

```

#include <iostream>
#include <vector>
#include <string>

using namespace std;

template <class T>
class Stack {
private:
    vector<T> elems;           // elements

public:
    void push(T);              // push element
    void pop();                // pop element
    T top();                   // return top element
};

template <class T>
void Stack<T>::push(T elem)
{
    elems.push_back(elem);
}

template <class T>
void Stack<T>::pop()
{
    elems.pop_back();
}

template <class T>
T Stack<T>::top()
{
    return elems.back();
}

int main()
{
    Stack<int>    intStack;      // stack of ints
    Stack<string> stringStack;   // stack of strings

    // manipulate int stack
    intStack.push(7);
    intStack.push(5);
    cout << intStack.top() << endl;

    // manipulate string stack
    stringStack.push("hello");
    stringStack.push("world");
    cout << stringStack.top() << endl;
    stringStack.pop();
    cout << stringStack.top();

    getchar();
    return 0;
}

```