**Case Study: Shopping Cart**

**Objective:**

Develop a menu-based console application to assess your proficiency in Core Java, MySQL, and JDBC. The application will simulate a simple online shopping system, allowing users to perform basic shopping operations, such as browsing products, adding them to cart, and checking out.

**Functionalities:**

1. **Product Management:**
   * Display list of available products
   * View product details
   * Add a product to cart
   * Remove a product from cart
2. **Cart Management:**
   * View items in cart
   * Update quantity of items in cart
   * Remove items from cart
   * Calculate total price of items in cart
3. **Order Management:**
   * Proceed to checkout
   * Enter shipping details
   * Place the order
   * Generate order confirmation

**Database Schema:**

* **Product Table:**
  + product\_id (Primary Key)
  + name
  + description
  + price
  + stock\_quantity
* **Cart Table:**
  + cart\_id (Primary Key)
  + product\_id (Foreign Key references Product Table)
  + quantity
* **Order Table:**
  + order\_id (Primary Key)
  + cart\_id (Foreign Key references Cart Table)
  + customer\_name
  + shipping\_address
  + order\_date
  + total\_price

**Requirements:**

* Develop a menu-based console application using Core Java.
* Use JDBC for interactions with the MySQL database.
* Implement menu options for browsing products, managing cart, and placing orders.
* Ensure that the application updates the stock quantity of products appropriately.
* 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.