**Case Study: Telecommunication Billing System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a telecommunication billing system, allowing users to manage customers, plans, and generate bills.

**Functionalities:**

1. **Customer Management:**
   * Add new customers
   * View customer details
   * Update customer information
   * Remove customers
2. **Plan Management:**
   * Add new plans (e.g., mobile, internet, TV)
   * View plan details
   * Update plan information
   * Remove plans
3. **Billing Management:**
   * Generate bills for customers based on their subscribed plans and usage
   * View billing details
   * Update billing information
   * Remove billing records

**Database Schema:**

* **Customer Table:**
  + customer\_id (Primary Key)
  + name
  + email
  + contact\_number
  + address
* **Plan Table:**
  + plan\_id (Primary Key)
  + name
  + description
  + price
* **Usage Table:**
  + usage\_id (Primary Key)
  + customer\_id (Foreign Key references Customer Table)
  + plan\_id (Foreign Key references Plan Table)
  + usage\_amount
  + usage\_date
* **Bill Table:**
  + bill\_id (Primary Key)
  + customer\_id (Foreign Key references Customer Table)
  + total\_amount
  + billing\_date

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing customers, plans, and billing.
* Ensure the application allows for generating bills based on customer usage and plan details, updating billing information, and managing customer information 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.