

Project Summary: E-commerce Java System

Overview:

This project is a Java-based e-commerce backend system, structured for modularity and maintainability. It includes models for products, customers, orders, and carts, as well as service classes for business logic and database management. The system uses SQLite for persistent storage and is designed for easy testing and extension (this is only a trial).

Key Components:

- src/models: Contains domain classes such as Product, Customer, Order, Cart, etc.
- src/services: Contains business logic and management (see UML for details)
- src/test: Contains test classes (TestSuite).
- lib/: Contains external libraries (sqlite-jdbc).
- resources/: Contains the SQLite database file and schema documentation.

Major Achievements:

- Implemented a DBManager class for safe CRUD operations on all entities, using upsert logic and transaction management.
- Created sample test programs (TestSuite) to verify all logic functions.
- Provided clear separation between main application logic and standalone test utilities.
- Can be integrated with GUI in a Model-View-Controller architecture.

How to Run:

- Compile and run the application using the provided command-line instructions in README.txt.
- DBTestProgram.java can be run independently to test database operations.

Status:

- All core features and tests are passing.
- The codebase is ready for further development, integration, or deployment.

For more details, see the README files in the project root.

UML Diagram



