**Case Study: Multimedia Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a multimedia library management system, allowing users to manage media items, users, and rentals.

**Functionalities:**

1. **Media Item Management:**
   * Add new media items (movies, music albums, etc.) to the library
   * View media item details
   * Update media item information
   * Delete media items from the library
2. **User Management:**
   * Register new users
   * View user details
   * Update user information
   * Delete users
3. **Rental Management:**
   * Rent out media items to users
   * View rental details
   * Update rental information (return media items)
   * Calculate late fees for overdue items

**Database Schema:**

* **Media Item Table:**
  + item\_id (Primary Key)
  + title
  + type (Movie, Music, etc.)
  + genre
  + release\_date
  + available\_copies
  + total\_copies
* **User Table:**
  + user\_id (Primary Key)
  + name
  + contact\_number
  + email
  + address
* **Rental Table:**
  + rental\_id (Primary Key)
  + item\_id (Foreign Key references Media Item Table)
  + user\_id (Foreign Key references User Table)
  + rental\_date
  + return\_date
  + returned (Boolean)

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing media items, users, and rentals.
* Ensure the application allows for renting items, updating rental status, and managing library inventory 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.