struct
class Node{
    int Data
    Node* next;
    Node* prev;
};
```

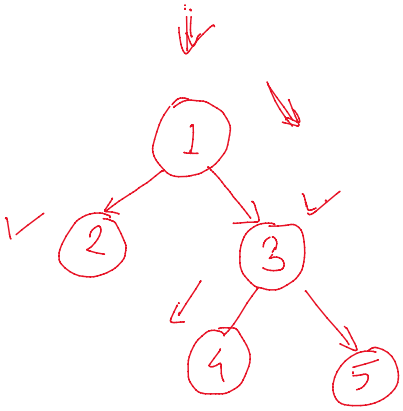
Binary Tree

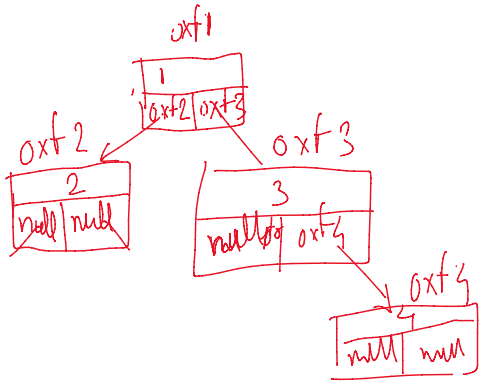
Linear

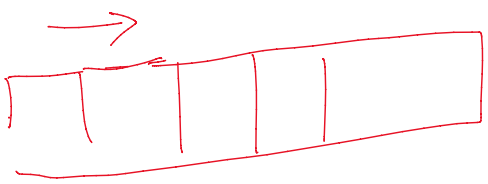


=5

```
class Node{
    int Data;
    Node* left;
    Node* right;
};
```



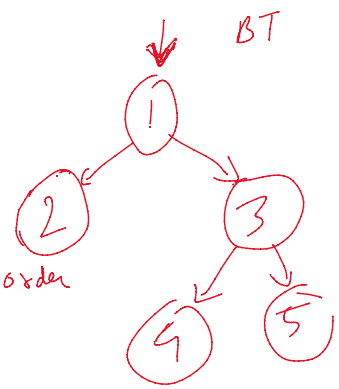




midorder left root right

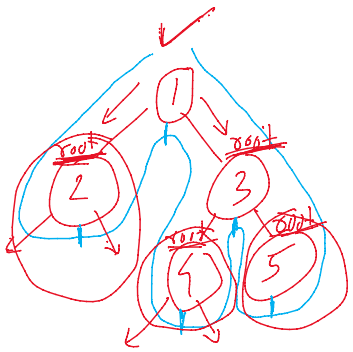
Pre root left right

Post left right root

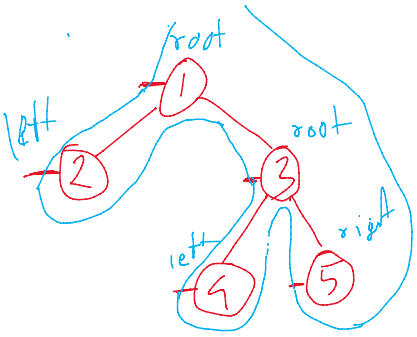


DFT ⟷ Inorder → midorder
Preorder
Postorder

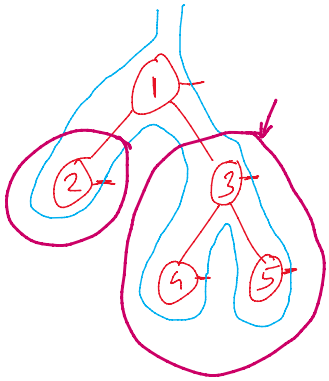
BFT → Level Order Traversal



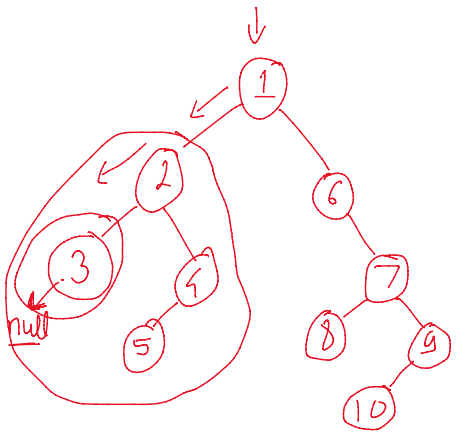
inorder 2,1,4,3,5



Preorder 1,2,3,4,5



Postorder :- 2 4 5 3 1

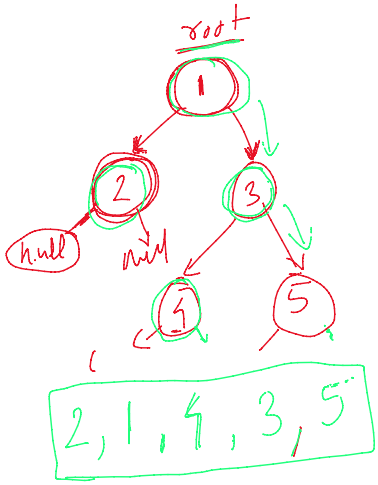


Inorder → 3, 2, 5, 4, 1, 6, 8, 7, 10, 9

PreOrder ⇒ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Postorder ⇒ 3, 5, 4, 2, 8, 10, 9, 7, 6, 1

```
void inorder(Node* root){
    if (root == nullptr){
        return;
    }
    inorder(root->left);
    cout << root->data << endl;
    inorder(root->right);
}
```



2, 1, 4, 3, 5

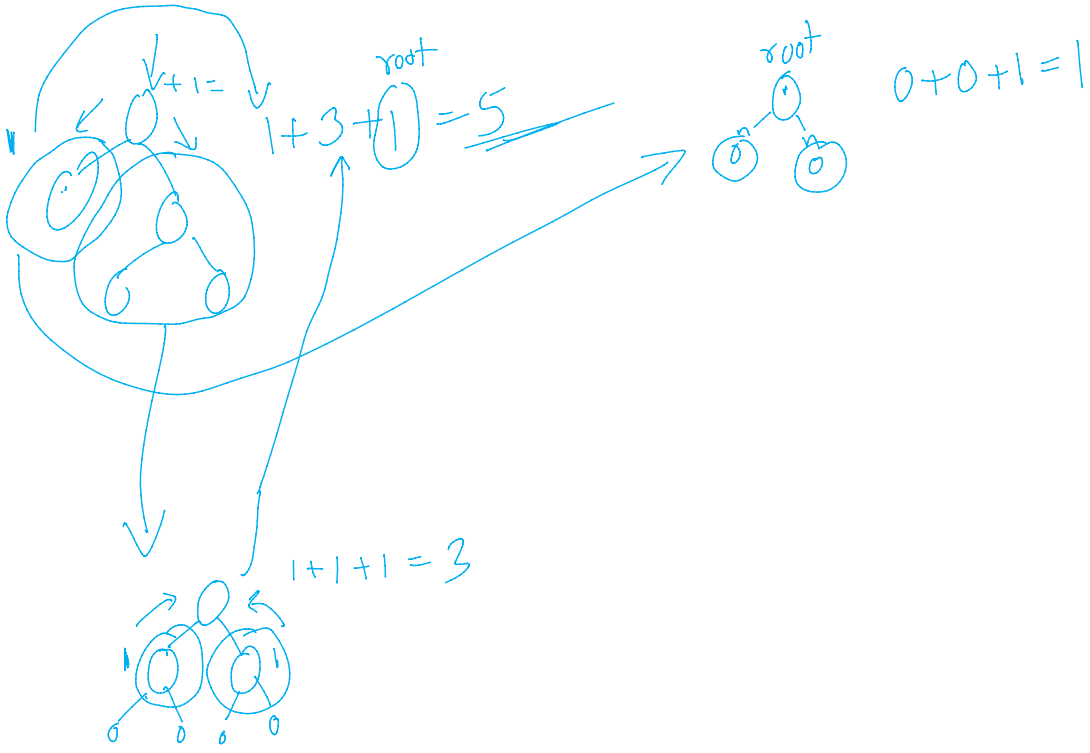
5 inorder

3 inorder

1 inorder

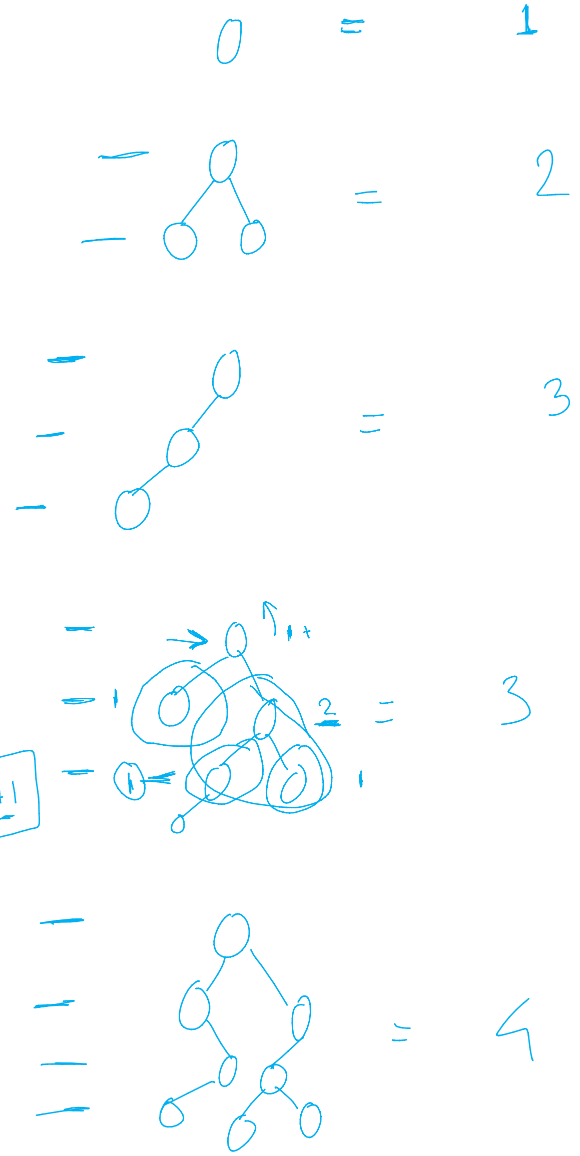
main

Internal Stack



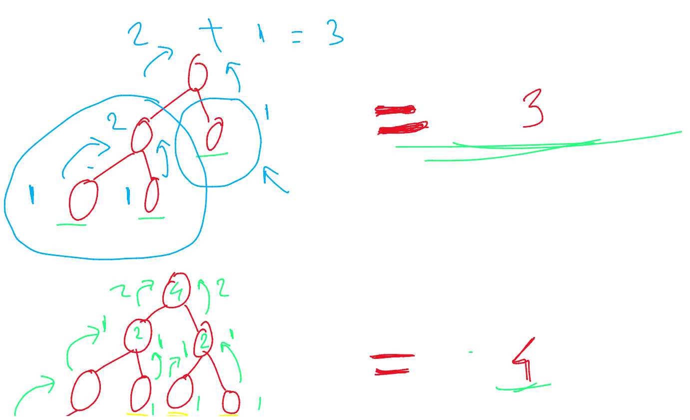
Height

DFS



size

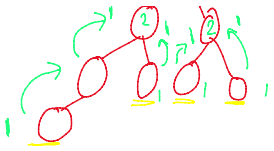
return max(LH, RH) +1



return 1

Base

&& root->R)



= 4

Base

if (root->L && root->R)
= ht
return 1

LL
RL
return LL + RL