**Case Study: Classroom Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a classroom management system, allowing users to manage courses, students, and grades.

**Functionalities:**

1. **Course Management:**
   * Add a new course
   * View course details
   * Update course information
   * Delete a course
2. **Student Management:**
   * Register a new student
   * View student details
   * Update student information
   * Delete a student
3. **Grade Management:**
   * Assign a grade to a student for a course
   * View student grades
   * Update grade information
   * Remove a grade

**Database Schema:**

* **Course Table:**
  + course\_id (Primary Key)
  + title
  + instructor
  + schedule
  + credits
* **Student Table:**
  + student\_id (Primary Key)
  + name
  + email
  + phone\_number
  + address
* **Grade Table:**
  + grade\_id (Primary Key)
  + course\_id (Foreign Key references Course Table)
  + student\_id (Foreign Key references Student Table)
  + grade

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing courses, students, and grades.
* Ensure that the application calculates GPA for each student based on their grades.
* 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.