237 Delete Node in a Linked List

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Question:

Write a function to delete a node (except the tail) in a singly linked list, given only access to that node.
Supposed the linked list is 1 -> 2 -> 3 -> 4 and you are given the third node with value 3, the linked list should become 1 -> 2 -> 4 after calling your function.

来自 <https://leetcode.com/problems/delete-node-in-a-linked-list/description/>

编写一个函数，在给定单链表一个结点(非尾结点)的情况下，删除该结点。
假设该链表为1 -> 2 -> 3 -> 4 并且给定你链表中第三个值为3的节点，在调用你的函数后，该链表应变为1 -> 2 -> 4。

Solution for Python3:

```python
class Solution(object):
    def deleteNode(self, node):
        """
        :type node: ListNode
        :rtype: void Do not return anything, modify node in-place instead.
        """
        node.val = node.next.val
        node.next = node.next.next
```

Solution for C++:

```cpp
/**
 * Definition for singly-linked list.
 * struct ListNode {
 *     int val;
 *     ListNode *next;
 *     ListNode(int x) : val(x), next(NULL) {}
 * };
 */

class Solution1 {
public:
    void deleteNode(ListNode* node) {
        *node = *node->next;
    }
};

class Solution2 {
public:
    void deleteNode(ListNode* node) {
        auto next = node->next;
        *node = *next;
        delete next;
    }
};
```

Appendix:

C++ *node = *node->next 复制所有值

1) node->val = node->next->val
2) node->next = node->next->next