**Case Study: Product Warranty Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a product warranty management system for a consumer electronics company, allowing users to manage warranty claims, product repairs, and customer communication.

**Functionalities:**

1. **Claim Management:**
   * Register a new warranty claim
   * View claim details
   * Update claim status
   * Delete a claim
2. **Repair Management:**
   * Schedule a repair for a claimed product
   * View repair details
   * Update repair status
   * Delete a repair record
3. **Communication Management:**
   * Send notifications to customers regarding their claims and repairs
   * View communication history
   * Update communication status
   * Delete a communication record

**Database Schema:**

* **Claim Table:**
  + claim\_id (Primary Key)
  + customer\_id (Foreign Key references Customer Table)
  + product\_id (Foreign Key references Product Table)
  + claim\_date
  + description
  + status
* **Repair Table:**
  + repair\_id (Primary Key)
  + claim\_id (Foreign Key references Claim Table)
  + repair\_date
  + repair\_details
  + status
* **Communication Table:**
  + communication\_id (Primary Key)
  + claim\_id (Foreign Key references Claim Table)
  + repair\_id (Foreign Key references Repair Table)
  + communication\_date
  + message
  + status

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing warranty claims, repairs, and communications.
* Ensure that the application handles warranty claims and repairs efficiently, including communication with customers.
* 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.