Lab 2 of cs202 system programming

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1 Objective

- Pointer handling
- Struct definition
- Linked list
- File input and output

2 Lab description

A book store wants you to write a simple inventory management program. The program reads in the inventory from a text file, each line of which stores the title, author name, and price for one book. You program should be able to do the following jobs

- Read books from the inventory file.
- Allow the user to insert new books.
- Save the books back into the inventory file.
- Compute the average price of the books.
- Print out the information of the books.

You shall define a **struct** to save the information for each book and arrange the books in a **linked list** such that your program can handle unlimited number of books. The newly-inserted books are always appended at the end of the list.

3 Interface

Your program shall use the following commands as the interface for the user

- 'r': read books from the inventory file.
- 'i': insert new books.
- 's': save books to the inventory file.
- 'a': compute the average price.
- 'p': print out book information.

4 Lab report

You shall write a brief report, in which you may discuss the problems you meet in the project and how you solve them. You may also discuss the data structures and functions you defined in the program, and any other information you feel may help others understand your program. At the end of the report, you shall attach the source code. Please include the screenshot in your report.