**Case Study: Automobile Inventory Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate an automobile inventory management system, allowing users to manage vehicles, customers, and sales transactions.

**Functionalities:**

1. **Vehicle Management:**
   * Add new vehicles to the inventory
   * View vehicle details
   * Update vehicle information
   * Delete vehicles from the inventory
2. **Customer Management:**
   * Register new customers
   * View customer details
   * Update customer information
   * Delete customer accounts
3. **Sales Transaction Management:**
   * Record vehicle sales
   * View sales transaction details
   * Generate sales reports
   * Calculate total sales revenue

**Database Schema:**

* **Vehicle Table:**
  + vehicle\_id (Primary Key)
  + make
  + model
  + year
  + price
  + available\_quantity
* **Customer Table:**
  + customer\_id (Primary Key)
  + customer\_name
  + email
  + phone\_number
* **Sales Transaction Table:**
  + transaction\_id (Primary Key)
  + vehicle\_id (Foreign Key references Vehicle Table)
  + customer\_id (Foreign Key references Customer Table)
  + transaction\_date
  + amount

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing vehicles, customers, and sales transactions.
* Ensure that the application allows for recording vehicle sales, viewing sales details, generating reports, and calculating total sales revenue.
* 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.