FINAL PROJECT

Classes:

* Book: This class will represent a book in the library, encapsulating attributes like title, author, ISBN, and availability status (available, borrowed, etc.).

* LibraryManagementSystem: This class will handle the overall library operations, providing methods for adding, borrowing, returning, and searching for books.

Functionalities:

* Adding a Book: This method will allow the librarian to add a new book to the library system, prompting for details like title, author, and ISBN.

* Borrowing a Book: This method will enable a user (borrower) to search for a book by title

or ISBN and borrow it if available, updating the book's availability status.

* Returning a Book: This method will allow a borrower to return a borrowed book, marking it as available again in the system.

* Searching for Books: This method will assist users in finding books by title, author, or ISBN, displaying relevant information.

Here is the code

```
import java.util.ArrayList;

import java.util.Scanner;


public class LibraryManagementSystem {


    private static Scanner scanner = new
Scanner(System.in);

    private static ArrayList<Book> books =
new ArrayList<>(); // List to store books
```

```
    public static void main(String[] args) {
        int choice;

        do {
            System.out.println("\nLibrary
Management System");
            System.out.println("1. Add Book");
            System.out.println("2. Borrow
Book");
            System.out.println("3. Return
Book");
            System.out.println("4. Search
Books");
            System.out.println("5. Exit");
            System.out.print("Enter your
choice: ");
```

```
choice = scanner.nextInt();

switch (choice) {
    case 1:
        addBook();
        break;
    case 2:
        borrowBook();
        break;
    case 3:
        returnBook();
        break;
    case 4:
        searchBooks();
        break;
```

```
                case 5:
                    System.out.println("Exiting
Library Management System...");
                    break;
                default:
                    System.out.println("Invalid
choice!");
            }
        } while (choice != 5);
    }

    // Implement methods for addBook(),
borrowBook(), returnBook(),
searchBooks()
}

class Book {
```

```
    // Define attributes and methods for
Book class
}
```

THANK YOU