Serendipity Booksellers Software Development Project— Part 7: A Problem-Solving Exercise

For this chapter's assignment, you are to add a series of arrays to the program. For the time being, these arrays will be used to hold the data in the inventory database. The functions that allow the user to add, change, and delete books in the store's inventory will modify the data held in these arrays.

> **NOTE:** The arrays you add in this chapter will only be large enough to hold data for 20 books. These arrays will primarily be used for testing the functions you are writing. In Chapter 12 you will modify the program to store this data in a file. At that time the program will be able to keep an inventory as large as the disk will hold.

1. **Understand the Relationship Between the Arrays**

   Add the following global arrays to the program:

   - `bookTitle`:   An array of `string` objects that will hold the title of each book in the inventory.
   - `isbn`:   An array of `string` objects that will hold the ISBN number of each book in the inventory.
   - `author`:   An array of `string` objects that will hold the name of the author of each book in the inventory.
   - `publisher`:   An array of `string` objects that will hold the name of the publisher of each book in the inventory.
   - `dateAdded`:   An array of `string` objects that will hold the date each book was added to the inventory. The dates should be stored in the form MM-DD-YYYY. For example, April 2, 2012 would be stored as 04-02-2012.
   - `qtyOnHand`:   An array of `int`s that will hold the quantity on hand of each book in the inventory.
   - `wholesale`:   An array of `double`s that will hold the wholesale price of each book in the inventory.
   - `retail`:   An array of `double`s that will hold the retail price of each book in the inventory.

2. **Understand the Relationship Between the Arrays**

   The data stored in the arrays will be linked through their subscripts. The string stored in `bookTitle[0]` is the title of the book whose ISBN number is stored in `isbn[0]`. Likewise, the data stored in `author[0]`, `publisher[0]`, `dateAdded[0]`, `qtyOnHand[0]`, `wholesale[0]`, and `retail[0]` also belong to that same book.

3.   Modify the `bookInfo` **Function**

The `bookInfo` function currently displays the following screen:

<div>

Serendipity Booksellers
Book Information

ISBN:
Title:
Author:
Publisher:
Date Added:
Quantity-On-Hand:
Wholesale Cost:
Retail Price:

</div>

Modify the function so it has the following parameters:

- `isbn:`   a `string` object. The ISBN number of a book will be passed into this parameter.
- `title:`   a `string` object. The book title will be passed into this parameter.
- `author:`   a `string` object. The author's name will be passed into this parameter.
- `publisher:`   a `string` object. The publisher's name will be passed into this parameter.
- `date:`   a `string` object. The date the book was added to inventory will be passed into this parameter.
- `qty:`   an integer. The quantity on hand of the book will be passed into this parameter.
- `wholesale:`   a `double`. The wholesale cost of the book will be passed into this parameter.
- `retail:`   a `double`. The retail price of the book will be passed into this parameter.

The program should display the data passed into its parameters in the following format:

```
Serendipity Booksellers
Book Information

ISBN: 1-999111-22-1
```

```
Title: Robert the Bruce, King of Scotland
Author: Haynes, Timothy
Publisher: Historical Publishers, Inc.
Date Added: 04-02-2012
Quantity-On-Hand: 20
Wholesale Cost: 15.50
Retail Price: 19.95
```