Byte Me - E-Commerce College Project

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Project Overview

Byte Me is a comprehensive e-commerce application developed as a college project. The application provides a robust platform for users to interact with an online store, supporting both customer and administrative functionalities.

Features

- *User Authentication*
- Secure user registration and login system
- Separate access for Customers and Admins
- *Inventory Management*
- Admin can add, update, and remove items
- Real-time inventory tracking
- Out-of-stock item management
- *Shopping Experience*
- Browse available items
- Add/remove items from cart
- Modify cart item quantities
- Place and manage orders
- *Order System*
- Create and track orders
- View order status
- Cancel pending orders
- Admin order status management
- *Data Persistence*
- Serialization of user, item, and order data

- Data retention between application sessions

Technologies Used

- *Programming Language*: Java (JDK 21+)
- *Testing Framework*: JUnit 5
- *GUI Framework*: Java Swing
- *Data Storage*: Java Serialization

Installation

Prerequisites

- Java Development Kit (JDK) 21 or higher
- Git
- Integrated Development Environment (IDE)

Steps

- Clone the repository
 bash
 git clone https://github.com/yourusername/byte-me.git
 cd byte-me
- 2. Open the project in your preferred Java IDE
- 3. Build the project using the IDE's build tools
- 4. Run the application by executing the ByteMeApp class

Usage

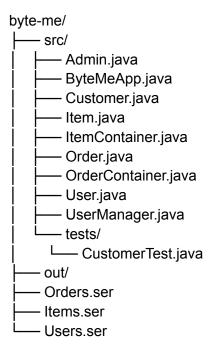
User Roles

- *Customer*
- Register/Login
- Browse items
- Manage shopping cart
- Place and track orders
- *Admin*
- Manage inventory
- View and update order statuses
- Add/remove/modify items

Basic Workflow

- 1. Launch the application
- 2. Choose to register or login
- 3. Navigate through available functionalities based on user role

File Structure



Testing

Unit Tests

The project includes comprehensive unit tests in CustomerTest.java, covering:

- Out-of-stock item ordering scenarios
- Login validation
- User interaction edge cases

Running Tests

- Use your IDE's built-in test runner
- Alternatively, run tests via command line with JUnit

Contributing

- 1. Fork the repository
- 2. Create a feature branch

bash

git checkout -b feature/your-feature-name

3. Commit your changes bash git commit -m 'Add some feature'

 Push to the branch bash git push origin feature/your-feature-name

5. Open a pull request

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