

Due Date:

Wednesday, April 2, 2014

Delivery

This is a multiple file program that must be archived using the **tar** command. Deliver a single file named `pa4.tar` (all lowercase) as an **attachment** to an email that you send to the class account `csc3320@orion.ucdenver.edu`. Put PA4 in the subject field, and your name in the body of the email. **Also, please list the compiler you used for this program.**

Program objectives

The objectives of this assignment are as follows.

An ability to use current techniques, skills, and tools necessary for computing practice (ABET i).

Value

This program is worth 15 points. The distribution of points will be as follows.

Criterion	Value
3320 List	2
Program style (error checking, greeting, etc.)	3
Menu	2
Editor class	3
Correctness of program (output, etc.)	5

Problem

Design a line-oriented text editor.

Input

A text file whose name is entered from the command line, stored in a 3320 forward list that is part of a class named **editor**.

Output

A menu of commands that act upon the text, and any output that is appropriate for the commands.

Text editor requirements

1. The text editor must be designed as a class. The structure that stores the text file should be a member of the editor class and specifically, it should be the 3320 forward list. Since this is a line-oriented text editor, store each line as the `value_type` of the linked-list nodes.
2. The editor should provide the following functionality through menu commands.
I[n]. Insert a new line after line *n* of the text. Prompt the user for the new line of text after the menu selection is made.
I[n,m]. Insert *m* consecutive new lines after line *n* of the text. Prompt for each new line.

D[n]. Delete a line after line n of the text.
D[n,m]. Delete m consecutive lines after line n of the text.
F[str]. Find and delete first occurrence of **str**.
FA[str]. Find and delete all occurrences of **str**.
R[str]. Find and replace first occurrence of **str**.
RA[str]. Find and replace all occurrences of **str**.

3. Always display the menu as a sequence of selections (one row of commands). After the menu, display the text file with the line numbers listed as the first thing on each line, as in,
1] This is line one.
2] This is line two.
Also, be sure to “refresh” the display after each menu option is completed.

Notes

The grader will be looking specifically for 3320 forward list operations, and in particular those where iterators are appropriate.