**Case Study: Digital Marketplace**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a digital marketplace, allowing users to manage products, sellers, and transactions.

**Functionalities:**

1. **Product Management:**
   * Add new products to the marketplace
   * View product details
   * Update product information
   * Delete products from the marketplace
2. **Seller Management:**
   * Register new sellers
   * View seller details
   * Update seller information
   * Delete sellers
3. **Transaction Management:**
   * Process new transactions
   * View transaction details
   * Update transaction status
   * Refund transactions

**Database Schema:**

* **Product Table:**
  + product\_id (Primary Key)
  + name
  + description
  + price
  + quantity\_available
  + category
* **Seller Table:**
  + seller\_id (Primary Key)
  + name
  + email
  + address
  + phone\_number
* **Transaction Table:**
  + transaction\_id (Primary Key)
  + product\_id (Foreign Key references Product Table)
  + seller\_id (Foreign Key references Seller Table)
  + buyer\_id (Foreign Key references Buyer Table)
  + quantity
  + transaction\_date
  + status

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for managing products, sellers, and transactions.
* Ensure the application allows for processing transactions, updating transaction status, and managing product inventory 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.