

# No memory leaks

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/*
Sorting+Binary search (No memory leaks)
Use dummy node to make a unified pattern to all nodes

Time complexity: O(nlogn)
Space complexity: O(logn)
*/
typedef std::vector<int> vi;
class Solution {
public:
    ListNode* modifiedList(vi& nums, ListNode* head){
        std::sort(nums.begin(), nums.end());

        ListNode* dummy=new ListNode(0, head);
        ListNode* fast=head;
        ListNode* slow=dummy;
        ListNode* to_delete=nullptr;

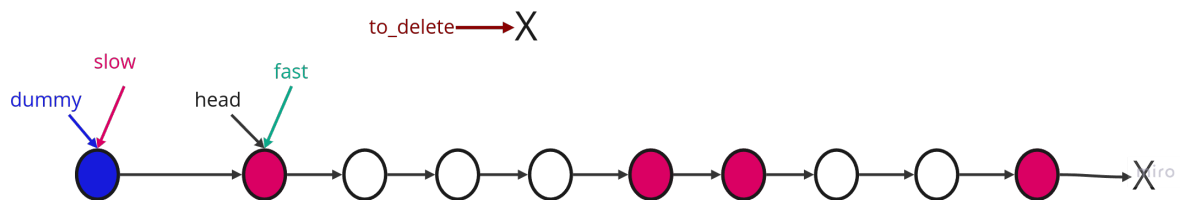
        while(fast){
            if(std::binary_search(nums.begin(), nums.end(), fast->val)){
                slow->next=fast->next;
                to_delete=fast;
            }
            else slow=fast;

            fast=fast->next;
            delete to_delete;
            to_delete=nullptr;
        }

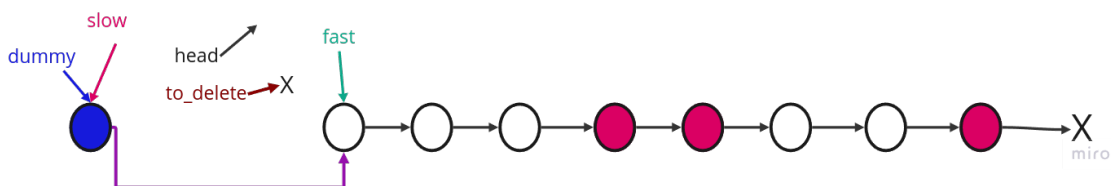
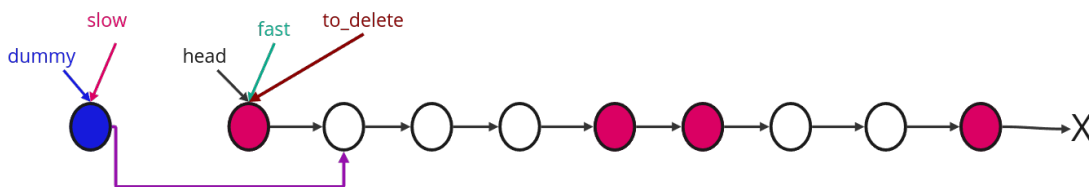
        head=fast=slow=to_delete=nullptr;

        return dummy->next;
    }
};

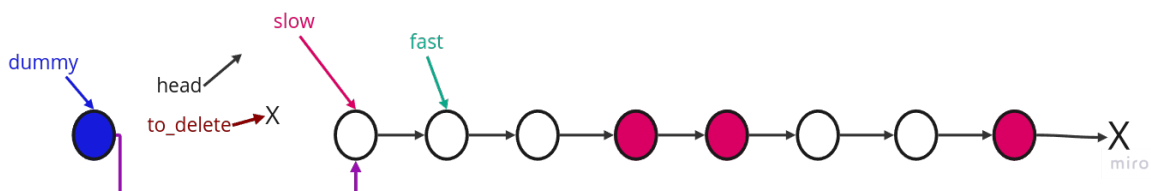
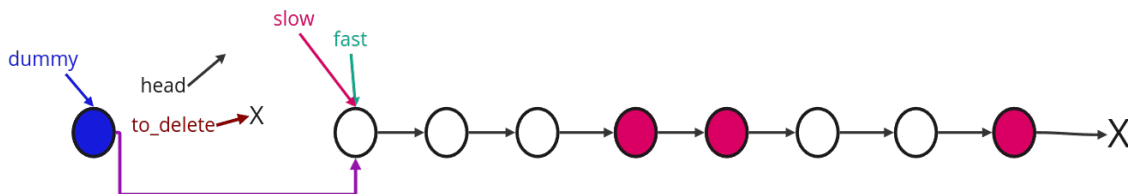
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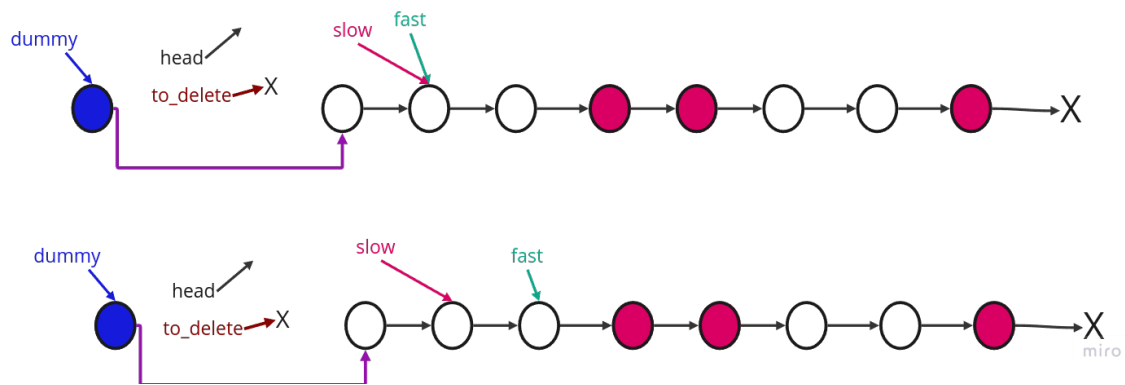
fast points to the node to delete:



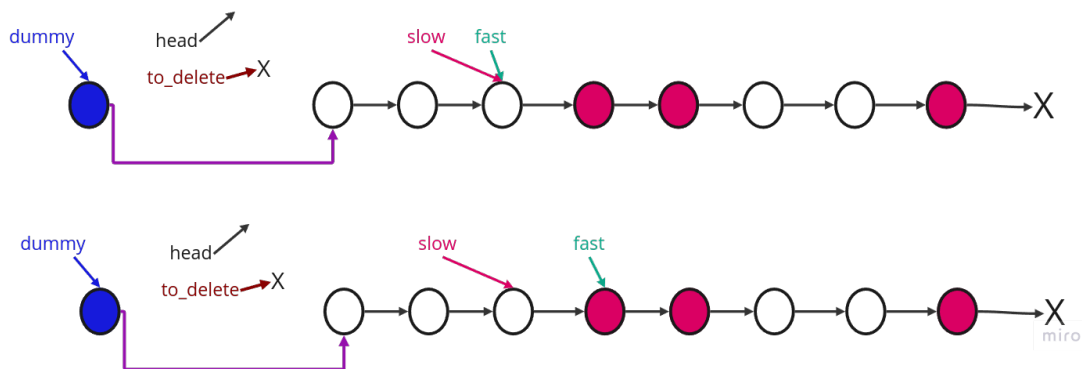
fast does not point to the node to delete:



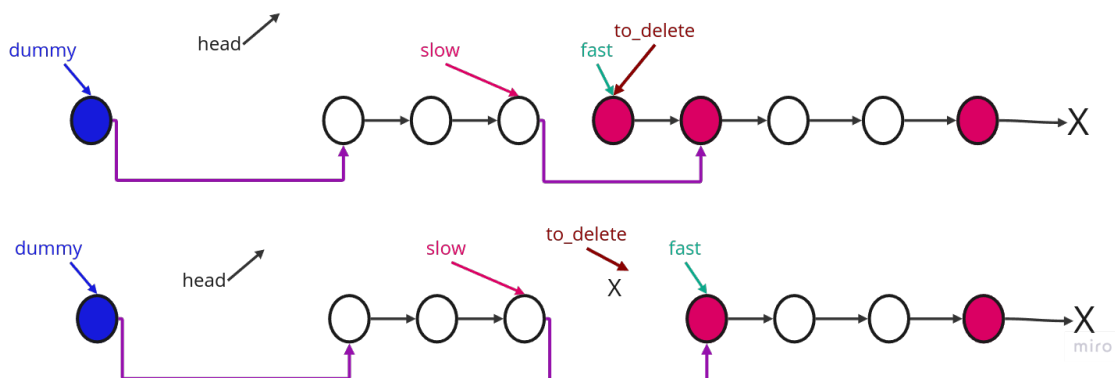
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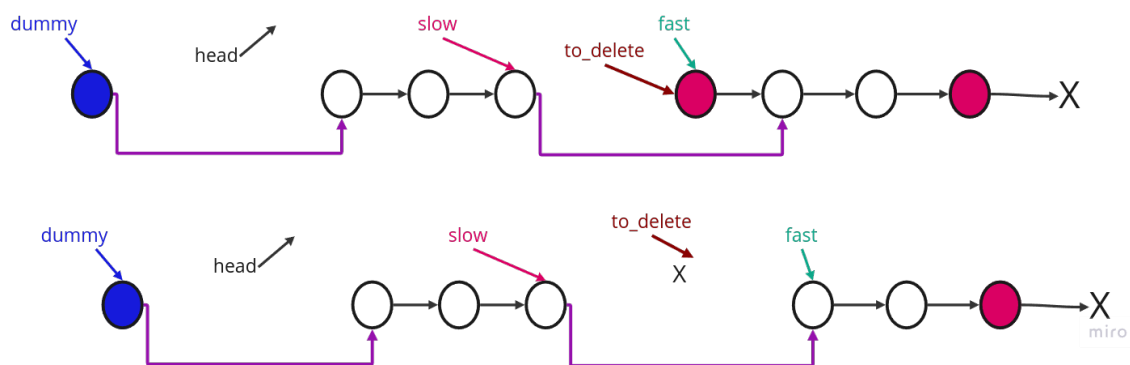
fast does not point to the node to delete:



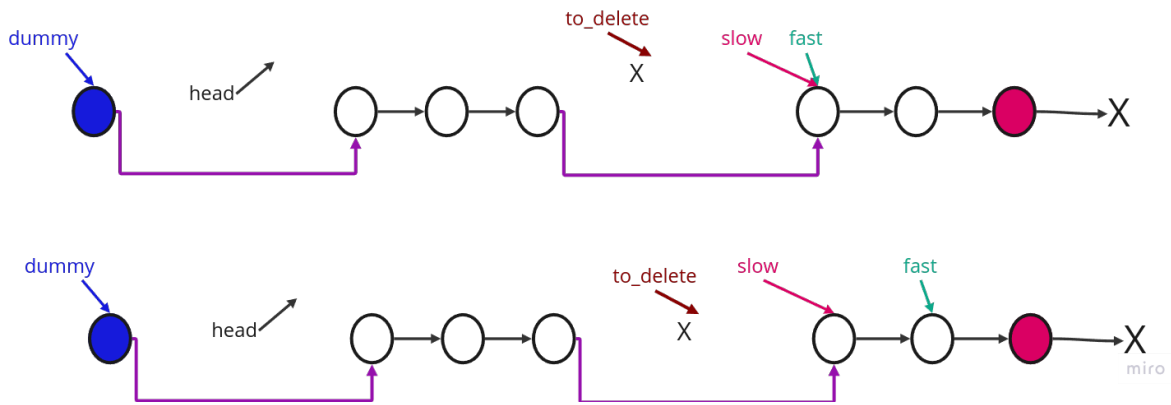
fast points to the node to delete:



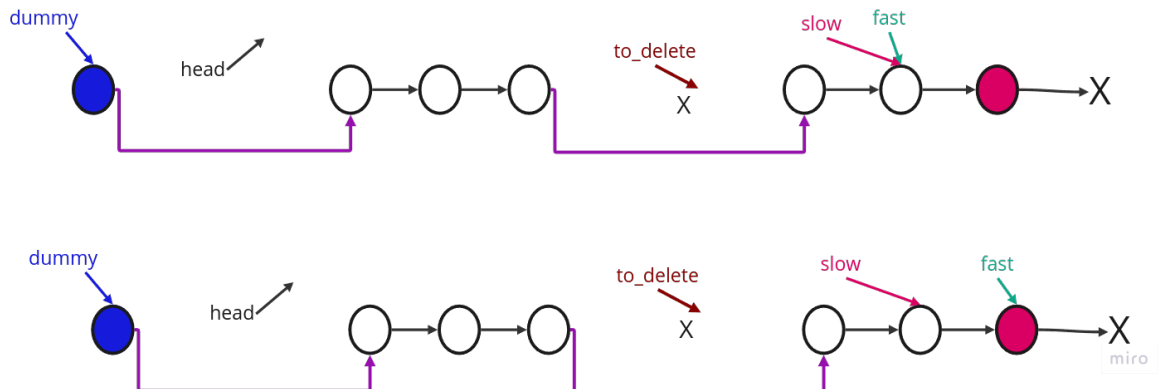
fast points to the node to delete:



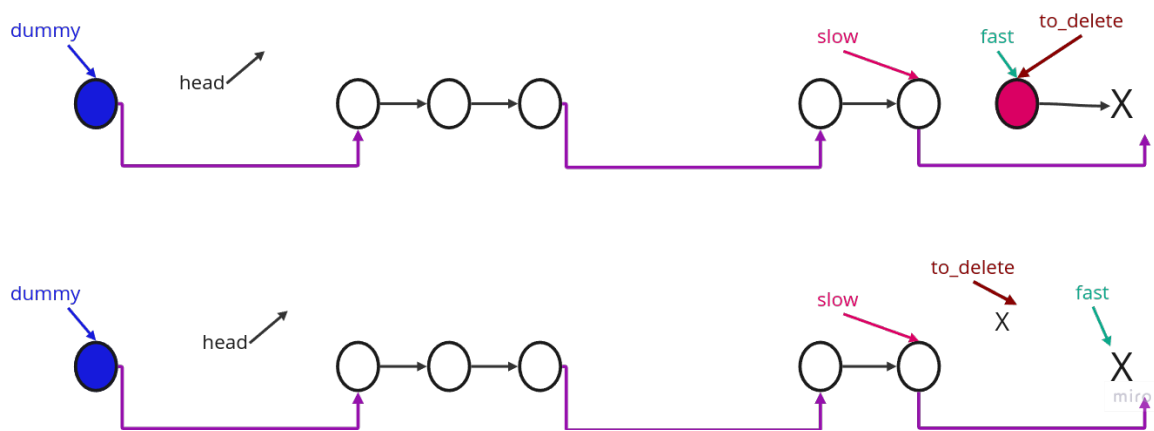
fast does not point to the node to delete:



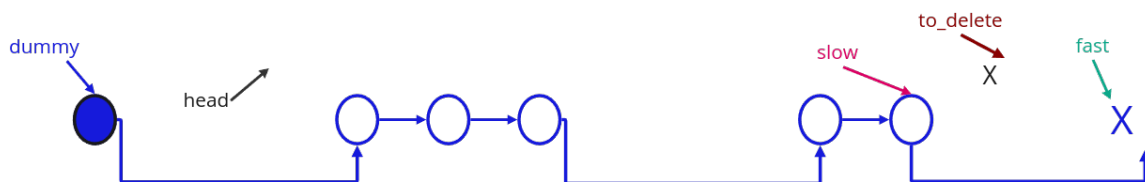
fast does not point to the node to delete:



fast points to the node to delete:



At end the we get:



points all used pointers to null

