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Assignment/Lab Number:	*Final Project*
Assignment/Lab Title:	*Bookstore App*

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Use Case 1	Owner changes number of books
Actor	Owner
Use case overview	The owner logs in and selects the books option. The owner then selects the book they wish to remove, then selects the remove button.
Preconditions	The owner must be successfully logged in.
Alternative flow	If the owner wishes to add a book, they must select the add button, and enter the name, price of the book they wish to add.

Use Case 2	Owner changes number of customers
Actor	Owner
Use case overview	The owner logs in and selects the customers option. The owner then selects the customer they wish to remove, then selects the remove button.
Preconditions	The owner must be successfully logged in.
Alternative flow	If the owner wishes to add a customer, they must select the add button, and enter the name, password of the customer they wish to add.

Use Case 3	Customer purchases a book
Actor	Customer
Use case overview	The customer must log in and select the buy button. Points will be added to the customer's account depending on the cost of the book(s). Their status may change after increasing their points.
Preconditions	The customer must be successfully logged in.
Alternative flow	The customer may select redeem points and buy. The cost of the book(s) will decrease by their points accordingly. Their status may be changed, depending on the number of points after the transaction.

Entry Condition - Universal	A user logs into the system by inputting a username and password. An Owner and Customer login will provide a different set of options.
Exit Condition - Universal	A user logs out using the Logout button provided or clicks the "X" button on the top right, terminating the process.

The state design pattern was used as we have states and subclasses in the implementation of our customer cost screen class. The state design pattern functions with a context and user, in which the context is the method in which the user interacts with the program. In the bookstore application, the customer and owner are the users, and the context is the GUI interface of the program. The state design pattern allows for the behavior of classes and objects to change depending on the current state of a run. These state-specific instances can run independently. In this bookstore application the subclasses used are Owner and Customer level accounts, each with different privileges and operations available.

The Owner class has access to the Books, Customers, and Logout states. The Owner Books state displays a table of available books in an inventory read from a text file, and allows the removal and addition of inventory. The Owner Customers state displays all current users read from another text file with options to add and delete customers from the table at will. Both of the aforementioned states have access to a back button which brings back the owner's initial three options. The Logout returns the Owner back to the Login menu and logs them out of their account.

Different customers will have different statuses and different effects depending on whether the customer belongs to a Gold or Silver subclass which is displayed at the bottom of the customer screen. Both types of customers will have the same options displayed, the books table and the option to Buy or Redeem & Buy with the use of points. Purchasing a book shows the price of the transaction and removes it from the inventory and table, or lowers its quantity if there is more than one. The Logout option is the same as the logout used by the Owner state.

At any point as long as a modification to any of the text files occurs, exiting the application using the "X" button on the top right will not result in a loss of data, as the program writes upon a button being clicked.