

Serendipity Booksellers Software Development Project— Part 9: A Problem-Solving Exercise

For this chapter's assignment you will enhance the program's point-of-sale and reporting capabilities.

1. Allow Multiple Transactions

Currently the `cashier` function only calculates the sale of one title. Modify it so that multiple titles may be purchased. After the data for each book is entered, the function should ask if there are other titles being purchased. If so, it allows the user to enter the data for another book. If not, it calculates the sale subtotal, tax, and total.

2. Enable Automatic Lookup

The `cashier` function currently asks the user to enter the ISBN number, title, and price of the book being purchased. Modify the function so that once the user enters the ISBN number, it automatically looks up the book title and price. It can do so by searching for the ISBN number in the `isbn` array, and then pulling the title from the `bookTitle` array and the price from the `retail` array.

If the function cannot locate the ISBN number in the `isbn` array, it should display a message indicating so. It then should ask the user if he or she wanted to re-enter the number and let the user enter that number again.

Once a book's data has been retrieved, the function should check the `qtyOnHand` array determine whether there are enough copies in stock to fill the order. If so, the function should subtract the number of copies being purchased from the amount in the array. If there aren't enough copies in stock, the function should display a message indicating so, and then return to the main menu.

3. Complete the Stub Functions Called from the Reports Menu

Currently, when the user chooses an option from the Reports Menu, a stub function is called, indicating which option was chosen. Modify the stub functions so they actually display the correct report on the screen.

Here is a list of the reporting functions and what they do:

The `repListing` function should display a report listing all the books in the inventory. The following data should be included in the report: title, ISBN number, author, publisher, data added to inventory, quantity on hand, wholesale cost, and retail price. There report should display an appropriate title that includes the date. The function should fill the screen with data and then ask the

user to press a key to continue to the next screen.

The `repWholesale` function should display a report that lists the following data on all books in the inventory: title, ISBN number, quantity on hand, and wholesale const. The report should display an appropriate title that includes the date. The function should fill the screen with data and then ask the user to press a key to continue to the next screen. The last line of the report should give the total wholesale value of the inventory (the sum of each book's wholesale const multiplied by the quantity on hand).

The `repRetail` function should display a report that lists the following data on all books in the inventory: title, ISBN number, quantity on hand, and retail price. The report should display an appropriate title that includes the data. The function should fill the screen with data and then ask the user to press a key to continue to the next screen. The last line of the reports should give the total retail value of the inventory (the sum of each book's retail price multiplied by the quantity on hand).

The `repQty` function should display a report that lists the following data on all books in the inventory: title, ISBN number, and quantity on hand. The list should be sorted by quantity on hand in the descending order (the books of the greatest quantity listed first). The report should display an appropriate title that included the date. The function should fill the screen with data and then ask the user to press a key to continue to the next screen.

The `repCost` function should display a report that lists the following data on all books in the inventory: title, ISBN number, quantity on hand, and wholesale cost. The list should be sorted by wholesale const in descending order (the books of the greatest unit cost listed first). The report should display an appropriate title that includes the date. The function should fill the screen with data and then ask the user to repress a key to continue to the next screen.

The `repAge` function should display a report that lists the following data on all books in the inventory: title, ISBN number, quantity on hand, and date added to the inventory. The list should be sorted by date added, in descending order (the books that have been in inventory longest will be listed first). The report should display an appropriate title that includes the date. The function should fill the screen with data and then ask the user to press a key to continue to the next screen.