**Case Study: Digital Library Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a digital library management system for a communications and media company, allowing users to manage e-books, authors, and user memberships.

**Functionalities:**

1. **E-Book Management:**
   * Add a new e-book
   * View e-book details
   * Update e-book information
   * Delete an e-book
2. **Author Management:**
   * Add a new author
   * View author details
   * Update author information
   * Delete an author
3. **Membership Management:**
   * Register a new user
   * View user membership details
   * Update membership information
   * Cancel a membership

**Database Schema:**

* **E-Book Table:**
  + ebook\_id (Primary Key)
  + title
  + genre
  + publication\_date
  + author\_id (Foreign Key references Author Table)
  + available\_copies
* **Author Table:**
  + author\_id (Primary Key)
  + name
  + bio
  + nationality
  + birth\_date
* **User Table:**
  + user\_id (Primary Key)
  + username
  + email
  + date\_of\_birth
  + membership\_date
  + membership\_status (active/inactive)

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing e-books, authors, and user memberships.
* Ensure that the application updates membership statuses and handles user, e-book, and author data efficiently.
* 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 to the coaches.