1650 - Lowest Common Ancestor of a Binary Tree III

Description

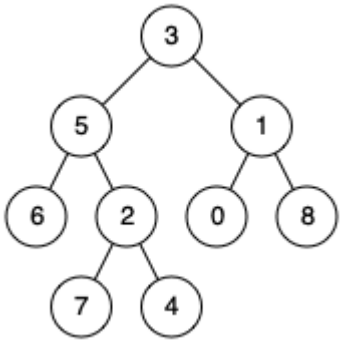
Given the root and two nodes in a Binary Tree. Find the lowest common ancestor(LCA) of the two nodes.

The nearest common ancestor of two nodes refers to the nearest common node among all the parent nodes of two nodes (including the two nodes).

In addition to the left and right son pointers, each node also contains a father pointer, parent, pointing to its own father.

Example

Example 1:



Input: root = [3,5,1,6,2,0,8,null,null,7,4], p = 5, q = 1

Output: 3

Example 2:

Input: root = [3,5,1,6,2,0,8,null,null,7,4], p = 5, q = 4

Output: 5

```
def lowestCommonAncestorII(self, root, A, B):
        # write your code here
        ancestors = set()
        temp = A
        while temp:
```

```
            ancestors.add(temp)
            temp = temp.parent
        temp = B
        while temp:
            if temp in ancestors:
                return temp
            else:
                temp = temp.parent
```