**Case Study: Customer Loyalty Program**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a customer loyalty program for a retail business, allowing users to manage customers, rewards, and purchases.

**Functionalities:**

1. **Customer Management:**
   * Add a new customer
   * View customer details
   * Update customer information
   * Delete a customer
2. **Reward Management:**
   * Add a new reward
   * View reward details
   * Update reward information
   * Delete a reward
3. **Purchase Management:**
   * Add a new purchase
   * View purchase details
   * Update purchase information
   * Delete a purchase

**Database Schema:**

* **Customer Table:**
  + customer\_id (Primary Key)
  + name
  + email
  + phone
  + total\_points
* **Reward Table:**
  + reward\_id (Primary Key)
  + name
  + points\_required
  + description
* **Purchase Table:**
  + purchase\_id (Primary Key)
  + customer\_id (Foreign Key references Customer Table)
  + reward\_id (Foreign Key references Reward Table)
  + purchase\_date
  + points\_earned

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing customers, rewards, and purchases.
* Ensure that the application updates customer points and handles reward and purchase 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.