**Stack template**

Description:

The template is for creating a stack and the basic functionalities that can be done with a stack. The template stack can hold up to 100 values. Examples of functionalities include pushing (inserting) a new value and popping (removing) the value at the top of the stack. The template also included other functions that returned the top of the stack, the size of the stack (how many elements are in the stack), and seeing if the stack was empty (are there any values in the stack).

**Using the template**

Description:

The test program uses the template to create two stacks – an int stack and a double stack. Each stack implements the same functions. They start checking if each stack is empty, which it is. Then, a set of values are entered for each stack using the push() function. The top() function is used to display all the elements in the stacks. A new value is then added and the top() function is called again to see what the new value is. The empty() function now says there are values in the stacks. The top values in the stacks are removed using the pop() function.

Output Example:

This is the int stack.

Is the stack currently empty? Yes.

New stack is the following: 2 5 7 9 11

The top of the stack is 11

Is the stack currently empty? No.

Pushing new value on the stack, such as 5.

Now, the top of the stack is: 5

The size of the stack is: 6

Popping a value on the stack.

Now, the top of the stack is again: 11

And the size of the stack is now: 5

This is the double stack.

Is the stack currently empty? Yes.

New stack is the following: 2.2 5.5 7.7 9.9 11.11

The top of the stack is 11.11

Is the stack currently empty? No.

Pushing new value on the stack, such as 5.4.

Now, the top of the stack is: 5.4

The size of the stack is: 6

Popping a value on the stack.

Now, the top of the stack is again: 11.11

And the size of the stack is now: 5

Time elapsed: 000:00:046

Press any key to continue