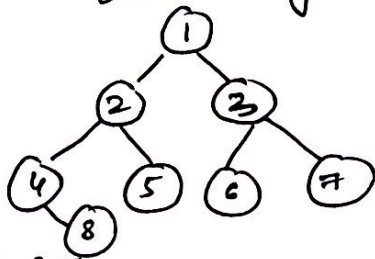


Balanced Tree :-

A binary tree is balanced if the height of the tree is $O(\log n)$ where 'n' is number of nodes in tree.

AVL trees, Red-Black trees and balanced binary search trees all maintain $O(\log n)$ height and are balanced as the depth of 2 subtrees of every node never differs by more than 1.

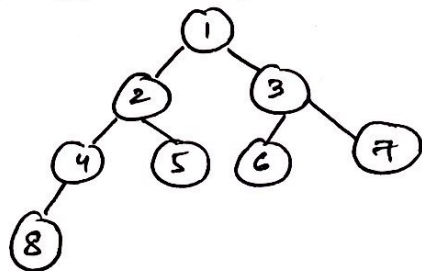
eg:-



Complete Tree :-

A complete binary tree is a binary tree whose all levels except the last level are completely filled and all leaves in last level are all set to left side.

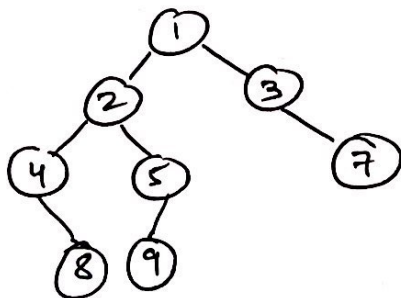
eg:-



Non-Complete Tree :-

A non-complete binary tree is a binary tree where not all levels of tree is completely filled and the leaves in last level need not be set to left side.

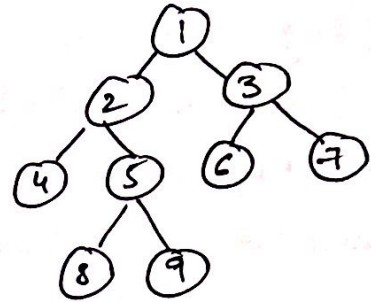
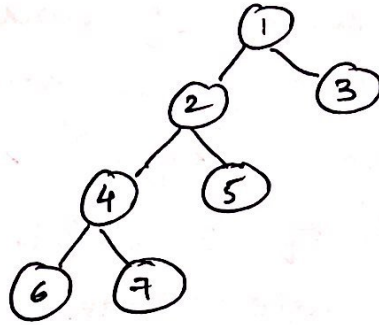
eg:-



Full Binary Tree :-

A binary tree is full if all nodes except leaves have 2 children.

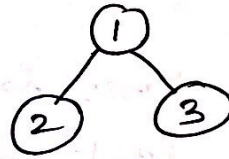
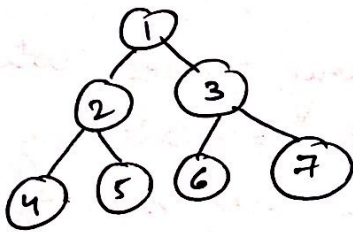
egs:-



Perfect Binary Tree :-

A perfect binary tree is one where all internal nodes have 2 children and leaves are at same level.

egs:-



Degenerate / Pathological Tree :-

Every internal node in this tree has only 1 child.

The performance of this tree is same as that of a linked list.

egs:-

