**Case Study: Hotel Reservation System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will manage a simple hotel reservation system, allowing users to manage rooms, customers, and reservations.

**Functionalities:**

1. **Room Management:**
   * Add a new room
   * View room details
   * Update room information
   * Delete a room
2. **Customer Management:**
   * Register a new customer
   * View customer details
   * Update customer information
   * Delete a customer
3. **Reservation Management:**
   * Make a reservation for a customer
   * View reservation details
   * Cancel a reservation
   * List all reservations for a specific customer

**Database Schema:**

* **Room Table:**
  + room\_id (Primary Key)
  + room\_number
  + type
  + price\_per\_night
  + status (available/booked)
* **Customer Table:**
  + customer\_id (Primary Key)
  + name
  + email
  + phone\_number
  + address
* **Reservation Table:**
  + reservation\_id (Primary Key)
  + room\_id (Foreign Key references Room Table)
  + customer\_id (Foreign Key references Customer Table)
  + check\_in\_date
  + check\_out\_date
  + status (reserved/canceled)

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing rooms, customers, and reservations.
* Ensure that the application updates the status in the Room table appropriately after a reservation is made or canceled.
* 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.