Serendipity Booksellers Software Development Project— Part 10: A Problem-Solving Exercise

For this chapter's assignment, you will modify the program to use C-strings. This will prepare the project for future modifications. You will also use library functions to make the program's search capabilities easier.

1. **Modify the program to use C-Strings**

   Replace the global arrays of `string` objects you created in Chapter 7 with C-strings:

   - `bookTitle`: A two-dimensional array of characters. The array should have 20 rows and 51 columns. This makes it large enough to store 20 book titles of up to 50 characters in length.
   - `isbn`: A two-dimensional array of characters. The array should have 20 rows and 14 columns. This makes it large enough to store 20 ISBN entries of up to 13 characters in length.
   - `author`: A two-dimensional array of characters. The array should have 20 rows and 31 columns. This makes it large enough to store the names of 20 authors, with up to 30 characters in each name.
   - `publisher`: A two-dimensional array of characters. The array should have 20 rows and 31 columns. This makes it large enough to store the names of 20 publishers, with up to 30 characters in each name.
   - `dateAdded`: A two-dimensional array of characters that will hold the date each book was added to the inventory. The array should have 20 rows and 11 columns. This makes it large enough to store 20 dates, as strings, with 11 characters for each one.

   Modify the `bookInfo` function so it works with the following parameters:

   - `isbn`: a 14-element character array. The ISBN number of a book will be passed into this parameter.
   - `title`: a 51-element character array. The book title will be passed into this parameter.
   - `author`: a 31-element character array. The author's name will be passed into this parameter.
   - `publisher`: a 31-element character array. The publisher's name will be passed into this parameter.
   - `date`: an 11-element character array. The date the book was added to inventory will be passed into this parameter.

2. Create the `strUpper` Function

Write a function called `strUpper`. This function should accept a pointer to a string as its argument. It should convert each character in the string to an uppercase letter.

3. Modify the `addBook` Function

Modify the `addBook` function so it calls `strUpper` to convert the following items to all uppercase before they are written to their arrays.

```
Book Title
ISBN Number
Author's Name
Publisher
```

NOTE: These items will be converted to all uppercase so searching will be easier and each book's data will be stored consistently.

4. Modify the `lookUpBook` Function

The `lookUpBook` function currently requires the user to enter the full name of the book to search for. Modify it so the user only has to enter part of the book title. *Hint*: Use the `strstr` function to search the title in the database.

NOTE: It is possible to find more than one book that matches a partial title. When this happens, show the book title to the user and ask if it is the one being searched for. If it isn't, continue searching until there are no more book titles in the array.

5. Modify the `editBook` Function

The `editBook` function currently requires the user to enter the full name of the book to search for. Modify it so the user only has to enter part of the book title. *Hint*: Use the `strstr` function to search the titles in the database.

NOTE: As mentioned before, it is possible to find more than one book that matches a partial title. When this happens, show the book title to the user and ask if it is the one being searched for. If it isn't, continue searching until there are no more

(Before storing modified book data into the arrays, be sure to use the `strUpper` function to convert the charters in the title, ISBN number, author's name, and publisher's name to all uppercase.)

6. Modify the `deleteBook` Function

The `deleteBook` function currently requires the user to enter the full name of the book to

search for. Modify it so the user only has to enter part of the book title. *Hint*: Use the `strstr` function to search the title in the database.

NOTE: Once again, it is possible to find more than one book that matches a partial title. When this happens, show the book title to the user and ask if it is the one being searched for. If it isn't, continue searching until there are no more book titles in the