題目

1. 相同的二元樹

題目描述

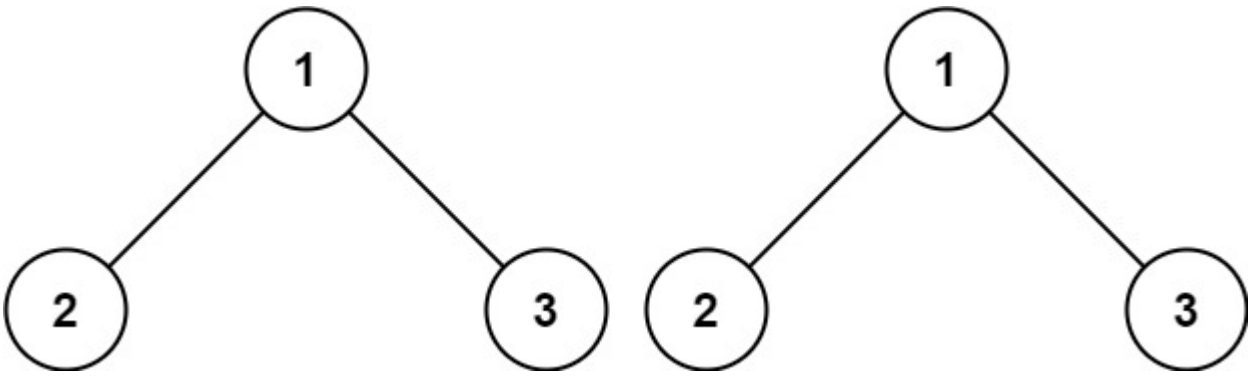
給定兩棵二元樹的根節點 `p` 和 `q`，請撰寫一個函式判斷它們是否相同。

當以下兩個條件同時成立時，兩棵樹被認為是「相同」的：

1. 結構完全相同（節點的排列方式一致）。
2. 對應位置的每個節點數值都相同。

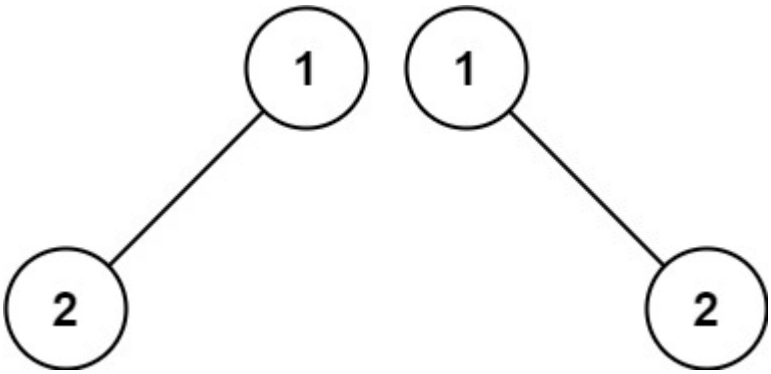
```
# Definition for a binary tree node.
# class TreeNode:
#     def __init__(self, val=0, left=None, right=None):
#         self.val = val
#         self.left = left
#         self.right = right
class Solution:
    def isSameTree(self, p: Optional[TreeNode], q: Optional[TreeNode]) -> bool:
```

Example 1:



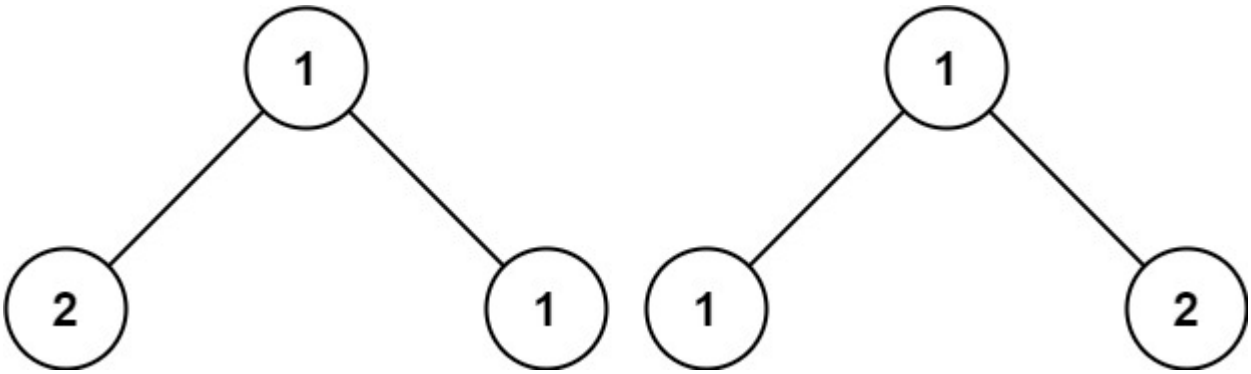
```
Input: p = [1,2,3], q = [1,2,3]
Output: true
```

Example 2:




```
Input: p = [1,2], q = [1,null,2]
Output: false
```

Example 3:




```
Input: p = [1,2,1], q = [1,1,2]
Output: false
```

2.對稱二元樹

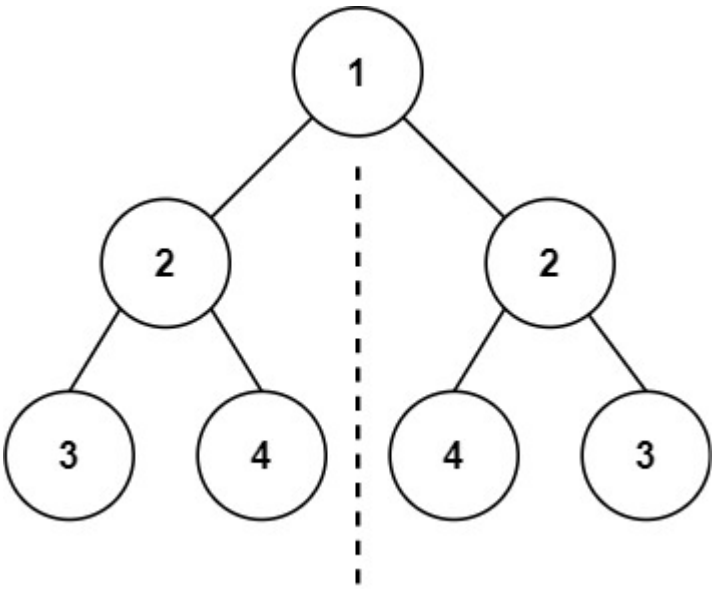
給定一棵二元樹的根節點 `root`，請判斷這棵樹是否「對稱」——

也就是說，它是否是**自身的鏡像（mirror）**。

換句話說，若從樹的中心往兩邊看，左子樹與右子樹的結構與節點值都完全對稱，則回傳 `true`；否則回傳 `false`。

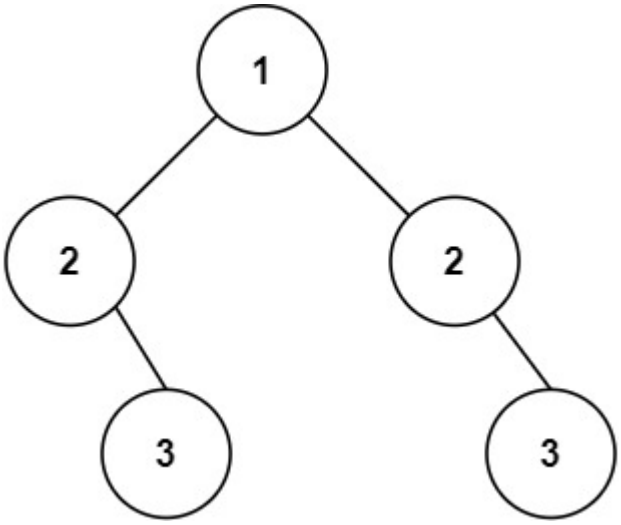
```
# Definition for a binary tree node.
# class TreeNode:
#     def __init__(self, val=0, left=None, right=None):
#         self.val = val
#         self.left = left
#         self.right = right
class Solution:
    def isSymmetric(self, root: Optional[TreeNode]) -> bool:
```

Example 1:




```
Input: root = [1,2,2,3,4,4,3]
Output: true
```

Example 2:



Input: root = [1,2,2,null,3,null,3]
Output: false