Library Database

An older library required their card catalogs to be modernized to an electronic format. A scanner was developed which could read each card into a text format then added to a CardCatalog.txt file. You have been hired to store the information on each card into a database that is quickly searchable as well as quickly sortable to display information.

Your database must be able to:

Search by: a) author

b) title

c) subject

The results should display alphabetically by author, then title if more than one.

When a single book is identified, it should display the book's information.

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Input File Format:

(LastName), (Firstname) (Middlename option).

(Book title)

by (Full Author's information).

-- (Edition) ed. -- (Location) : (Publisher), (Year).

(card tracings), (# pages)p. // the card tracings are worthless

ISBN (ISBN #)

1. (Subject). 2. (Subject). 3. (Subject). //At least one subject

Example Card:

Arif, Abdul Majid.

Political structure in a changing Pakistani Village

by Abdul Majid Arif and Basharat Andaleeb.

-- 2nd ed. -- Lahore : ABC Press, 1985.

xvi, 367p.

ISBN 969-8612-02-8

1. Pakistan. 2. Politics

Example Card 2

Gump, Bubba.

The Fantabulous Uses of Shrimp

by Bubba Gump.

-- 1st ed. -- Alabama : BG Shrimp, 1994.

mcmii, 987p.

ISBN 546-4510-45-5

1. Shrimp. 2. Cooking. 3. Zen.

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Output Example after searching for The Fantabulous Uses of Shrimp:

Author: Bubba Gump

Title: The Fantabulous Uses of Shrimp

Subjects: Shrimp, Cooking, Zen

Edition: 1st

Location: Alabama

Publisher: BG Shrimp

Year: 1994

Pages: 987

ISBN: 546-4510-45-5

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Program Running

1) Program should read in the database from the file, storing it as necessary.

2) 2a Program should prompt user: search for author, title, or subject.

2b Let user input selection

2c.1 Display results if multiple in alphabetical order by a) author, b) title, using:

<Result Number>) <Author>, <Title> - <Subject>, <Year>.

1) Abdul Majid Arif, Political structure in a changing Pakistani Village - Pakistan, Politics, 1985.

2) Bubba Gump, The Fantabulous Uses of Shrimp - Shrimp, Cooking, 1994.

2c.12 User may then select a result to see the output of a single book.

2c.2 Display entire output of data if only a single result:

Author: Bubba Gump

Title: The Fantabulous Uses of Shrimp

Subjects: Shrimp, Cooking, Zen

Edition: 1st

Location: Alabama

Publisher: BG Shrimp

Year: 1994

Pages: 987

ISBN: 546-4510-45-5

2c.3 Display no results if nothing found.

Search yielded no results.

2c At any point a user types in the value "0" as the only input should bring back the original search menu.

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Your program should be searchable in extremely quick time, but it should also be sortable as well.

You might need more than one structure for storing information to make it searching quickly by different fields.

You should definitely create a Book or some other class which allows information to be stored / accessed, and a toString method would be helfpul as well.