092. Reverse Linked List II

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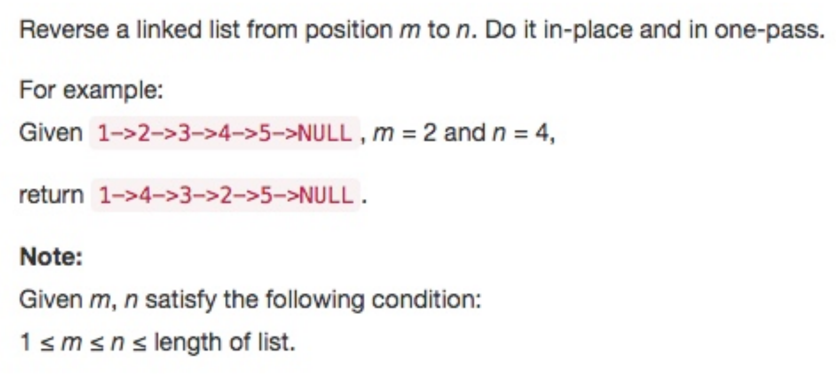
- Linked List

Description



Reverse a linked list from position *m* to *n*. Do it in-place and in one-pass.

For example:
Given `1->2->3->4->5->NULL`, *m* = 2 and *n* = 4,

return `1->4->3->2->5->NULL`.

Note:
Given *m*, *n* satisfy the following condition:
1 ≤ *m* ≤ *n* ≤ length of list.

1. Thought line

2. Linked List

```
/**
 * Definition for singly-linked list.
 * struct ListNode {
 *     int val;
 *     ListNode *next;
 *     ListNode(int x) : val(x), next(NULL) {}
 * };
 */
class Solution {
public:
    ListNode* reverseBetween(ListNode* head, int m, int n) {
        ListNode* dummyHead = new ListNode(0);
        dummyHead->next = head;
        unsigned int size = 0;
        ListNode* ptr = dummyHead->next;
        ListNode* ptr_st = dummyHead;
        ListNode* ptr_ed = dummyHead->next;

        while(ptr!=nullptr){
            ++size;
            ListNode* ptr_next = ptr->next;
            if(size<=m){
                ptr_st = (size<m)?ptr_st->next:ptr_st;
                ptr_ed = (size<m)?ptr_ed->next:ptr_ed;
            }
            else if (size>m && size<=n){
                ListNode* ptr_st_next = ptr_st->next;
                ptr_st->next = new ListNode(ptr->val);
                ptr_st->next->next = ptr_st_next;
                ptr_ed->next = ptr->next;
            }else
```

```
                break;
            ptr = ptr_next;

        }
        return dummyHead->next;
    }
};
```