```
import java.util.*;

class Book {
    String title;
    String author;
    boolean isAvailable;

    // Constructor to create a new book
    public Book(String title, String author) {
        this.title = title;
        this.author = author;
        this.isAvailable = true; // Initially, the book is available
    }

    // Display book information
    public void displayBook() {
        System.out.println("Title: " + title + ", Author: " + author + ", Available: " + (isAvailable ? "Yes" :
"No"));
    }

    // Borrow the book (set availability to false)
    public void borrowBook() {
        if (isAvailable) {
            isAvailable = false;
            System.out.println("You have successfully borrowed the book: " + title);
        } else {
            System.out.println("Sorry, the book '" + title + "' is currently not available.");
        }
    }

    // Return the book (set availability to true)
    public void returnBook() {
        if (!isAvailable) {
            isAvailable = true;
            System.out.println("You have successfully returned the book: " + title);
        } else {
            System.out.println("The book '" + title + "' was not borrowed.");
        }
    }
}

public class OnlineLibraryManagementSystem {

    private static List<Book> library = new ArrayList<>();
    private static Scanner scanner = new Scanner(System.in);

    // Method to add a new book to the library
    public static void addBook(String title, String author) {
        Book book = new Book(title, author);
        library.add(book);
        System.out.println("The book '" + title + "' by " + author + " has been added to the library.");
    }

    // Method to display all books in the library
    public static void displayBooks() {
```

```
    if (library.isEmpty()) {
        System.out.println("The library is empty.");
    } else {
        System.out.println("\nAvailable Books in the Library:");
        for (Book book : library) {
            book.displayBook();
        }
    }
}

// Method to borrow a book
public static void borrowBook() {
    System.out.print("Enter the title of the book you want to borrow: ");
    String title = scanner.nextLine();

    boolean found = false;
    for (Book book : library) {
        if (book.title.equalsIgnoreCase(title)) {
            found = true;
            book.borrowBook();
            break;
        }
    }

    if (!found) {
        System.out.println("The book '" + title + "' was not found in the library.");
    }
}

// Method to return a borrowed book
public static void returnBook() {
    System.out.print("Enter the title of the book you want to return: ");
    String title = scanner.nextLine();

    boolean found = false;
    for (Book book : library) {
        if (book.title.equalsIgnoreCase(title)) {
            found = true;
            book.returnBook();
            break;
        }
    }

    if (!found) {
        System.out.println("The book '" + title + "' was not found in the library.");
    }
}

// Main method to display the menu and handle user input
public static void main(String[] args) {
    // Adding some sample books to the library
    addBook("The Great Gatsby", "F. Scott Fitzgerald");
    addBook("To Kill a Mockingbird", "Harper Lee");
    addBook("1984", "George Orwell");
```

```
        // Main menu loop
        while (true) {
            System.out.println("\nWelcome to the Online Library Management System");
            System.out.println("1. Display Available Books");
            System.out.println("2. Borrow a Book");
            System.out.println("3. Return a Book");
            System.out.println("4. Exit");
            System.out.print("Choose an option: ");
            int choice = Integer.parseInt(scanner.nextLine());

            switch (choice) {
                case 1:
                    displayBooks();
                    break;
                case 2:
                    borrowBook();
                    break;
                case 3:
                    returnBook();
                    break;
                case 4:
                    System.out.println("Exiting the library system. Goodbye!");
                    return; // Exit the program
                default:
                    System.out.println("Invalid option. Please try again.");
            }
        }
    }
}
```