Simple Book Shop Management Program

Introduction

In this project, you are required to develop a C console program to demonstrate your skills of using basic C programming constructs: selection statements (if-else, switch), loops (while, for, do-while), arrays, structures (struct), and I/O functions (printf, scanf, etc.). You are only allowed to use the C programming concepts and techniques taught in the CSE103 course.

What to submit for this assignment:

1. **GroupX_SimpleBookShop.c**
   The C program source code where GroupX will be replaced by the respective group number. Examples: Group1_SimpleBookShop, Group2_SimpleBookShop, and so on. Your program should have sufficient comments to describe the code.

2. **GroupX_Report.docx**
   A report where students are required to mention the tests conducted to validate the program. The test report should include individual test cases, set of inputs, and respective output screenshots of the program test runs. (Use Alt-PrtScrn to capture just the console window and you can paste it into your Word document, or you can use Windows Snipping Tool). You should thoroughly test your program and outline your testing plan and annotate your screenshots with what you are testing.

You are required to submit your files by the due date using the "Mini Project" Assignment submission link on the respective Google Classroom.

simple library management program that can be used to keep records of books. The program must be implemented in a modular fashion utilizing multiple functions.

Assignment specification

The Simple Book Shop project keeps track of records of books added by the user. It must keep the following information for each book:

• Book title: can store book title of maximum 50 characters long.

• Book author's name: can store book author's name of maximum 30 characters long. • Book price: can store book price with decimal points ranging from 0.0 TK to 1,00,000.99 TK. • Number of copies of the book available in the book shop: can store whole numbers.

Your program must be able to keep track of 500 books in a single run. The program must contain the following functions with their respective tasks.

showWelcomeMessage()

When called, this function should display the following welcome message:

```
****************************************

Welcome to Simple Book Management System.

****************************************
```

showGoodByeMessage()

When this function is called, it must display the following goodbye message:

```
*******************************************************

Thank you for using Simple Book Management System.

*******************************************************
```

showMenuOptions()

When this function is called, it must display the following menu options. Your menu options must match the menu numbers shown below.

```
Please select a menu option number:
1) Display this menu.
2) Show all available books.
3) Add a book to the book shop.
4) Search a book by title.
5) Display the total number of books.
6) Exit from this book shop system.
```

showBooks()

This function must display all the books stored in the system as a list. It must display all the details for each book: title, author name, price, and number of copies.

```
Enter your choice: 2

List of books:

Book title: Teach Yourself C
Book author: Herbert Schildt
Book price: 500.50
Book author: 10

Book title: Thinking in Java
Book author: Bruce Eckel
Book price: 700.00
Book author: 20

Book title: Python Crash Course
Book author: Eric Matthes
Book price: 999.99
Book author: 5
```

addBook()

When called, this function will take the details of a single book from keyboard as follows. It must show appropriate messages when taking inputs from users.

```
Enter your choice: 3

Enter book title: Teach Yourself C
Enter book author: Herbert Schildt
Enter book price: 500.50
Enter number of copies: 10
```

searchBook()

When this function is called it will take the title of the book to search from keyboard and search the whole list of the books in the system. If it finds the book title, it shows all the details of the book; otherwise, it shows "Book not found" message.

```
Enter your choice: 4

Enter book title to search: Thinking in Java

Book title: Thinking in Java
Book author: Bruce Eckel
Book price: 700.00
Book author: 20

Enter your choice:
```

showNumberOfBooks()

When called, this function will count the number of books in the system and show the number on the screen.

```
Enter your choice: 5

Total number of books in the shop: 4
```

main()

When the program is executed, firstly the main() function will display the welcome message, show option menu to the user, and wait for input.

```
****************************************
Welcome to Simple Book Management System.

****************************************


Please select a menu option number:
1) Display this menu.
2) Show all available books.
3) Add a book to the book shop.
4) Search a book by title.
5) Display the total number of books.
6) Exit from this book shop system.


Enter your choice:
```

Depending on the user's choice of options, main() should call appropriate function (mentioned-above) to perform the tasks.

When the user enters option 6, the program should terminate after showing the Goodbye message as mentioned before.