**Case Study: Stock Trading System**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a stock trading system, allowing users to manage stocks, portfolios, and transactions.

**Functionalities:**

1. **Stock Management:**
   * Add new stocks
   * View stock details
   * Update stock information
   * Remove stocks
2. **Portfolio Management:**
   * Create new portfolios
   * View portfolio details
   * Update portfolio information
   * Delete portfolios
3. **Transaction Management:**
   * Buy stocks
   * Sell stocks
   * View transaction history

**Database Schema:**

* **Stock Table:**
  + stock\_id (Primary Key)
  + stock\_name
  + price\_per\_share
  + quantity\_available
* **Portfolio Table:**
  + portfolio\_id (Primary Key)
  + portfolio\_name
  + owner\_id (Foreign Key references User Table)
* **Transaction Table:**
  + transaction\_id (Primary Key)
  + stock\_id (Foreign Key references Stock Table)
  + portfolio\_id (Foreign Key references Portfolio Table)
  + transaction\_type (Buy/Sell)
  + quantity
  + transaction\_date
* **User Table:**
  + user\_id (Primary Key)
  + name
  + email
  + contact\_number
  + address

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing stocks, portfolios, and transactions.
* Ensure the application allows for buying and selling stocks, updating portfolio information, and managing stock details 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.