

Library Management System



Requirments

- 🚺 User Management
 - Each user (student or librarian) must have a unique ID.
 - Users must have a name and age when registering.
- Book Management
 - Each book must have a unique ID, title, author, and category.
 - Books should belong to a predefined category (e.g., Fiction, Science, Technology).
- Borrowing Rules
 - Students can borrow up to 3 books at a time.
 - If a book is already borrowed, it cannot be borrowed again until returned.
 - When a student returns a book, it should be marked as available.
 - If a student tries to return a book they never borrowed, the system should notify them.



Library Management System

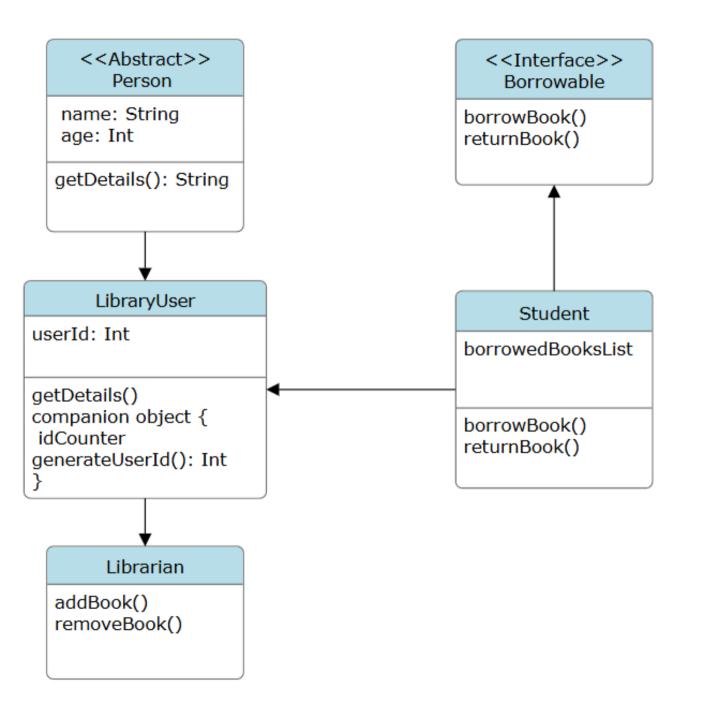


Requirments

- 4 Librarian Permissions
 - Only librarians can add new books to the system.
 - Only librarians can remove books from the system.
- 5 System Behavior
 - The system should automatically generate user IDs upon registration.
 - It should prevent invalid actions (e.g., borrowing more than 3 books).
 - Users should be able to view their details at any time.



- 1.Create userId using generateUserId()
- 2. Just one single instance from Library
- 3. Student extend from Borrowable interface and Library User class



Book

id: Int

title: String author: String

category: BookCategory isBorrowed: Boolean

BookCategory

Values : FICTION NON_FICTION SCIENCE TECHNOLOGY

Library

books: List<Book> users: List<User>

registerUser()

findBookById():Book

showAllBooks()