DSA Assignment - 2 July

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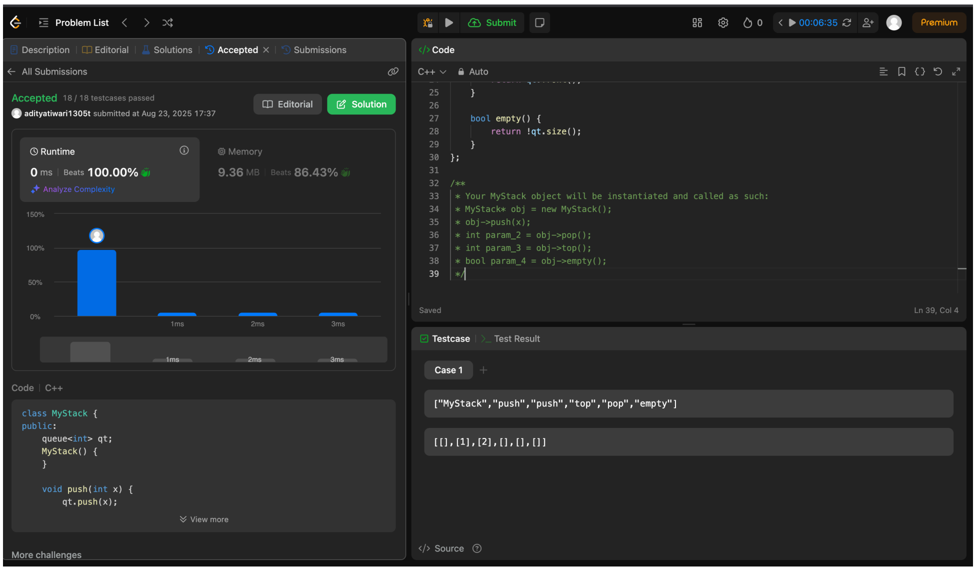
Github Repo Link:

https://github.com/Aditya1305T/SOE_Training_25

Question 1: Design Stack Using Queues

Platform: LeetCode

Link: · https://leetcode.com/problems/implement-stack-using-queues/description/



Accepted 18 / 18 testcases passed

adityatiwari1305t submitted at Aug 23, 2025 17:37

Runtime 0 ms | Beats 100.00%

Memory 9.36 MB | Beats 86.43%

Code | C++

```cpp
class MyStack {
public:
    queue<int> qt;
    MyStack() {
    }

    void push(int x) {
        qt.push(x);
```

```cpp
    }

    bool empty() {
        return !qt.size();
    }
};

/**
 * Your MyStack object will be instantiated and called as such:
 * MyStack* obj = new MyStack();
 * obj->push(x);
 * int param_2 = obj->pop();
 * int param_3 = obj->top();
 * bool param_4 = obj->empty();
 */
```

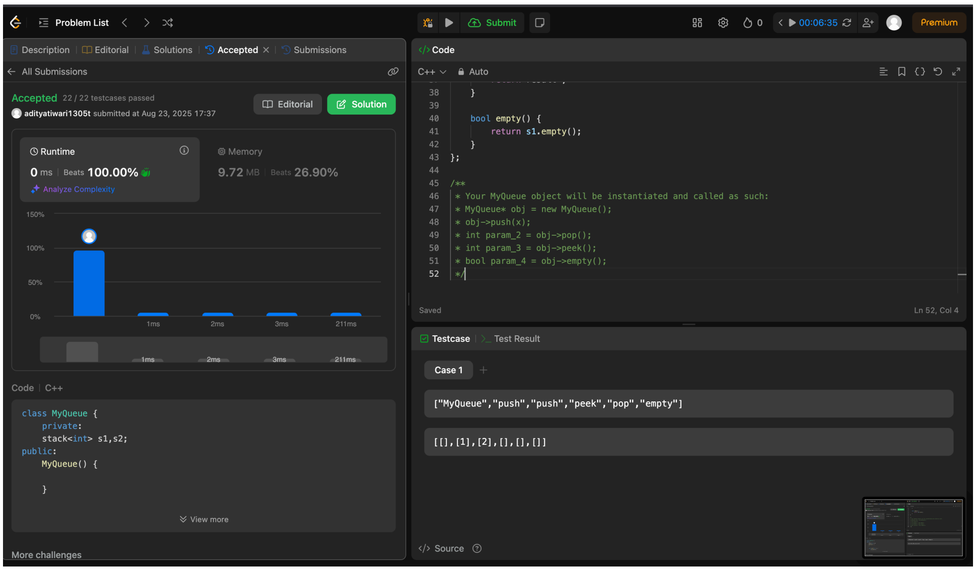
```
["MyStack","push","push","top","pop","empty"]
```

```
[[],[1],[2],[],[],[]]
```

Question 2: Design Queues Using Stack

Platform: LeetCode

Link: · https://leetcode.com/problems/implement-queue-using-stacks/description/



Accepted 22 / 22 testcases passed

adityatiwari1305t submitted at Aug 23, 2025 17:37

Runtime 0 ms | Beats 100.00%

Memory 9.72 MB | Beats 26.90%

Code | C++

```cpp
class MyQueue {
    private:
    stack<int> s1,s2;
public:
    MyQueue() {

    }
```

```cpp
    }

    bool empty() {
        return s1.empty();
    }
};

/**
 * Your MyQueue object will be instantiated and called as such:
 * MyQueue* obj = new MyQueue();
 * obj->push(x);
 * int param_2 = obj->pop();
 * int param_3 = obj->peek();
 * bool param_4 = obj->empty();
 */
```

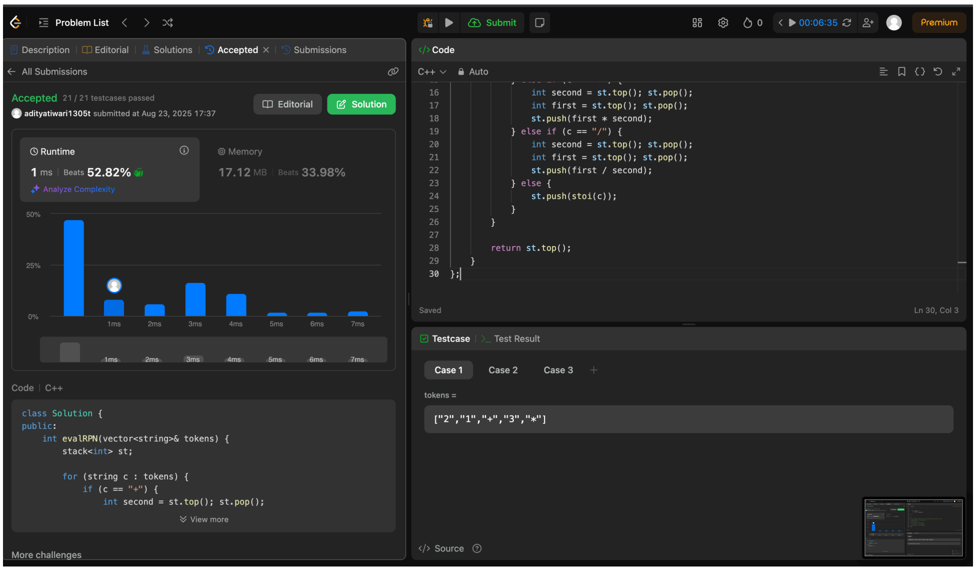
```
["MyQueue","push","push","peek","pop","empty"]
```

```
[[],[1],[2],[],[],[]]
```

Question 3: Evaluate Reverse Polish Notation

Platform: LeetCode

Link: · https://leetcode.com/problems/evaluate-reverse-polish-notation



Accepted 21 / 21 testcases passed

adityatiwari1305t submitted at Aug 23, 2025 17:37

Runtime

1 ms | Beats 52.82%

Analyze Complexity

Memory

17.12 MB | Beats 33.98%

Code | C++

```cpp
class Solution {
public:
    int evalRPN(vector<string>& tokens) {
        stack<int> st;

        for (string c : tokens) {
            if (c == "+") {
                int second = st.top(); st.pop();
```

```cpp
                int second = st.top(); st.pop();
                int first = st.top(); st.pop();
                st.push(first * second);
            } else if (c == "/") {
                int second = st.top(); st.pop();
                int first = st.top(); st.pop();
                st.push(first / second);
            } else {
                st.push(stoi(c));
            }
        }

        return st.top();
    }
};
```

Saved

Ln 30, Col 3

tokens =

```
["2","1","+","3","*"]
```