DSA Assignment - 24 June

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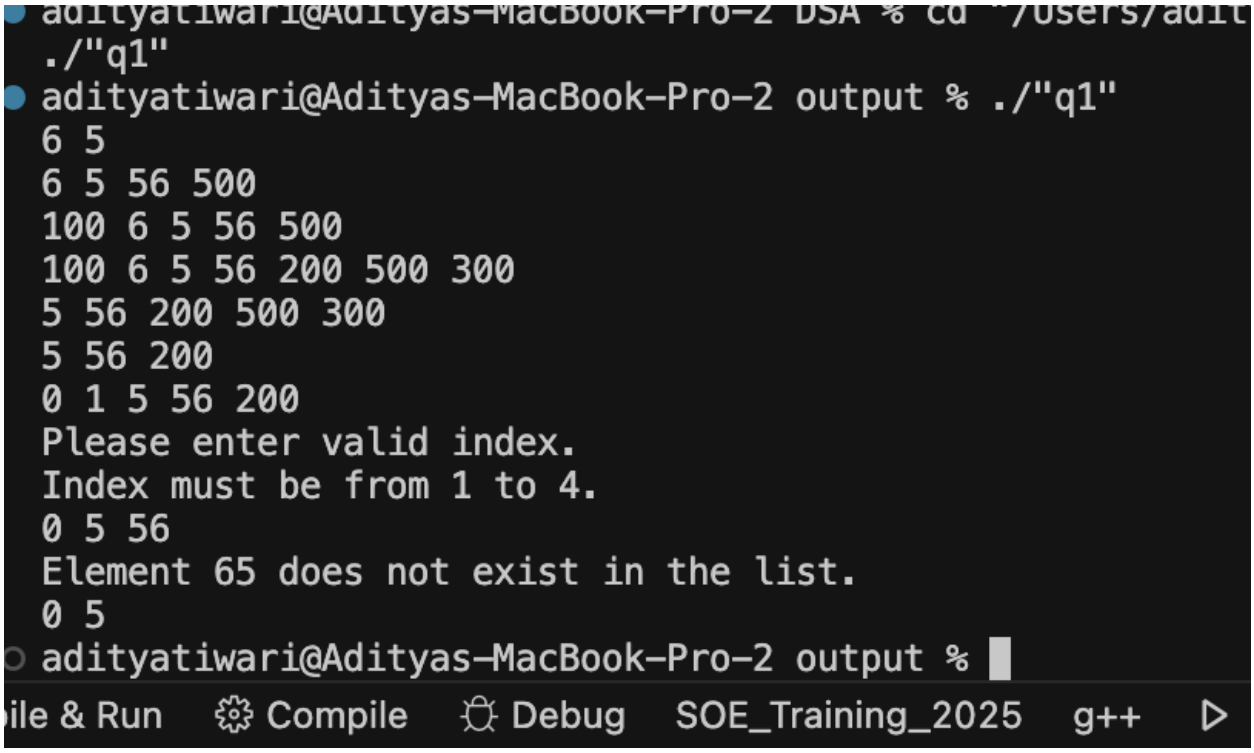
GeekforGeeks - aditya1305t
Github Repo Link -
https://github.com/Aditya1305T/SOE_Training_25

DSA- Section -

Question 1: Design a Singly Linked List and write functions to

- **Insert at beginning**
- **Insert at end**
- **Insert at any index**
- **Delete at beginning**
- **Delete at end**
- **Delete at index**

Submission Screenshot:



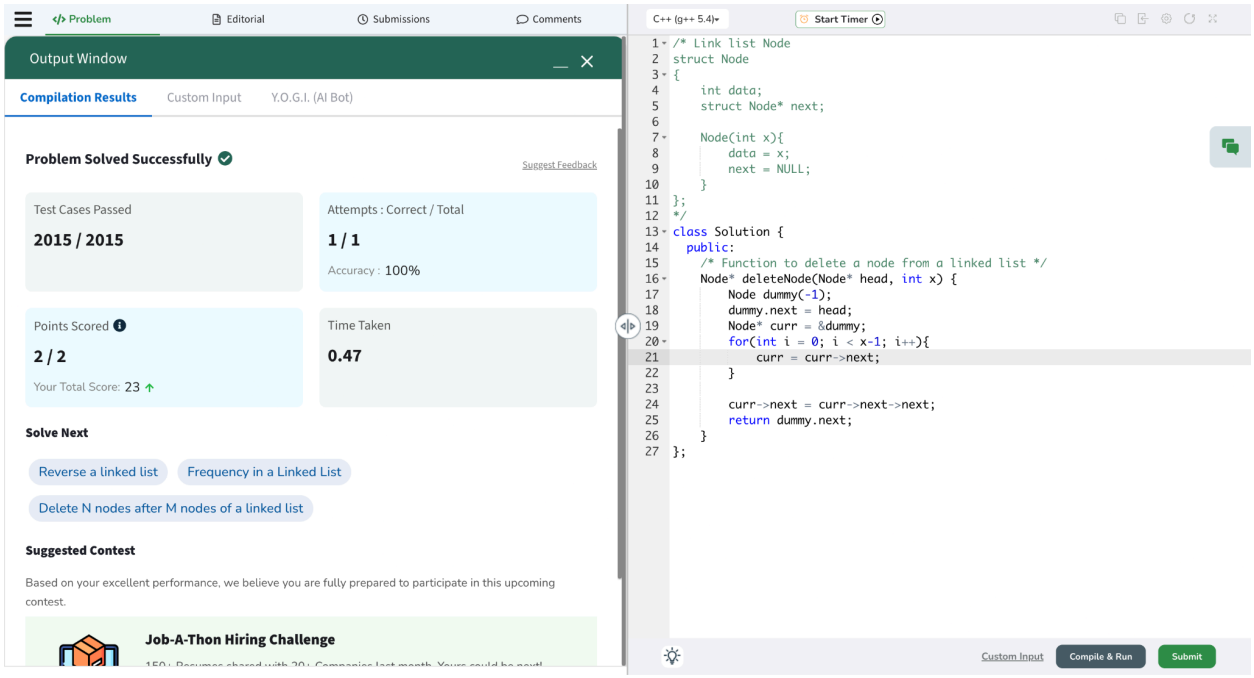
Question 2: Delete a Node in Singly Linked List

Platform: GeeksForGeeks

Problem Link:
https://www.geeksforgeeks.org/problems/delete-a-node-in-single-link

[ed-list/1]

Submission Screenshot:

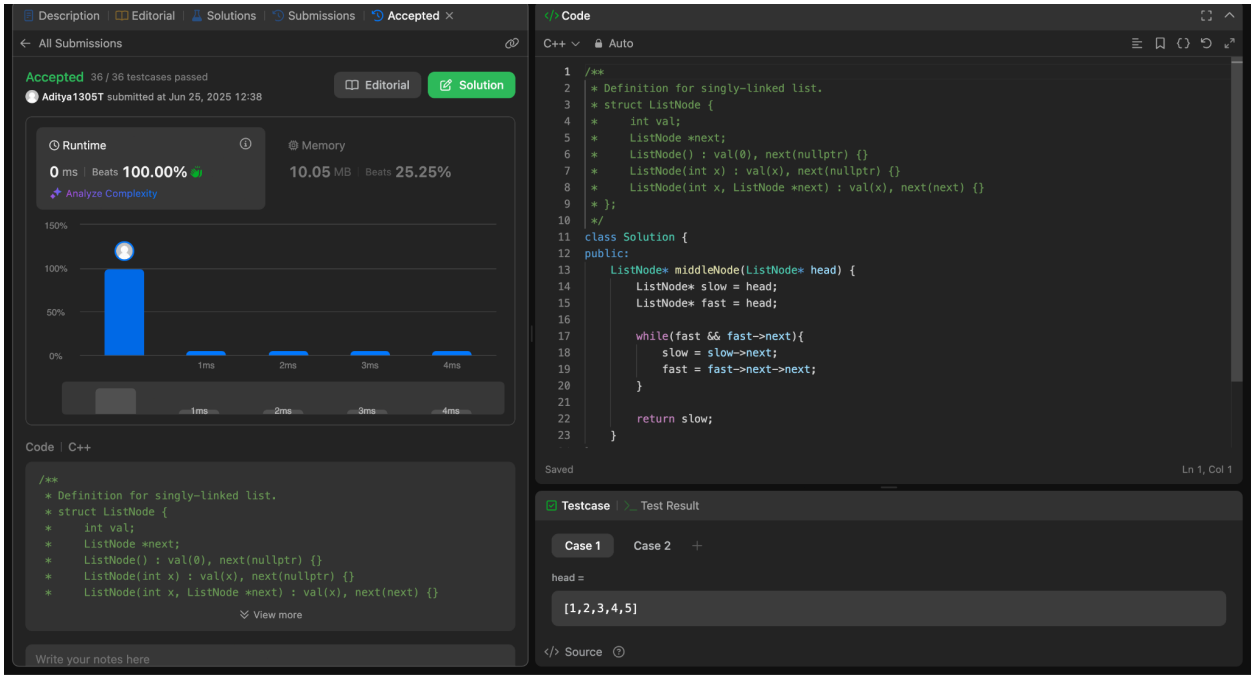


Question 3: Find Middle

Platform: LeetCode

Problem Link: [https://leetcode.com/problems/middle-of-the-linked-list/]

Submission Screenshot:


Description
Editorial
Solutions
Submissions
Accepted
All Submissions
Accepted 36 / 36 testcases passed
Aditya1305T submitted at Jun 25, 2025 12:38
Editorial
Solution
Runtime
0 ms | Beats 100.00%
Analyze Complexity
Memory
10.05 MB | Beats 25.25%
150%
100%
50%
0%
1ms
2ms
3ms
4ms
Code | C++
/**
* Definition for singly-linked list.
* struct ListNode {
*   int val;
*   ListNode *next;
*   ListNode() : val(0), next(nullptr) {}
*   ListNode(int x) : val(x), next(nullptr) {}
*   ListNode(int x, ListNode *next) : val(x), next(next) {}
View more
Write your notes here
Code
C++
Auto
/**
* Definition for singly-linked list.
* struct ListNode {
*   int val;
*   ListNode *next;
*   ListNode() : val(0), next(nullptr) {}
*   ListNode(int x) : val(x), next(nullptr) {}
*   ListNode(int x, ListNode *next) : val(x), next(next) {}
* };
*/
class Solution {
public:
ListNode* middleNode(ListNode* head) {
ListNode* slow = head;
ListNode* fast = head;
while(fast && fast->next){
slow = slow->next;
fast = fast->next->next;
}
return slow;
}
Saved
Ln 1, Col 1
Testcase
Test Result
Case 1
Case 2
head =
[1,2,3,4,5]
Source