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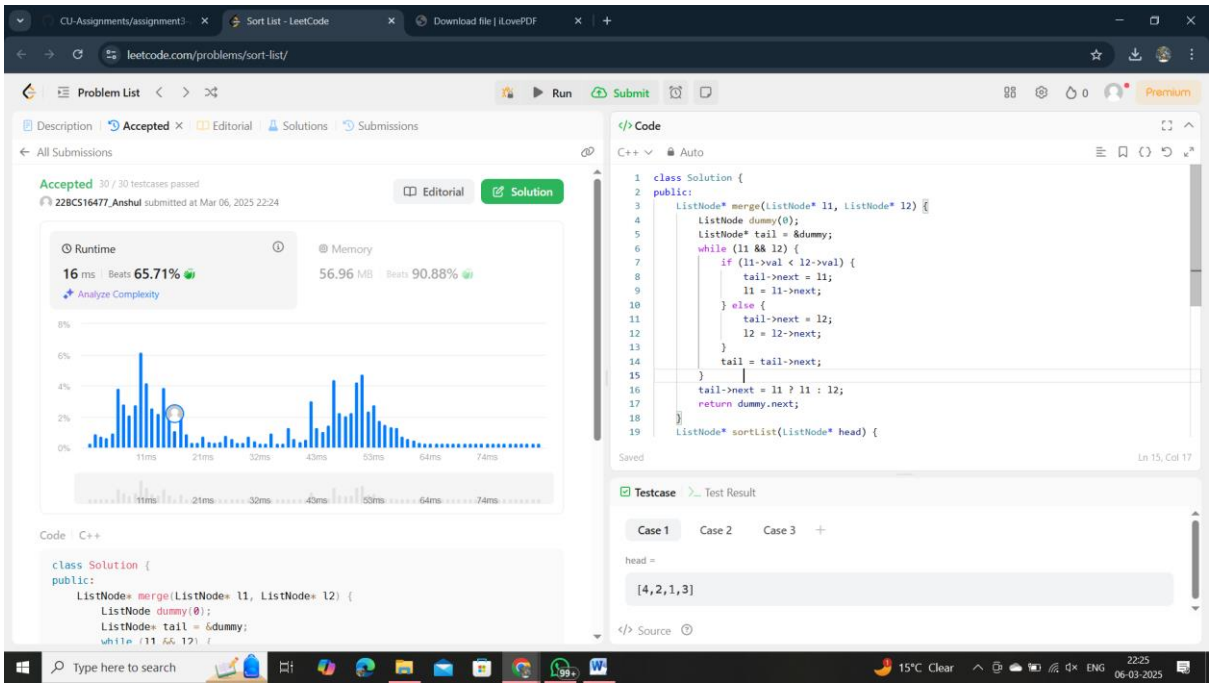
Section/Group: 609(B)

Sort List

Code:

```
class Solution {
public:
    ListNode* merge(ListNode* l1, ListNode* l2) {
        ListNode dummy(0);
        ListNode* tail = &dummy;
        while (l1 && l2) {
            if (l1->val < l2->val) {
                tail->next = l1;
                l1 = l1->next;
            } else {
                tail->next = l2;
                l2 = l2->next;
            }
            tail = tail->next;
        }
        tail->next = l1 ? l1 : l2;
        return dummy.next;
    }
    ListNode* sortList(ListNode* head) {
        if (!head || !head->next) return head;
        ListNode* slow = head, *fast = head, *prev = nullptr;
        while (fast && fast->next) {
            prev = slow;
            slow = slow->next;
            fast = fast->next->next;
        }
        prev->next = nullptr;
        ListNode* left = sortList(head);
        ListNode* right = sortList(slow);
        return merge(left, right);
    }
};
```

Output:


CU-Assignments/assignment3
Sort List - LeetCode
Download file | iLovePDF
leetcode.com/problems/sort-list/
Problem List
Run
Submit
Premium
Description
Accepted
Editorial
Solutions
Submissions
All Submissions
Accepted 30 / 30 testcases passed
22BCS16477_Anshul submitted at Mar 06, 2025 22:24
Editorial
Solution
Runtime
16 ms | Beats 65.71%
Analyze Complexity
Memory
56.96 MB | Beats 90.88%
Code
C++
class Solution {
public:
ListNode* merge(ListNode* l1, ListNode* l2) {
ListNode dummy(0);
ListNode* tail = &dummy;
while (l1 && l2) {
if (l1->val < l2->val) {
tail->next = l1;
l1 = l1->next;
} else {
tail->next = l2;
l2 = l2->next;
}
tail = tail->next;
}
tail->next = l1 ? l1 : l2;
return dummy.next;
}
ListNode* sortList(ListNode* head) {
Saved
Ln 15, Col 17
Testcase
Test Result
Case 1
Case 2
Case 3
head =
[4,2,1,3]
Source
Type here to search
15°C Clear
ENG
22:25
06-03-2025