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#include <iostream>
#include <stack>
#include <vector>

using namespace std;

int main() {
    int T;
    cout << "Enter the number of test cases: ";
    cin >> T;

    vector<int> N(T);
    vector<vector<int> > scores(T);
    for (int i = 0; i < T; i++) {
        cout << "Enter the value of N for test case #" << i + 1 << ": ";
        cin >> N[i];

        cout << "Enter the scores of students for test case #" << i + 1
<< ": ";
        for (int j = 0; j < N[i]; j++) {
            int val;
            cin >> val;
            scores[i].push_back(val);
        }

        for (int i = 0; i < T; i++) {
            stack<int> st;
            int total_punishment = 0;

            for (int j = 0; j < N[i]; j++) {
                if (scores[i][j] > 33) {
                    if (!st.empty() && scores[i][j] < st.top()) {
                        continue;
                    } else {
                        st.push(scores[i][j]);
                    }
                } else {
                    if (!st.empty()) {
                        int top_score = st.top();
                        st.pop();
                        total_punishment += top_score;
                    }
                }
            }

            cout << "Total punishment for test case #" << i + 1 << ": " <<
total_punishment << endl;
        }

        return 0;
    }
}

```