**Case Study: Maintenance Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a maintenance management system for a manufacturing plant, allowing users to manage equipment, maintenance schedules, and maintenance logs.

**Functionalities:**

1. **Equipment Management:**
   * Add new equipment
   * View equipment details
   * Update equipment information
   * Delete equipment
2. **Maintenance Schedule Management:**
   * Schedule maintenance for equipment
   * View maintenance schedules
   * Update maintenance schedules
   * Cancel a maintenance schedule
3. **Maintenance Log Management:**
   * Log maintenance activities
   * View maintenance logs
   * Update maintenance logs
   * Delete maintenance logs

**Database Schema:**

* **Equipment Table:**
  + equipment\_id (Primary Key)
  + name
  + description
  + purchase\_date
  + status (active/inactive)
* **Maintenance Schedule Table:**
  + schedule\_id (Primary Key)
  + equipment\_id (Foreign Key references Equipment Table)
  + scheduled\_date
  + status (scheduled/completed/cancelled)
* **Maintenance Log Table:**
  + log\_id (Primary Key)
  + equipment\_id (Foreign Key references Equipment Table)
  + maintenance\_date
  + description
  + technician\_name

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing equipment, maintenance schedules, and maintenance logs.
* Ensure that the application updates the status of equipment and tracks maintenance activities.
* 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.