**Case Study: Transportation Management System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a transportation management system for a logistics company, allowing users to manage vehicles, routes, and cargo.

**Functionalities:**

1. **Vehicle Management:**
   * Add new vehicles to the fleet
   * View vehicle details
   * Update vehicle information
   * Delete vehicles from the fleet
2. **Route Management:**
   * Create new routes for transportation
   * View route details
   * Update route information
   * Delete routes
3. **Cargo Management:**
   * Register new cargo items for transport
   * Assign cargo to vehicles
   * Update cargo status
   * View cargo details

**Database Schema:**

* **Vehicle Table:**
  + vehicle\_id (Primary Key)
  + vehicle\_number
  + capacity
  + status (Available, In Use, Under Maintenance)
* **Route Table:**
  + route\_id (Primary Key)
  + origin
  + destination
  + distance
  + estimated\_duration
* **Cargo Table:**
  + cargo\_id (Primary Key)
  + description
  + weight
  + status (Pending, In Transit, Delivered)
  + assigned\_vehicle\_id (Foreign Key references Vehicle Table)

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing vehicles, routes, and cargo.
* Ensure the application allows for assigning cargo to vehicles, updating cargo status, and managing routes 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.