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Tree: Height of a Binary Tree ☆

Problem

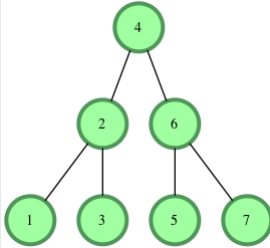
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The height of a binary tree is the number of edges between the tree's root and its furthest leaf. For example, the following binary tree is of height **2**:



Function Description

Complete the `getHeight` or `height` function in the editor. It must return the height of a binary tree as an integer.

`getHeight` or `height` has the following parameter(s):

- `root`: a reference to the root of a binary tree.

Note -The Height of binary tree with single node is taken as zero.

Input Format

The first line contains an integer n , the number of nodes in the tree.

Next line contains n space separated integer where i th integer denotes `node[i].data`.

Note: Node values are inserted into a binary search tree before a reference to the tree's root node is passed to your function. In a binary search tree, all nodes on the left branch of a node are less than the node value. All values on the right branch are greater than the node value.

Constraints

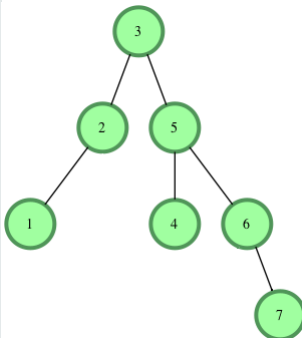
$$1 \leq \text{node.data}[i] \leq 20$$

$$1 \leq n \leq 20$$

Output Format

Your function should return a single integer denoting the height of the binary tree.

Sample Input

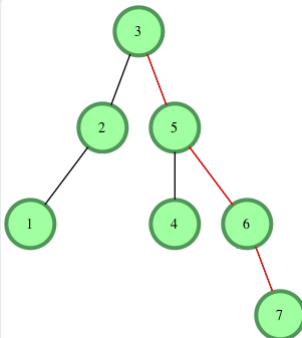


Sample Output

3

Explanation

The longest root-to-leaf path is shown below:



There are **4** nodes in this path that are connected by **3** edges, meaning our binary tree's **height = 3**.

Author [vatsalchanana](#)Difficulty [Easy](#)

Max Score 10

Submitted By [110223](#)

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C++

```
1  #include <bits/stdc++.h>...
35 /*The tree node has data, left child and right child
36 class Node {
37     int data;
38     Node* left;
39     Node* right;
40 };
41
42 */
43     int height(Node* root) {
44         // Write your code here.
45     }
46
47 }; //End of Solution...
```

Line: 35 Col: 1

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