Project 4

Linked List

due: Tuesday the 14th November 2017

Overview

In this project, we will exercise our understanding of structs and pointers to build a useful data structure called a linked list. We're not going to write a program to use the code. Instead, you will be working to make your code pass all of the provided tests.

For direction, you will be given a specification (a .h file) which will describe the behaviors your linked list must provide

Submission Instructions

Submit only the .c and .h files *that you created or fleshed out*, but do not zip them.

You do not need to submit a Makefile for this project as the one that was provided to you will be used during grading.

Technical Description and Instructions

In this project, you will not write a full program. Instead, you will write a generic linked list library that will be subjected to a series of tests to ensure it is working correctly.

What is a Linked List?

A linked list is a simple data structure comprised of nodes. Each node holds a piece of data and a connection to the node in front of it and the node behind it. The list itself holds a reference to the first and last nodes in the list as well as a count of how many nodes it contains in total. The C code implementing both the list and node structures will be given to you.

Your Job

Your job for this project is simply to implement the functions whose signatures are declared in the '`linked_list.c`' file provided. Once you have done this and your implementation passes the supplied tests, you're finished!

Things to Remember and Helpful Hints:

Come to class to receive additional help, hints, and direction concerning this and future projects!

Grading Specification

For your submission to receive a grade of 'pass', it must fulfill the following criteria:

- **It must be submitted correctly**.
- The linked list file must compile with no warnings or errors.
- Your implementation should pass all the tests.