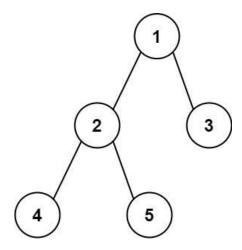
## 543. Diameter of Binary Tree

Given the root of a binary tree, return the length of the diameter of the tree.

The diameter of a binary tree is the length of the longest path between any two nodes in a tree. This path may or may not pass through the root.

The length of a path between two nodes is represented by the number of edges between them.

## Example 1:



**Input:** root = [1,2,3,4,5]

Output: 3

**Explanation:** 3 is the length of the path [4,2,1,3] or [5,2,1,3].

## Example 2:

Input: root =  $\lceil 1,2 \rceil$ 

Output: 1

## **Constraints:**

- The number of nodes in the tree is in the range  $[1, 10^4]$ .
- -100 <= Node.val <= 100