**Case Study: Grade Calculation**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will manage a school management system, allowing users to perform basic operations related to student and teacher management, course scheduling, and grade management.

**Functionalities:**

1. **Student Management:**
   * Add a new student
   * View student details
   * Update student information
   * Delete a student
2. **Teacher Management:**
   * Add a new teacher
   * View teacher details
   * Update teacher information
   * Delete a teacher
3. **Course Management:**
   * Add a new course
   * View course details
   * Update course information
   * Delete a course
4. **Grade Management:**
   * Assign grades to students for courses
   * View grades of students for courses
   * Update grades of students for courses
   * Calculate GPA (Grade Point Average) of students

**Database Schema:**

* **Student Table:**
  + student\_id (Primary Key)
  + name
  + date\_of\_birth
  + address
  + email
* **Teacher Table:**
  + teacher\_id (Primary Key)
  + name
  + date\_of\_birth
  + address
  + email
* **Course Table:**
  + course\_id (Primary Key)
  + title
  + description
  + teacher\_id (Foreign Key references Teacher Table)
* **Grade Table:**
  + grade\_id (Primary Key)
  + student\_id (Foreign Key references Student Table)
  + course\_id (Foreign Key references Course Table)
  + grade

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for student, teacher, course, and grade management.
* Ensure that the application handles grade calculation and GPA calculation correctly.
* 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.