

geeksforgeeks.org/problems/print-linked-list-elements/0

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ProblemEditorialSubmissionsComments

Output Window

Compilation ResultsCustom InputY.O.G.I. (AI Bot)

Problem Solved Successfully

Test Cases Passed

1112 / 1112

Attempts : Correct / Total

2 / 2

Accuracy : 100%

Time Taken

0.08

You get marks only for the first correct submission if you solve the problem without viewing the full solution.

Solve Next

Count Linked List NodesDelete Alternate NodesInsert in Middle of Linked List

C++ (g++ 5.4)

Start Timer

```
1 // } Driver Code Ends
19
20 class Solution {
21 public:
22 void printList(Node *head) {
23     Node* temp = head;
24     while (temp != nullptr) {
25         cout << temp->data << " ";
26         temp = temp->next;
27     }
28 }
29 };
30
31 // } Driver Code Ends
```

Custom InputCompile & RunSubmit

Type here to search

Stock market update...10:28 PM 3/6/2025

Remove Duplicates from Sorted List

Accepted 168 / 168 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:31

Runtime: 0 ms | Beats 100.00% | Memory: 16.16 MB | Beats 67.73%

Editorial Solution

```
class Solution {
public:
    ListNode* deleteDuplicates(ListNode* head) {
        if (head == nullptr) return head; // If list is empty, return NULL

        ListNode* current = head;

        while (current != nullptr && current->next != nullptr) {
            if (current->val == current->next->val) {
                // Skip duplicate node
                current->next = current->next->next;
            } else {
                // Move to next distinct node
                current = current->next;
            }
        }

        return head;
    }
};
```

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2

Input

head =

Reverse Linked List - LeetCode

Accepted 28 / 28 testcases passed

Runtime: 0 ms | Beats 100.00% | Memory: 13.46 MB | Beats 39.75%

Editorial Solution

```
class Solution {
public:
    ListNode* reverseList(ListNode* head) {
        ListNode* prev = nullptr;
        ListNode* current = head;
        ListNode* next = nullptr;

        while (current != nullptr) {
            next = current->next; // Store next node
            current->next = prev; // Reverse the link
            prev = current; // Move prev forward
            current = next; // Move current forward
        }

        return prev; // Now head of the reversed list
    }
};
```

Testcase Test Result

Accepted Runtime: 0 ms

Case 1 Case 2 Case 3

Input

Output

leetcode.com/problems/delete-the-middle-node-of-a-linked-list/submissions/1565106071/

Problem List Run Submit

Description Accepted Editorial Solutions Submissions

All Submissions

Accepted 70 / 70 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:33

Editorial Solution

Runtime 3 ms | Beats 45.30%

Memory 312.08 MB | Beats 55.26%

Analyze Complexity

Runtime (ms)	Percentage
1ms	40%
2ms	0%
3ms	0%
4ms	20%
5ms	0%
6ms	0%
7ms	0%

Code C++

```
class Solution {
public:
    ListNode* deleteMiddle(ListNode* head) {
        if(head==nullptr||head->next==nullptr) {
            return nullptr;
        }
        ListNode* temp=head;
        int length=0;
        while (temp!=nullptr) {
            length++;
            temp=temp->next;
        }
        int middleIndex=length/2;
        temp=head;
        for (int i=0; i < middleIndex - 1; i++) {
            temp = temp->next;
        }
        temp->next = temp->next->next;
        return head;
    }
}
```

Testcase Test Result

Case 1 Case 2 Case 3

head =

[1,3,4,7,1,2,6]

Source

Air: Moderate 10:33 PM 3/6/2025

leetcode.com/problems/merge-two-sorted-lists/submissions/1565107811/

Problem List Run Submit

Description Accepted Editorial Solutions Submissions

All Submissions

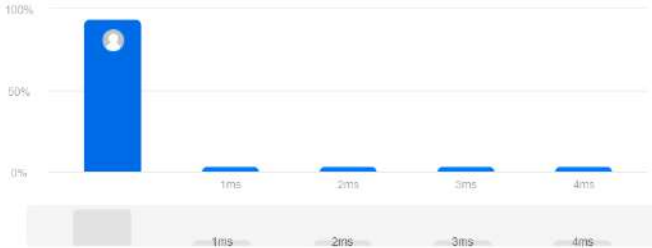
Accepted 208 / 208 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:35

Editorial Solution

Runtime 0 ms | Beats 100.00% Memory 19.62 MB | Beats 10.44%

Analyze Complexity



Code C++

```
class Solution {
public:
    ListNode* mergeTwoLists(ListNode* list1, ListNode* list2) {
        ListNode dummy(0); // Dummy node as placeholder
        ListNode* tail = &dummy; // Pointer to track last node

        while (list1 != nullptr && list2 != nullptr) {
            if (list1->val <= list2->val) {
                tail->next = list1;
                list1 = list1->next;
            } else {
                tail->next = list2;
                list2 = list2->next;
            }
            tail = tail->next; // Move tail forward
        }

        // Attach remaining elements (if any)
        if (list1 != nullptr) tail->next = list1;
        if (list2 != nullptr) tail->next = list2;

        return dummy.next; // Return merged list head
    }
};
```

Saved In 25, Col 1

Testcase Test Result

Accepted Runtime: 0 ms

Type here to search Air: Moderate 10:35 PM 3/6/2025

leetcod.com/problems/linked-list-cycle/submissions/1565109624/

Problem List Run Submit

Description Accepted Editorial Solutions Submissions


All Submissions

Accepted 29 / 29 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:36

Runtime 4 ms | Beats 97.47% Memory 11.91 MB | Beats 24.19%

Analyze Complexity



Code C++

```
class Solution {
public:
    bool hasCycle(ListNode *head) {
        ListNode* slow = head;
        ListNode* fast = head;

        while (fast != nullptr && fast->next != nullptr) {
            slow = slow->next; // Move slow by 1 step
            fast = fast->next->next; // Move fast by 2 steps

            if (slow == fast) return true; // Cycle detected
        }

        return false; // No cycle
    }
};
```

Saved

Testcase Test Result

Accepted Runtime: 3 ms

Type here to search

10:37 PM 3/6/2025

Rotating a linked list by k places is a common problem in data structures. The goal is to move the last k nodes of the list to the front. For example, if the list is 1 → 2 → 3 → 4 → 5 and k = 2, the result should be 4 → 5 → 1 → 2 → 3.

The solution involves four main steps:

- Find the length of the list:** Traverse the list to count the total number of nodes.
- Optimize k:** Since rotating by the length of the list results in the same list, we use  $k = k \% \text{length}$ .
- Find the new tail and new head:** The new tail is at  $\text{length} - k - 1$  and the new head is at  $\text{length} - k$ .
- Update pointers:** Break the list at the new tail, connect the new tail to the new head, and set the new head as the head of the list.

**Runtime Performance:** 0 ms | Beats 100.00% | Memory: 16.45 MB | Beats 31.91%

```
class Solution {
public:
    ListNode* rotateRight(ListNode* head, int k) {
        if (!head || !head->next || k == 0) return head; // Edge cases

        // Step 1: Find the length of the list
        int length = 1;
        ListNode* tail = head;
        while (tail->next) {
            tail = tail->next;
            length++;
        }

        // Step 2: Optimize k
        k = k % length;
        if (k == 0) return head; // No rotation needed

        // Step 3: Find the new tail (n - k - 1) and new head (n - k)
        ListNode* new_tail = head;
        for (int i = 0; i < length - k - 1; i++) {
            new_tail = new_tail->next;
        }

        // Step 4: Update pointers
        ListNode* new_head = new_tail->next;
        new_tail->next = nullptr; // Break the list
        tail->next = head; // Connect old tail to old head

        return new_head;
    }
};
```



leetcode.com/problems/sort-list/submissions/1565114889/

Problem List Run Submit

Description Accepted Editorial Solutions Submissions

All Submissions


Accepted 30 / 30 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:41

Editorial Solution

Runtime 10 ms Beats 87.60% Memory 57.16 MB Beats 81.38%

Analyze Complexity



Code C++

```
class Solution {
public:
    // Function to merge two sorted lists
    ListNode* merge(ListNode* l1, ListNode* l2) {
        ListNode dummy(0);
        ListNode* tail = &dummy;
```

Code

```
// Function to find the middle node
ListNode* findMid(ListNode* head) {
    ListNode* slow = head;
    ListNode* fast = head->next;

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

// Main function to sort the linked list
ListNode* sortList(ListNode* head) {
    if (!head || !head->next) return head; // Base case

    // Step 1: Find the middle and split the list
    ListNode* mid = findMid(head);
    ListNode* rightHead = mid->next;
    mid->next = nullptr; // Break the list into two halves

    // Step 2: Sort both halves recursively
    ListNode* left = sortList(head);
    ListNode* right = sortList(rightHead);

    // Step 3: Merge both sorted halves
    return merge(left, right);
}
```

Testcase Test Result

Air: Moderate 10:41 PM 3/6/2025



leetcod.com/problems/merge-k-sorted-lists/submissions/1565117562/

Problem List Run Submit

Description Accepted Editorial Solutions Submissions

All Submissions

Accepted 134 / 134 testcases passed

Gurvirsinghsekhon submitted at Mar 06, 2025 22:44

Runtime 3 ms | Beats 64.88% Memory 18.46 MB | Beats 66.07%

Analyze Complexity

75% 50% 25% 0%

1ms 26ms 50ms 75ms 100ms 125ms 150ms 175ms

Code C++

```
#include <queue>
class Solution {
public:
    struct Compare {
        bool operator()(ListNode* a, ListNode* b) {
            return a->val > b->val; // Min-Heap: smallest value has highest priority
        }
    };
    ListNode* mergeKLists(vector<ListNode*>& lists) {
        priority_queue<ListNode*, vector<ListNode*>, Compare> minHeap;
        // Step 1: Push the head of each list into the heap
        for (ListNode* list : lists) {
            if (list) minHeap.push(list);
        }
        ListNode dummy(0);
        ListNode* tail = &dummy;
        // Step 2: Extract the smallest node and push the next node from that list
        while (!minHeap.empty()) {
            ListNode* smallest = minHeap.top();
            minHeap.pop();

            tail->next = smallest;
            tail = tail->next;

            if (smallest->next) {
                minHeap.push(smallest->next);
            }
        }
        return dummy.next;
    }
};
```

Saved

Testcase Test Result

Ln 1, Col 17

Air: Moderate 10:44 PM 3/6/2025