



Library Management System



Requirments

1 User Management

- Each user (student or librarian) must have a unique ID.
- Users must have a name and age when registering.

2 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).

3 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.



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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 LibraryUser class

