Binary Tree Playlist...

Leetcode - 543

Easy

Video - 40

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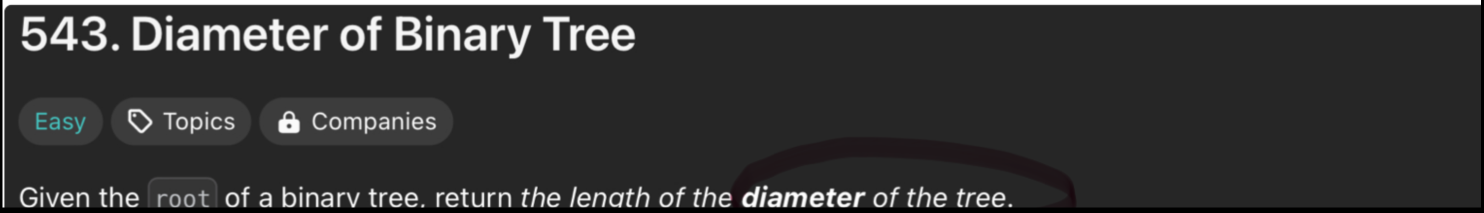
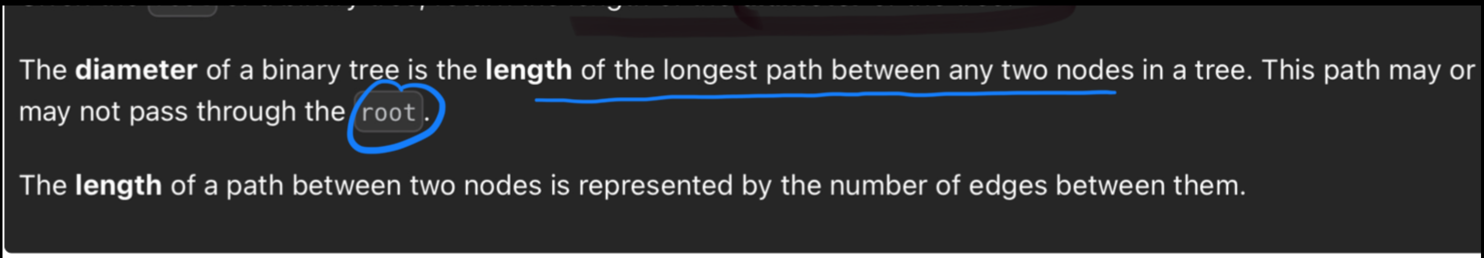


543. Diameter of Binary Tree

Easy Topics Companies

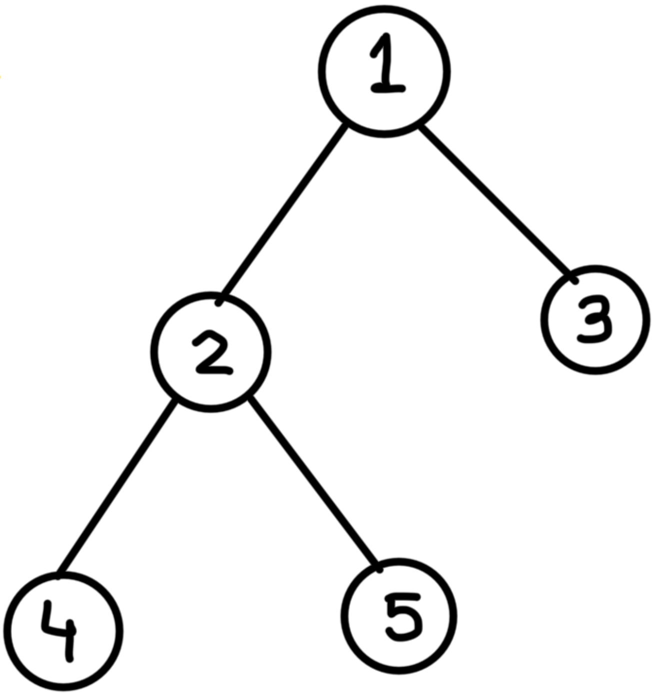
Given the `root` of a binary tree, return *the length of the* ***diameter*** *of the tree.*



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.

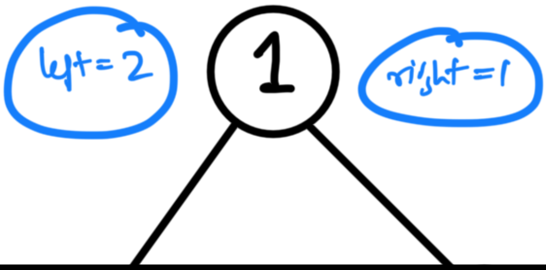
Example:-

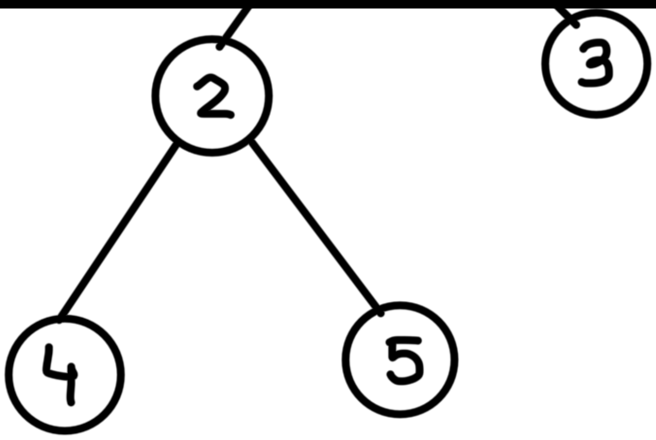


Output = 3

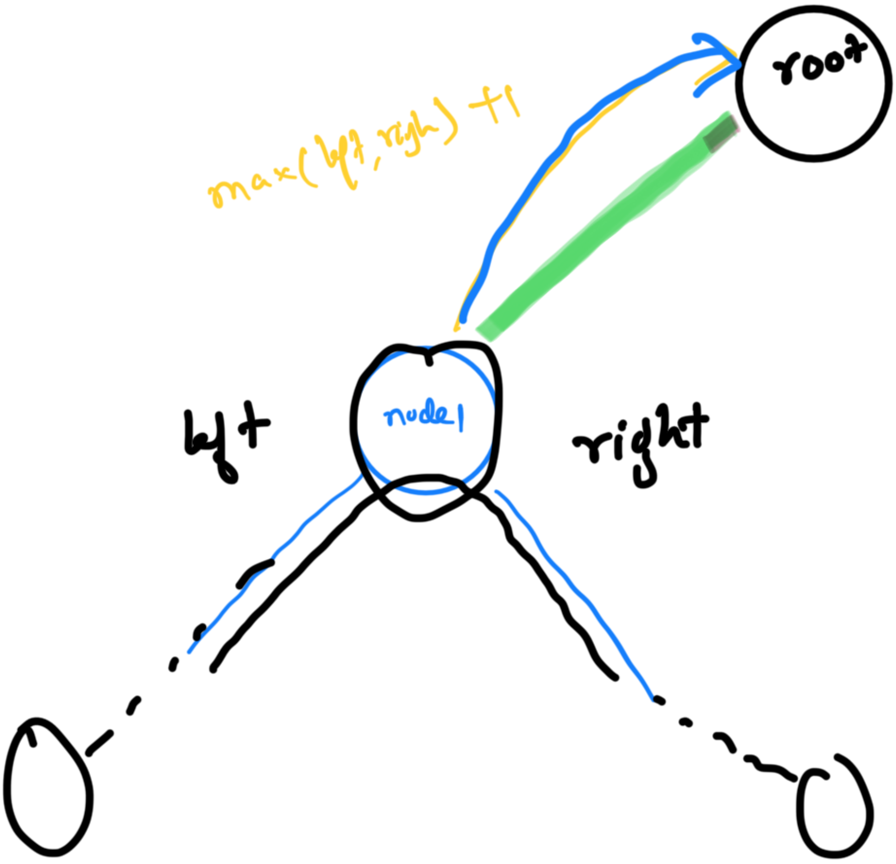
Thought Process
(बस कहानी बनाओ
(Story)

left + right





result = ~~0~~ ~~2~~ 3



max(left, right) +1

left → node1 → right

left + right

Possible

Story points:-

result = INT_MIN;

(•) root
↳ left = Solve(root->left); //Trav

```
↳ right = solve (root→right) ; //Trust
```

(•)

```
result = max (result, left+right) ;
```

```
return max (l,r) + 1 ;
```

(•)

T.C :- $O(n)$

S.C :- Auxi space → $O(1)$

Recursion → O(depth tree)