

Library Information System

You have been tasked with developing a library information system using object-oriented programming concepts. The system should be able to store and manage information about books, authors, publishers, borrowers, and librarians. The system has several JFrames.

Requirements

Book

This class should represent a book in the library. It should have the following properties:

- Title (String)
- Author (Author)
- ISBN (String)
- Publication Date (Date)
- Publisher (Publisher)
- Available Copies (int)

It should also have methods for:

- Borrowing a copy of the book (decrementing the available copies)
- Returning a copy of the book (incrementing the available copies)

Author

This class should represent an author of a book. It should have the following properties:

- Name (String)
- Email (String)
- Biography (String)

Publisher

This class should represent a publisher of a book. It should have the following properties:

- Name (String)
- Address (String)
- Email (String)

Borrower

This class should represent a borrower of a book. It should have the following properties:

- Name (String)
- Email (String)
- Borrowed Books (List<Book>)

It should also have methods for:

- Borrowing a book (adding the book to the borrower's list of borrowed books)
- Returning a book (removing the book from the borrower's list of borrowed books)

Librarian

This class should represent a librarian in the library. It should have the following properties:

- Name (String)
- Email (String)

It should also have methods for:

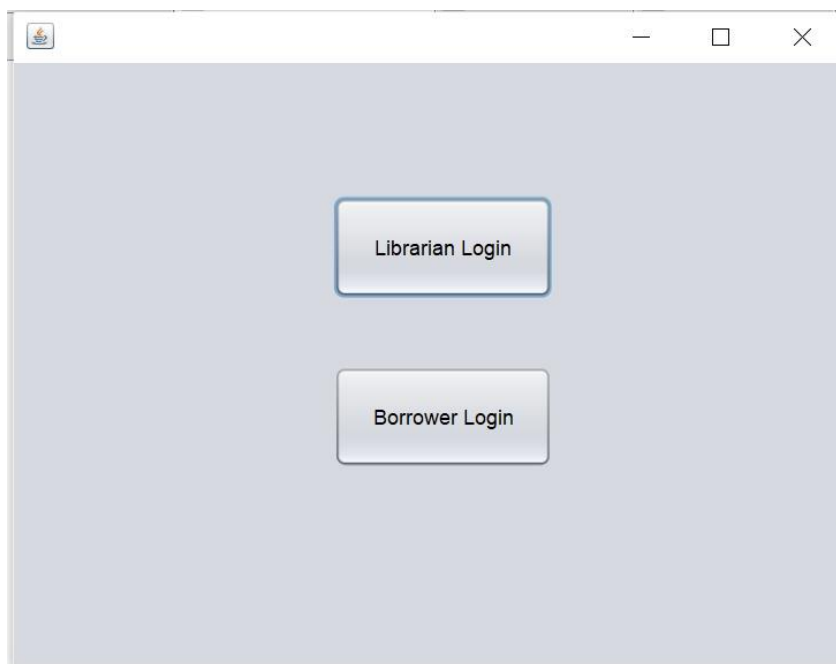
- Adding a book to the library
- Removing a book from the library
- Adding an author to the library
- Removing an author from the library
- Adding a publisher to the library
- Removing a publisher from the library
- Adding a borrower to the library
- Removing a borrower from the library
- Finding a book by title or author
- Finding a borrower by name or email

Do not forget to add the necessary methods (getter/setter, toString, etc.) for each class.

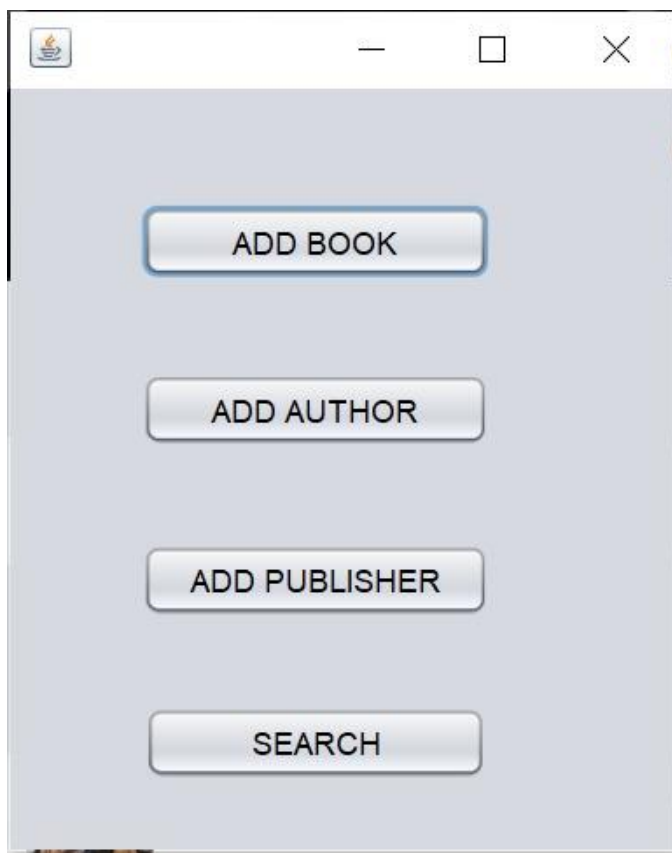
Create your GUI.

Draw your diagram.

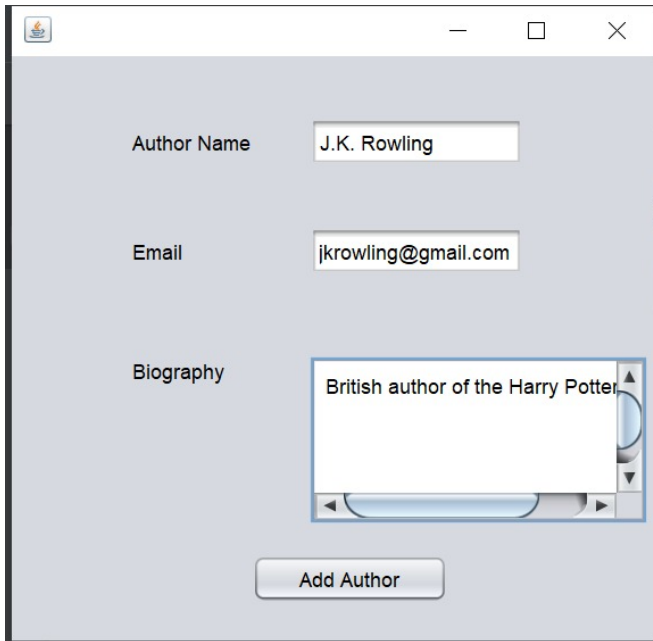
Main Screen



Librarian Screen



Add Author Screen



A screenshot of a web application window titled "Add Author Screen". The window has a light gray background and a standard window title bar with a minimize button, a maximize button, and a close button. The form contains three input fields: "Author Name" with the text "J.K. Rowling", "Email" with the text "jkrowling@gmail.com", and "Biography" with the text "British author of the Harry Potter". The "Biography" field is a text area with a blue border and a scrollbar. At the bottom of the form is a button labeled "Add Author".

Author Name	J.K. Rowling
Email	jkrowling@gmail.com
Biography	British author of the Harry Potter

Add Author


Add Publisher Screen



A screenshot of a web application window titled "Add Publisher Screen". The window has a light gray background and a standard window title bar with a minimize button, a maximize button, and a close button. The form contains three input fields: "Publisher Name" with the text "oomsbury Publishing", "Email" with the text "info@bloomsbury.co", and "Address" with the text "London, UK". The "Address" field is a text area with a blue border. At the bottom of the form is a button labeled "Add Publisher".

Publisher Name	oomsbury Publishing
Email	info@bloomsbury.co
Address	London, UK

Add Publisher



Title

Philosopher's Stone

Author

J.K. Rowling

ISBN


9780

Publisher

Bloomsbury Publishing

Publication Date

4 Mar 2023



of Copies

43

Add Book

Add Book Screen

Library Management System

Searched Text:

Find Book By Title Find Borrower By Name

Find Book By Author Find Borrower By Email

Title 1	Title 2	Title 3	Title 4

Search Screen

Library Management System

Borrower Name: Aybuke

Book Name: hilosopher's Stone

GIVE

Book Name	Author	ISBN	Publicatio...	Publisher	Available ...
Harry Pott...	J.K. Rowli...	9780	Wed Mar ...	Bloomsbu...	43

Borrower Screen