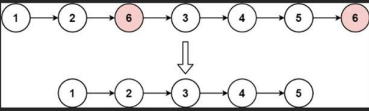


203. Remove Linked List Elements

Solved

EasyTopicsCompanies

Given the head of a linked list and an integer val, remove all the nodes of the linked list that has Node.val == val, and return the new head.

Example 1:  
  
Input: head = [1,2,6,3,4,5,6], val = 6  
Output: [1,2,3,4,5]  
Example 2:  
Input: head = [], val = 1  
Output: []  
Example 3:  
Input: head = [7,7,7,7,7], val = 7  
Output: []

Code

```
1  /**
2   * Definition for singly-linked list.
3   * struct ListNode {
4   *     int val;
5   *     struct ListNode *next;
6   * };
7   */
8   struct ListNode* removeElements(struct ListNode* head, int val) {
9       while (head != NULL && head->val == val) {
10          struct ListNode* temp = head;
11          head = head->next;
12          free(temp);
13      }
14
15      struct ListNode* current = head;
16      while (current != NULL && current->next != NULL) {
17          if (current->next->val == val) {
18              struct ListNode* temp = current->next;
19              current->next = current->next->next;
20              free(temp);
21          } else {
22              current = current->next;
23          }
24      }
25
26      return head;
27  }
```

SavedLn 28, Col 2

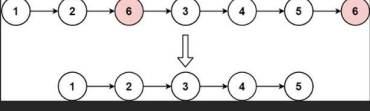
61 Online

203. Remove Linked List Elements

Solved

EasyTopicsCompanies

Given the head of a linked list and an integer val, remove all the nodes of the linked list that has Node.val == val, and return the new head.

Example 1:  
  
Input: head = [1,2,6,3,4,5,6], val = 6  
Output: [1,2,3,4,5]  
Example 2:  
Input: head = [], val = 1  
Output: []  
Example 3:  
Input: head = [7,7,7,7,7], val = 7  
Output: []

Code

TestcaseTest Result

AcceptedRuntime: 0 ms

Case 1Case 2Case 3

Input  
head =  
[1,2,6,3,4,5,6]  
  
val =  
6  
  
Output  
[1,2,3,4,5]  
  
Expected  
[1,2,3,4,5]

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148. Sort List

Medium

Given the `head` of a linked list, return the list after sorting it in *ascending order*.

Example 1:

Input: `head = [4,2,1,3]`  
Output: `[1,2,3,4]`

Example 2:

Input: `head = [-1,5,3,4,0]`  
Output: `[-1,3,4,5,0]`

```
struct ListNode* merge(struct ListNode* l1, struct ListNode* l2) {
    if (l1 == NULL) return l2;
    if (l2 == NULL) return l1;

    struct ListNode* head = NULL;
    struct ListNode* tail = NULL;

    while (l1 && l2) {
        struct ListNode* temp = NULL;
        if (l1->val < l2->val) {
            temp = l1;
            l1 = l1->next;
        } else {
            temp = l2;
            l2 = l2->next;
        }

        if (!head) {
            head = tail = temp;
        } else {
            tail->next = temp;
            tail = temp;
        }
    }

    if (l1) tail->next = l1;
    if (l2) tail->next = l2;

    return head;
}
```

148. Sort List

Medium

Given the `head` of a linked list, return the list after sorting it in *ascending order*.

Example 1:

Input: `head = [4,2,1,3]`  
Output: `[1,2,3,4]`

Example 2:

Input: `head = [-1,5,3,4,0]`  
Output: `[-1,3,4,5,0]`

```
struct ListNode* sortList(struct ListNode* head) {
    if (head == NULL || head->next == NULL)
        return head;

    struct ListNode* slow = head;
    struct ListNode* fast = head;
    struct ListNode* prev = NULL;

    while (fast && fast->next) {
        prev = slow;
        slow = slow->next;
        fast = fast->next->next;
    }

    prev->next = NULL;

    struct ListNode* left = sortList(head);
    struct ListNode* right = sortList(slow);

    return merge(left, right);
}
```

148. Sort List

Medium Topics Companies

Given the `head` of a linked list, return the list after sorting it in *ascending order*.

Example 1:

Input: `head = [4,2,1,3]`  
Output: `[1,2,3,4]`

Example 2:

Input: `head = [-1,5,3,4,0]`  
Output: `[-1,3,4,5,0]`

106 Online

Code

```
C Auto
35
36 return head;
37 }
38
```

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head =  
[4,2,1,3]

Output

[1,2,3,4]

Expected

[1,2,3,4]

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206. Reverse Linked List

Easy Topics Companies

Given the `head` of a singly linked list, reverse the list, and return the reversed list.

Example 1:

Input: `head = [1,2,3,4,5]`  
Output: `[5,4,3,2,1]`

Example 2:

Input: `head = [1,2]`  
Output: `[2,1]`

304 Online

Code

```
C Auto
8 struct ListNode* reverseList(struct ListNode* head) {
9     struct ListNode* prev = NULL;
10    struct ListNode* curr = head;
11
12    while (curr != NULL) {
13        struct ListNode* next_temp = curr->next;
14        curr->next = prev;
15        prev = curr;
16        curr = next_temp;
17    }
18    return prev;
19}
```

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head =  
[1,2,3,4,5]

Output

[5,4,3,2,1]

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21. Merge Two Sorted Lists

Easy

Topics

Companies

You are given the heads of two sorted linked lists `list1` and `list2`.

Merge the two lists into one **sorted** list. The list should be made by splicing together the nodes of the first two lists.

Return the head of the merged linked list.

**Example 1:**

**Input:** list1 = [1,2,4], list2 = [1,3,4]

24.4K 554 420 Online

Code

```
8 struct ListNode* mergeTwoLists(struct ListNode* list1, struct ListNode* list2) {
9     struct ListNode* tail = &list;
10    struct ListNode* tail = &list;
11
12    while (list1 != NULL && list2 != NULL) {
13        if (list1->val <= list2->val) {
14            tail->next = list1;
15            list1 = list1->next;
16        } else {
17            tail->next = list2;
18            list2 = list2->next;
19        }
20        tail = tail->next;
21    }
22    tail->next = (list1 != NULL) ? list1 : list2;
23    return list->next;
24 }
```

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

list1 = [1,2,4]

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141. Linked List Cycle

Easy

Topics

Companies

Given `head`, the head of a linked list, determine if the linked list has a cycle in it.

There is a cycle in a linked list if there is some node in the list that can be reached again by continuously following the `next` pointer. Internally, `pos` is used to denote the index of the node that tail's `next` pointer is connected to. **Note that `pos` is not passed as a parameter.**

Return `true` if there is a cycle in the linked list. Otherwise, return `false`.

**Example 1:**

**Input:** head = [3,2,0,-4], pos = 1  
**Output:** true  
**Explanation:** There is a cycle in the linked list, where the tail connects to the 1st node (0-indexed).

**Example 2:**

17.2K 474 205 Online

Code

```
6 *
7 */
8 bool hasCycle(struct ListNode *head) {
9     struct ListNode *slow = head;
10    struct ListNode *fast = head;
11
12    while (fast != NULL && fast->next != NULL) {
13        slow = slow->next;
14        fast = fast->next->next;
15        if (slow == fast) {
16            return true;
17        }
18    }
19    return false;
20 }
```

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

head = [3,2,0,-4]

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142. Linked List Cycle II

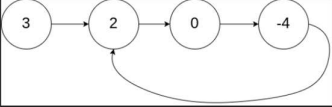
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Given the `head` of a linked list, return the node where the cycle begins. If there is no cycle, return `null`.

There is a cycle in a linked list if there is some node in the list that can be reached again by continuously following the `next` pointer. Internally, `pos` is used to denote the index of the node that tail's `next` pointer is connected to (0-indexed). It is `-1` if there is no cycle. **Note that `pos` is not passed as a parameter.**

Do not modify the linked list.

**Example 1:**



```
graph LR; 3((3)) --> 2((2)); 2 --> 0((0)); 0 --> -4((-4)); -4 --> 2;
```

**Input:** `head = [3,2,0,-4], pos = 1`  
**Output:** tail connects to node index 1  
**Explanation:** There is a cycle in the linked list, where tail

14.9K238100 Online

Code

```
16         break;
17     }
18 }
19
20 if (fast == NULL || fast->next == NULL) {
21     return NULL;
22 }
23
24 slow = head;
25 while (slow != fast) {
26     slow = slow->next;
27     fast = fast->next;
28 }
29
30 return slow;
31 }
```

Saved

TestcaseTest Result

AcceptedRuntime: 0 ms

Case 1Case 2Case 3

Input

head = [3,2,0,-4]

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