

1. Find Height of a Binary Tree

Find the maximum depth (height) of a tree using recursion.

Example:

Input:



Output: 3

2. Count Leaf and Non-Leaf Nodes

Count how many nodes are **leaves** (no children) and how many are **non-leaves**.

4. Level Order Traversal

Traverse the tree level by level using a queue.

Example:

Input:



Output: 1 2 3

5. Diameter of a Binary Tree (Leetcode #543)

Find the **longest path** between any two nodes in a tree.

6. Check if a Binary Tree is a BST

Verify if all nodes satisfy BST properties.

7. Find Path from Root to a Given Node

Given a node value, print the path from root to that node.

8. Sum of All Left Leaves

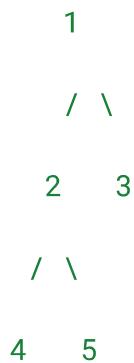
Find the sum of all **left leaf nodes** in a binary tree.

9. Print Ancestors of a Given Node

Given a node **x**, print all its **ancestors** from root to parent.

Example:

Input:



Ancestors of 5: 2, 1

10. Find Kth Smallest Element in a BST

Return the **Kth smallest** element using inorder traversal.

Example:

Input: [3, 1, 4, null, 2], k = 1

Output: 1