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Description

Solution

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1367. Linked List in Binary Tree

Medium 1421 48 Add to List Share

Given a binary tree `root` and a linked list with `head` as the first node.

Return `True` if all the elements in the linked list starting from the `head` correspond to some *downward path* connected in the binary tree otherwise return `False`.

In this context downward path means a path that starts at some node and goes downwards.

Example 1:

```
graph TD
    1((1)) --> 4L((4))
    1 --> 4R((4))
    4L --> 2L((2))
    4L --> 2R((2))
    2L --> 1L((1))
    2R --> 6((6))
    2R --> 8((8))
    8 --> 1R((1))
    8 --> 3((3))
    style 4L fill:#add8e6
    style 2L fill:#add8e6
    style 2R fill:#add8e6
    style 8 fill:#add8e6
```

Input: `head = [4,2,8]`, `root = [1,4,4,null,2,2,null,1,null,6,8,null,null,null,1,3]`

Output: `true`

Explanation: Nodes in blue form a subpath in the binary Tree.

Example 2:

```
graph TD
    1((1)) --> 4L((4))
    1 --> 4R((4))
    4L --> 2L((2))
    4L --> 2R((2))
    2L --> 1L((1))
    2R --> 6((6))
    2R --> 8((8))
    8 --> 1R((1))
    8 --> 3((3))
    style 1 fill:#add8e6
    style 4L fill:#add8e6
    style 2L fill:#add8e6
    style 6 fill:#add8e6
```

Input: `head = [1,4,2,6]`, `root = [1,4,4,null,2,2,null,1,null,6,8,null,null,null,1,3]`

Output: `true`

Example 3:

Input: `head = [1,4,2,6,8]`, `root = [1,4,4,null,2,2,null,1,null,6,8,null,null,null,1,3]`

Output: `false`

Explanation: There is no path in the binary tree that contains all the elements of the linked list from head.

Constraints:

- The number of nodes in the tree will be in the range `[1, 2500]`.
- The number of nodes in the list will be in the range `[1, 100]`.
- `1 <= Node.val <= 100` for each node in the linked list and binary tree.

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```
/**
 * Definition for singly-linked list.
 * public class ListNode {
 *     int val;
 *     ListNode next;
 *     ListNode() {}
 *     ListNode(int val) { this.val = val; }
 *     ListNode(int val, ListNode next) { this.val = val; this.next = next; }
 * }
 */
/**
 * Definition for a binary tree node.
 * public class TreeNode {
 *     int val;
 *     TreeNode left;
 *     TreeNode right;
 *     TreeNode() {}
 *     TreeNode(int val) { this.val = val; }
 *     TreeNode(int val, TreeNode left, TreeNode right) {
 *         this.val = val;
 *         this.left = left;
 *         this.right = right;
 *     }
 * }
 */
class Solution {
    public boolean isSubPath(ListNode head, TreeNode root) {
    }
}
```

Console

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Run Code ^

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