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/* The following code example is taken from the book
 * "The C++ Standard Library – A Tutorial and Reference, 2nd Edition"
 * by Nicolai M. Josuttis, Addison-Wesley, 2012
 *
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 */
#include <iostream>
#include <exception>
#include "Stack.hpp"          // use special stack class
using namespace std;

int main()
{
    try {
        Stack<int> st;

        // push three elements into the stack
        st.push(1);
        st.push(2);
        st.push(3);

        // pop and print two elements from the stack
        cout << st.pop() << ' ';
        cout << st.pop() << ' ';

        // modify top element
        st.top() = 77;

        // push two new elements
        st.push(4);
        st.push(5);

        // pop one element without processing it
        st.pop();

        // pop and print three elements
        // - ERROR: one element too many
        cout << st.pop() << ' ';
        cout << st.pop() << endl;
        cout << st.pop() << endl;
    }
    catch (const exception& e) {
        cerr << "EXCEPTION: " << e.what() << endl;
    }
}

```