

===Lab Info===

* 50 points

* Due 11:59pm, Sunday 8/30 for Monday lab and Tuesday 9/1 for Wednesday lab.

==Assignment==

In this assignment you will work on a singly linked list (The goal of this lab is to review pointers). You are to read in the numbers from a data file of integers, one at a time, and put each number, as it is read, into a node of a singly linked list. (You may not store all of the numbers in a vector or array; the list must be built as you read in the numbers.) You may hard code the file name in your program if you wish.

In this lab first you should make the linked list by the samples which are in the data.txt, after that your program should have a simple menu like:

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

When you are finished, submit the final project along with a makefile so that we may build an executable and run your code. Make sure to zip or tar.gz everything together.

==List==

The List should implement an appropriate constructor and destructor. The rest of the methods should be implemented as follows:

*insert(x) Insert x into a list L if x does not exist. Insertion should be done at the end of the list.

*isEmpty() should return true if L is empty.

*erase(x) Use Find(x,L) to remove x from L if found; else, return message.

*print() should print out all the elements of the list separated by a space and ending with an endl.

*Find(x) Search for x in L and return a pointer pointing at x.

==Output==

data.txt elements : 17 19 11 0 3 5 8 13 21 37 55

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 0 3 5 8 13 21 37 55

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 2

Choose a number to be deleted from the list:

> 0

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 8 13 21 37 55

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 2

Choose a number to be deleted from the list:

> 21

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 8 13 37 55

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 1

Choose a number to be inserted to the list:

> 10

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 8 13 37 55 10

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 1

Choose a number to be inserted to the list:

> 44

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 8 13 37 55 10 44

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 1

Choose a number to be inserted to the list:

> 12

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 8 13 37 55 10 44 12

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 2

Choose a number to be deleted from the list:

> 8

.....

Please choose one of the following commands:

1- insert

2- delete

3- print

4- exit

> 3

List: 17 19 11 3 5 13 37 55 10 44 12

===Files===

* Files to include in folder:

** all source files

** a functioning makefile

** data.txt

* Folder name: Lastname_Lab1

* Compressed file name: Lastname_Lab1.zip (or .rar or .tar.gz)

* Executable name: lab1