Labwork 3

Your work should be able to compile and run with the example main file provided. Your work will be evaluated using Visual Studio 2015.

Q1 (0 pts): Add the following member functions to DoublyLinkedList class provided to you in order to add the class stack functionality:

`void push(const T &)`: pushes a new element to the top of stack.

`T& top()`: returns the element which is at the top of stack.

`void pop()`: removes the top element from stack.

Q2 (100 pts): Implement the function with the prototype `bool is_palindrome(const string &)` which returns true if the parameter is a palindrome and false otherwise.

A string is a palindrome if it reads the same forward and backwards. For example, "racecar" is a palindrome, because the reverse is also "racecar".

You are not allowed to use any other function than the three you implement for Q1. Your palindrome-detecting solution should be based on utilizing stacks.