Lab 5: Templated Deques & Stacks
CSCI 41

Objectives:
- Practice Stacks and Deques by implementing our very own
- Write templated classes

Part 1: Get the starter code

First, `cd` into the folder where you want to store your class files (e.g., `~/labs`). Copy the starter code there with the following line:

`gimme lab05@csci41`

This will make a lab05 folder in whatever directory you were in.

Part 2: Implement the Deque class using std::list

Take a look at Deque.h—there you'll find all the methods you need to implement. You'll be implementing all the Deque operations using a std::list as the underlying representation.

You'll be creating a *templated* Deque, so remember that you have to break the golden rule and write everything in the .h file!

Part 3: Test your Deque class

Get the test in testDeque.cpp working, and write 2 new tests of your own. Compile with `make testDeque`.

Part 4: Implement the Stack class using your Deque class

After you finish writing your Deque class, you're going to *use* it to create a Stack class! To be consistent with your textbook, "pop" is called "peek" in this lab. Go forth and implement Stack.h!

Part 5: Test your Stack class

Get the test in testStack.cpp working, and write 2 new tests of your own. Compile with `make testStack`.

Part 6: Submit your code

When you're satisfied with your solutions, you can submit them to the autograder for grading. **Do not submit and assume you got 100%—you may be unpleasantly surprised. Always check your grade.**

From your solution directory, submit your code to the autograder using the following command on the terminal:

```
turnin lab05@csci41 Deque.h Stack.h testDeque.cpp testStack.cpp
```

The autograder will grade your code within a minute or so. If it's not working, please yell at Lawton to fix it. Run `view-grades` to look at your grades on the terminal, or go to the class website to view them there. You may resubmit as much as you want before the due date—just follow this same process after you've updated your programs.

Rubric

Rubric Item	Points (28 pts total)
Lawton's Deque test passes	10 pts
Your Deque tests pass	4 pts (2 for each test)
Lawton's Stack test passes	10 pts
Your Stack tests pass	4 pts (2 for each test)