

DSA Assignment - 7 July

Name: Aditya Tiwari

Roll No: 23/11/EC/040

LeetCode ID: adityatiwari1305t

GeeksForGeeks ID: aditya1305t

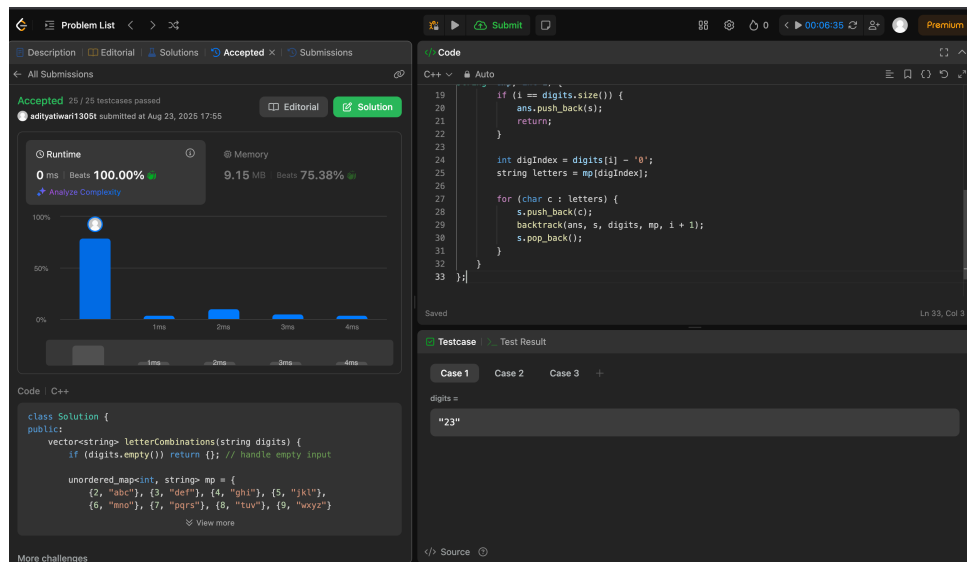
Github Repo Link:

https://github.com/Aditya1305T/SOE_Training_25

Question 1: Letter Combinations

Platform: LeetCode

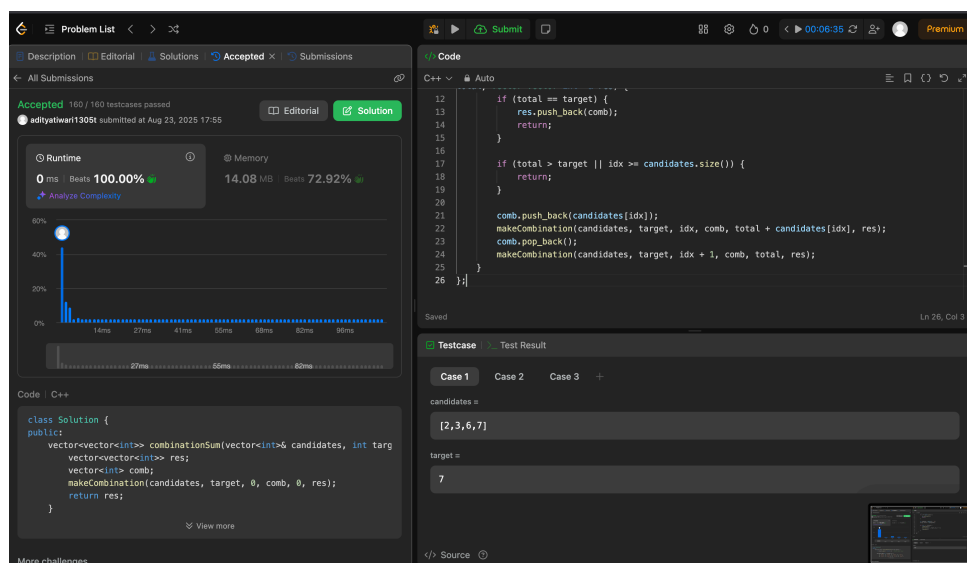
Link: - <https://leetcode.com/problems/letter-combinations-of-a-phone-number/description/>



Question 2: Combination Sum

Platform: LeetCode

Link: - <https://leetcode.com/problems/combination-sum/description/>



Question 3: Permutations

Platform: LeetCode

Link: - <https://leetcode.com/problems/permutations/description/>

The screenshot displays the LeetCode submission interface for the 'Permutations' problem. The top section shows the problem title and a 'Solution' button. Below this, a performance summary indicates the solution is 'Accepted' with 26/26 test cases passed. The runtime is 11 ms, which is 6.15% better than the average, and the memory usage is 14.49 MB, which is 5.22% better than the average. A bar chart visualizes the runtime performance across different time intervals. The C++ code is shown in the editor, implementing a recursive function to generate all permutations of the input array. The code uses a single list and backtracking to build the permutations.

```
class Solution {
public:
    vector<vector<int>> permute(vector<int>& nums) {
        vector<vector<int>> res;
        if (nums.size() == 1) {
            vector<int> singleList;
            singleList.push_back(nums[0]);
            res.push_back(singleList);
        }
        // ... (rest of the code)
    }
};
```