**Case Study: Library Management System**

**Objective:** Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will manage a library system, performing CRUD (Create, Read, Update, Delete) operations for books, and include functionality for issuing books to members.

**Functionalities:**

1. **Book Management:**
   * Add a new book
   * View book details
   * Update book information
   * Delete a book
2. **Issue Book:**
   * Display list of available books
   * Display list of members
   * Issue a selected book to a selected member
   * Update the issue record in the database (issue\_date, return\_date initially null)
   * Validate that the selected book is available (not already issued)
   * Validate that the selected member can issue more books (limit not reached)

**Database Schema:**

* **Book Table:**
  + book\_id (Primary Key)
  + title
  + author
  + genre
  + price
  + available\_copies
* **Member Table:**
  + member\_id (Primary Key)
  + name
  + email
  + phone
  + books\_issued (stores count of books issued)
* **Issue Table:**
  + issue\_id (Primary Key)
  + book\_id (Foreign Key references Book Table)
  + member\_id (Foreign Key references Member Table)
  + issue\_date
  + return\_date (nullable)

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for CRUD operations for books and issuing books.
* Ensure that the application updates the available\_copies in the Book table and books\_issued in the Member table appropriately.
* Handle exceptions effectively and provide user-friendly error messages.
* Ensure the application code is clean, well-documented, and follows standard coding conventions.

**Submission:**

* Submit the complete source code along with a README file that provides setup and usage instructions.
* Share your project by uploading it to a public GitHub repository.
* Provide the link to the GitHub repository.