Lowest Common Ancestor

Given the root node of a binary tree and two distinct values, find the lowest common ancestor.  
  
Input: Root Node, Two Integer Values   
Output: Integer Value of Lowest Common Ancestor

# Example

Input: root, 4, 9 => Output: 7

# Constraints

Time Complexity: O(N)  
Auxiliary Space Complexity: O(N)  
  
Integer values of nodes are all distinct.

# Solution

1. Perform a tree traversal to find/collect the path to the first node.
   1. Place values of the path into an array (e.g., [5, 7, 4])
2. Perform a tree traversal to find/collect the path to the second node.
   1. Place values of the path into second array (e.g., [5, 7, 8, 9])
3. Iterate through both path arrays and compare the values.
4. Return the last matching value. (e.g., return 7)

# Notes

Facebook technical screen problem

# Resources

http://www.geeksforgeeks.org/lowest-common-ancestor-binary-tree-set-1/