Import java.util.ArrayList;

Import java.util.List;

Import java.util.Scanner;

Class Book {

Private String title;

Private String author;

Private boolean available;

Public Book(String title, String author) {

This.title = title;

This.author = author;

This.available = true;

}

Public String getTitle() {

Return title;

}

Public String getAuthor() {

Return author;

}

Public boolean isAvailable() {

Return available;

}

Public void borrow() {

Available = false;

}

Public void returnBook() {

Available = true;

}

@Override

Public String toString() {

Return “Title: “ + title + “ | Author: “ + author + “ | Available: “ + available;

}

}

Class Library {

Private List<Book> books;

Public Library() {

Books = new ArrayList<>();

}

Public void addBook(String title, String author) {

Book book = new Book(title, author);

Books.add(book);

}

Public void displayBooks() {

System.out.println(“Library Inventory:”);

For (Book book : books) {

System.out.println(book);

}

}

Public void borrowBook(String title) {

For (Book book : books) {

If (book.getTitle().equalsIgnoreCase(title) && book.isAvailable()) {

Book.borrow();

System.out.println(“You have successfully borrowed: “ + title);

Return;

}

}

System.out.println(“Book not found or already borrowed.”);

}

Public void returnBook(String title) {

For (Book book : books) {

If (book.getTitle().equalsIgnoreCase(title) && !book.isAvailable()) {

Book.returnBook();

System.out.println(“You have successfully returned: “ + title);

Return;

}

}

System.out.println(“Book not found or already returned.”);

}

}

Public class LibraryManagementSystem {

Public static void main(String[] args) {

Library library = new Library();

Scanner scanner = new Scanner(System.in);

While (true) {

System.out.println(“\nLibrary Management System Menu:”);

System.out.println(“1. Add Book”);

System.out.println(“2. Display Books”);

System.out.println(“3. Borrow Book”);

System.out.println(“4. Return Book”);

System.out.println(“5. Exit”);

System.out.print(“Enter your choice: “);

Int choice = scanner.nextInt();

Scanner.nextLine(); // Consume newline

Switch (choice) {

Case 1:

System.out.print(“Enter title of the book: “);

String title = scanner.nextLine();

System.out.print(“Enter author of the book: “);

String author = scanner.nextLine();

Library.addBook(title, author);

Break;

Case 2:

Library.displayBooks();

Break;

Case 3:

System.out.print(“Enter the title of the book you want to borrow: “);

String borrowTitle = scanner.nextLine();

Library.borrowBook(borrowTitle);

Break;

Case 4:

System.out.print(“Enter the title of the book you want to return: “);

String returnTitle = scanner.nextLine();

Library.returnBook(returnTitle);

Break;

Case 5:

System.out.println(“Exiting the Library Management System.”);

Scanner.close();

System.exit(0);

Default:

System.out.println(“Invalid choice. Please try again.”);

}

}

}

}