Invert a Binary Tree

Given a binary tree root node, invert the binary tree (mirror) and return back the root node.  
  
Input: Node in a Binary Tree  
Output: Node in a Binary Tree

# Example

Input: Output:

# 

# Constraints

Time Complexity: O(N)  
Auxiliary Space Complexity: O(N)

The binary tree node has the following properties:

value : an integer  
leftChild : default null  
rightChild : default null

Must swap the entire node instances, not just the value

# Solution

1. Use recursion to solve this problem, our only input is ‘node’
2. For the base case if input ‘node’ is null, return ‘node’
3. Otherwise swap the leftChild and rightChild. Use a temp variable if necessary
4. Call the function recursively on both the leftChild and rightChild
5. Finally return the input ‘node’

# Notes

The creator of homebrew couldn’t solve this problem on a Google Interview  
<https://twitter.com/mxcl/status/608682016205344768>

# Resources

https://leetcode.com/problems/invert-binary-tree/