

Scenario:

You are developing a **Library Management System** where books can be **borrowed and returned** multiple times. The system automatically runs **predefined transactions** inside a loop instead of taking user input.

Task 1: Implement the **Book Class** (BLC - Business Logic Class)

- Create a **Java class** named **Book** with the following **private attributes**:
 - **bookId** (int) → Unique ID for the book.
 - **title** (String) → Book title.
 - **availableCopies** (int) → Number of copies available.
- Implement:
 1. **Parameterized constructor** to initialize attributes.
 2. **Getter methods** to retrieve book details.
 3. **borrowBook()** method to reduce available copies by 1 (only if copies are available).
 4. **returnBook()** method to increase available copies by 1.

Task 2: Implement the **LibrarySystem Class** (ELC - Executable Logic Class)

- Inside the **main** method:
 1. **Create a Book object** with predefined values.
 2. **Use a loop** to simulate borrowing and returning books.
 3. **Perform automatic transactions** without user input.
 4. **Print book details after each transaction.**

Conditions:

1. A book **cannot be borrowed** if no copies are available.
2. A book **can always be returned**, increasing the number of available copies.
3. The **loop automatically performs transactions and stops after a fixed number of operations.**

Example Run (Expected Output):

```
Book Details:
Book ID: 101
Title: Harry Potter
Available Copies: 2

Attempting to borrow a book...
Book borrowed successfully! Updated Available Copies: 1

Attempting to borrow a book...
Book borrowed successfully! Updated Available Copies: 0

Attempting to borrow a book...
Book is not available for borrowing.

Attempting to return a book...
```

Book returned successfully! Updated Available Copies: 1

Attempting to return a book...

Book returned successfully! Updated Available Copies: 2

Library system transactions completed.