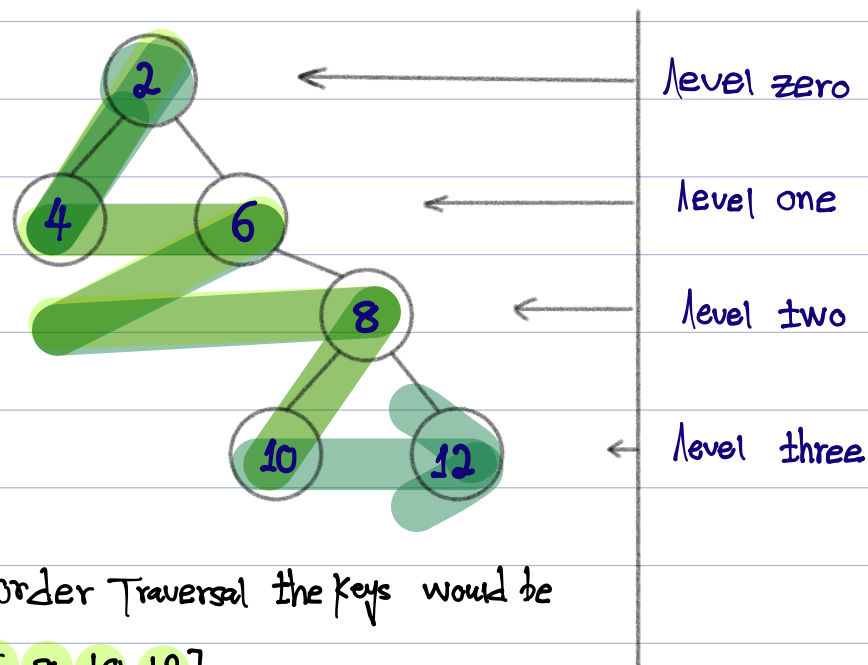


Tree traversal: Tree traversal is visiting every node of a tree exactly once. It can be classified into two categories:

① **Breadth First Traversal or level order:** The tree is traversed level by level, for instance, first, root node will be visited, then nodes at level one and so on.



After level order Traversal the keys would be
[2, 4, 6, 8, 10, 12]

② **Depth First:** The tree's nodes are visited depth wise which means, first it will finish one side of the tree, then move to another side of the tree.

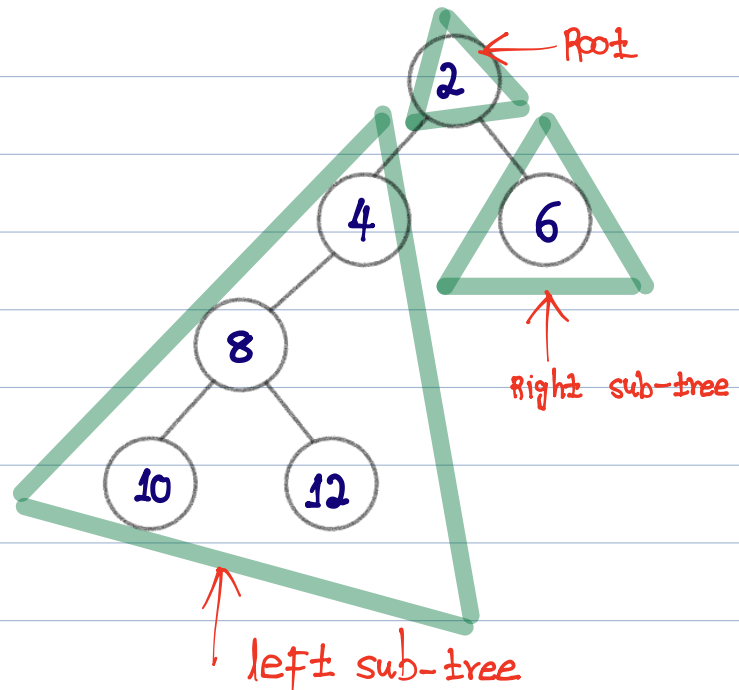
for instance, either first visit all the nodes to the left side of a tree, then move to its right side or vice versa.

in Depth First search (DFS), Three tasks needs to be done:

Traverse Root

Traverse Left sub-Tree

Traverse Right sub-Tree



There are six ways (3!) to traverse the given tree, but three most used ones are:

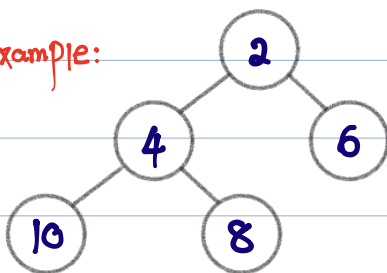
① Inorder (left subtree, Root, Right subtree)

② Preorder (Root, left subtree, Right subtree)

③ Postorder (left subtree, Right subtree, Root)

The order to visit a Tree differs in each method

Example:



Inorder (10, 4, 8, 2, 6)

Preorder (2, 4, 10, 8, 6)

Postorder (10, 8, 4, 6, 2)