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### Scenario: Library Management System

You are tasked by the Makhema Library with creating a simple library management system that allows users to manage a collection of books. The system should have the following features:

1. **Add a Book:** Users should be able to add new books to the library. Each book has:
  - Title
  - Author
  - ISBN
  - Availability (whether it is currently available for borrowing)
2. **View Books:** Users should be able to view the list of all books in the library, displaying their details and availability.
3. **Borrow a Book:** Users should be able to borrow a book if it is available. When a book is borrowed, its availability status should be updated.
4. **Return a Book:** Users should be able to return a borrowed book, updating its availability status.
5. **Search for a Book:** Users should be able to search for a book by title or author.

### Requirements:

- Implement the system using Object-Oriented Programming (OOP) principles.
- Create a Book class with the necessary attributes and methods.
- Create a Library class that manages a collection of books and handles the logic for adding, viewing, borrowing, returning, and searching for books.
- Use a simple text-based interface (console input/output) to interact with the user.

### Bonus Challenge:

- Implement error handling for cases such as trying to borrow a book that is not available or returning a book that was not borrowed.
- Optionally, you can implement a graphical user interface (GUI) using JavaFX once the console version is complete.

This scenario allows you to practice OOP concepts, data structures (like lists or arrays), and user interaction, making it a well-rounded coding exercise! Let me know if you need help getting started or have any specific questions about implementing this!

default

## Main

+library: Library

## Book

+Title: String  
+Author: String  
+ISBN: int  
+IsAvailable: boolean

+Book()  
+Attributes()  
+Attributes()  
+borrow()  
+returnTheBook()  
+getTitle(): String  
+getAuthor(): String

## Library

-books: ArrayList<Book>

+Library()  
+addBook(): void  
+displayBooks(): void  
+borrowBook(ISBN:int ): void  
+returnBook(ISBN:int): void  
+searchBook(): void

## LibraryMenu

-library: Library

+LibraryMenu(library:Library)  
+showMenu(): void