

root →

children →

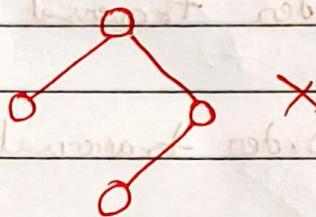
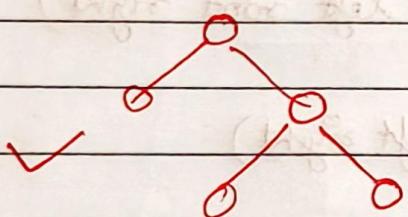
leaf node →

ancestors →

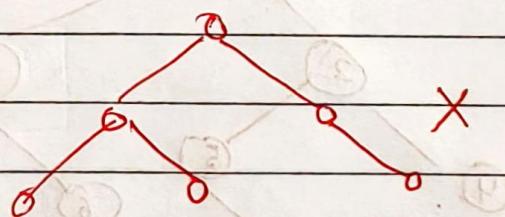
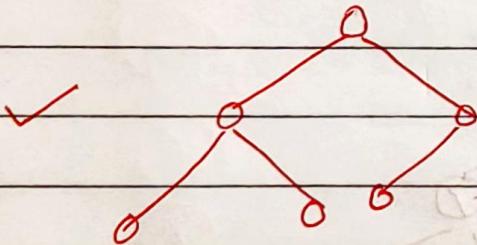
Subtree →

Descendents →

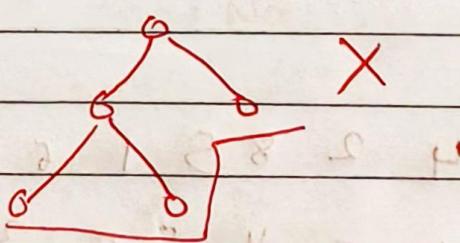
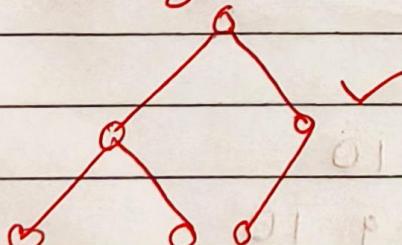
Full BT → either has 0 or 2 children



Complete BT → All levels are completely filled except the last level. The last level has nodes as left as possible

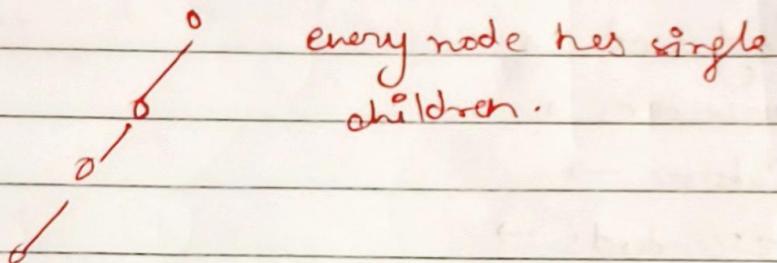


Perfect Binary tree: All leaf nodes are on same level.



Balanced tree → Max height can be maximum of $\log(n)$

Degenerate tree : →

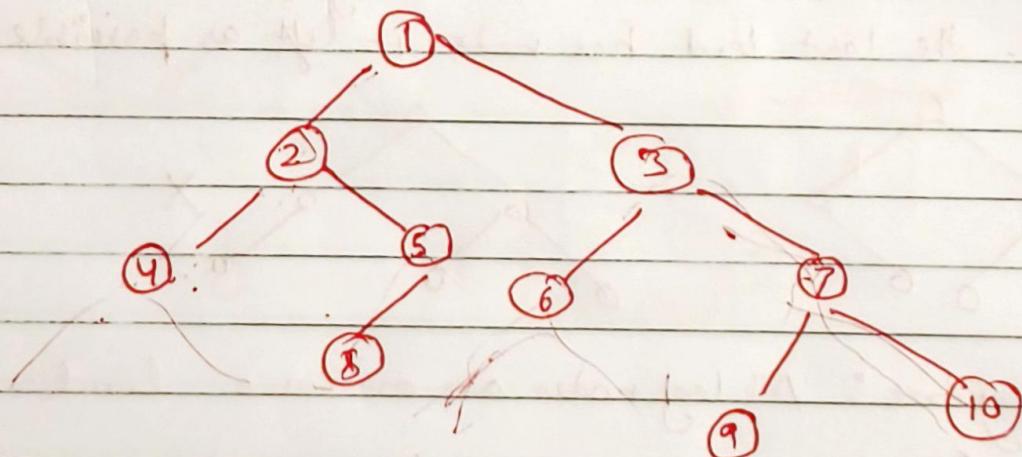


DFS

→ Inorder traversal (~~root left right~~)

→ Pre-order traversal (root left right)

→ Post-order traversal (left right root)



4 2 8 5 1 6 3 9 7 10

1 2 4 5 8 3 6 7 9 10

4 8 5 2 6 9 10 7 3 1

BFS

1 2 3 4 5 6 7 8 9 10

Representation

Struct Node {

~~Registers~~

int data

Struct Node* left;

Struct Node* right;

Node (int val)

{

data = val;

left = right = NULL;

}

main()

{

Struct Node* root = new Node(1);

root → left = new Node(2);

root → left = new Node(3);

root → left → right = new Node(5);

}