

算法设计上机题

- 1、 Given a linked list, return the node where the cycle begins. If there is no cycle, return null.

Note: Do not modify the linked list.

Follow up:

Can you solve it without using extra space?

- 2、 Given a singly linked list, group all odd nodes together followed by the even nodes. Please note here we are talking about the node number and not the value in the nodes.

You should try to do it in place. The program should run in $O(1)$ space complexity and $O(\text{nodes})$ time complexity.

Example 1:

Input: 1->2->3->4->5->NULL

Output: 1->3->5->2->4->NULL

Example 2:

Input: 2->1->3->5->6->4->7->NULL

Output: 2->3->6->7->1->5->4->NULL