```
/*
// Definition for a Node.
class Node {
    public int val;
    public Node left;
    public Node right;
    public Node next;

    public Node() {}

    public Node(int _val,Node _left,Node _right,Node _next) {
        val = _val;
        left = _left;
        right = _right;
        next = _next;
    }
};
*/
class Solution {
    public Node connect(Node root) {
        Node itr = root;
        while (itr != null) {
            Node node = itr;
            while (node != null) {
                if (node.left != null) {
                    node.left.next = node.right;
                }
                if (node.right != null && node.next != null) {
                    node.right.next = node.next.left;
                }
                node = node.next;
            }
            itr = itr.left;
        }
        return root;
    }
}
```