166. Nth to Last Node in List

* [Description](http://www.lintcode.com/en/problem/nth-to-last-node-in-list/" \l "description)
* [Notes](http://www.lintcode.com/en/problem/nth-to-last-node-in-list/#note)
* [Testcase](http://www.lintcode.com/en/problem/nth-to-last-node-in-list/#testcase)
* [Judge](http://www.lintcode.com/en/problem/nth-to-last-node-in-list/#judge)

Find the nth to last element of a singly linked list.

The minimum number of nodes in list is n.

Have you met this question in a real interview?

Yes

**Example**

Given a List  3->2->1->5->null and n = 2, return node  whose value is 1.

<http://www.lintcode.com/en/problem/nth-to-last-node-in-list/#>

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*\*/*

**package** javaapplication7;

***/\*\****

***\****

***\* @author Usuario***

***\*/***

**public** **class** JavaApplication7 {

***/\*\****

***\* @param args the command line arguments***

***\*/***

**static** ListNode reverse(ListNode node) {

        ListNode prev = **null**;

        ListNode current = node;

        ListNode next = **null**;

**while** (current != **null**) {

            next = current.next;

            current.next = prev;

            prev = current;

            current = next;

        }

        node = prev;

**return** node;

    }

**public** **static** ListNode nthToLast(ListNode head, **int** n) {

*// write your code here*

        ListNode rev = reverse(head);

**int** i = 1;

        ListNode temp = rev;

**for**( ;i < n && temp != **null**; temp = temp.next) {

            i++;

        }

**return** temp;

     }

**public** **static** **void** main(String[] args) {

*// TODO code application logic here*

        ListNode lista = **new** ListNode(3);

        lista.next = **new** ListNode(2);

        lista.next.next = **new** ListNode(1);

        lista.next.next.next = **new** ListNode(5);

        lista.next.next.next.next = **null**;

**for**(ListNode temp = lista ; temp != **null**; temp = temp.next) {

            System.out.println(temp.val + " ");

        }

        System.out.println("**\n**");

        System.out.println(nthToLast(lista, 2).val);

    }

**static** **class** ListNode {

**int** val;

        ListNode next;

        ListNode(**int** val) {

**this**.val = val;

**this**.next = **null**;

        }

     }

}