Assignment on OOPs Concept

Problem: Building a Library System

Create a simple library system that models books, authors, and library users. Your system should incorporate the following OOP concepts:

Book Class:

- Attributes: `title`, `author`, `ISBN`, `availableCopies`, `totalCopies`, etc.

- Methods: `borrow()`, `returnBook()`, `isAvailable()`, etc.

Author Class:

- Attributes: `name`, `birthDate`, `biography`, etc.

- Methods: `getAuthorInfo()`, etc.

LibraryUser Class:

- Attributes: `userId`, `name`, `userType`, etc.

- Methods: `displayInfo()`, `borrowBook()`, `returnBook()`, etc.

Student Class (Inherits from `LibraryUser`):

- Additional attributes: `studentId`, `yearOfStudy`, etc.

- Override `displayInfo()` to include student-specific information.

Professor Class (Inherits from `LibraryUser`):

- Additional attributes: `employeeId`, `department`, etc.

- Override `displayInfo()` to include professor-specific information.

Your program should allow users to:

- Add and remove books from the library system.

- Borrow and return books, updating the available copies accordingly.

- Display information about books, authors, and users.

- Handle different user types (students, professors) appropriately.