

Project Overview

The OnlineStore project simulates an online electronics store, where users can register, log in, view products, and add items to their shopping cart. Administrators use a separate interface to manage customer orders, update product information, and monitor employee records. This system utilizes JavaFX for a graphical user interface and XML for data persistence, which is ideal for prototyping data storage in this educational context.

Features

For Customers:

- **User Registration and Login:**
 - New users can quickly create an account by providing necessary details. Returning users can log in to access their accounts.
 - User data is stored in XML files, making the registration system lightweight and easy to maintain.
- **Product Catalog:**
 - Customers can view a wide range of electronic products such as televisions, smartphones, laptops, and accessories.
 - Each product is presented with details like name, manufacturer, ID, quantity, and price.
- **Product Filtering and Sorting:**
 - Customers can filter products by criteria like name, producer, minimum price, and maximum price.
 - This filtering allows for a more refined search, improving the user experience by helping them find the desired product faster.
- **Shopping Cart and Order Management:**
 - Customers can add products to their cart by specifying the product ID and quantity.
 - Orders are organized in a separate "Order" section, where customers can view and manage selected products before finalizing the purchase.
 - The "Buy" button enables customers to complete the order, which then moves into an order confirmation state.

For Administrators:

- **Order Tracking and Management:**
 - Administrators can view and confirm customer orders, helping manage the inventory more efficiently.
 - By tracking orders, administrators gain insights into product demand, allowing them to optimize stock levels and product offerings.
- **Inventory Control:**
 - In the "Buy Finished Product" section, administrators can track product stock levels to avoid shortages or overstocking.
 - Administrators are alerted to reorder popular items when stock levels run low, ensuring product availability for customers.
- **Product Management:**
 - Administrators can add, update, or remove products from the inventory.
 - Adding a product requires filling in fields like name, producer, ID, quantity, and price.

- Updating inventory is done by specifying a product's ID and entering the new quantity, ensuring real-time inventory adjustments.
 - Products can also be removed if they are no longer in demand.
- **Employee Management:**
 - The "Employees" section allows administrators to manage employee accounts.
 - Administrators can add new employees by filling in personal details like name, surname, username, and password.
 - Current employees can be removed as needed, maintaining an updated employee record.

System Requirements

- **Java:** Version 8 or higher
- **JavaFX:** Required for the graphical user interface
- **XML:** Used for storing data on employees, customers, and orders

Installation and Setup

1. Clone the Repository:

```
bash
Копировать код
git clone https://github.com/Raikhanov/OnlineStoreSDP.git
```

2. Import Project into an IDE:

- Import the project into your preferred IDE, such as IntelliJ IDEA or Eclipse.

3. Configure JavaFX and XML Dependencies:

- Ensure that JavaFX and XML dependencies are correctly set up to avoid runtime issues.

4. Run the Main Class:

- Locate and execute the main Java class to start the application.

5. Database Initialization:

- The application will automatically set up XML files for data persistence if they do not already exist. Ensure read and write permissions are enabled for XML data files in the project directory.

Detailed Project Structure

- **Client Panel:**
 - Interface for customers to browse, filter, and select products.
 - The shopping cart section shows items added by the customer for review before purchase.
- **Admin Panel:**
 - Management dashboard for administrators with sections for handling orders, products, and employees.
 - Separate sections for each administrative function make navigation straightforward and efficient.

Database and Data Management

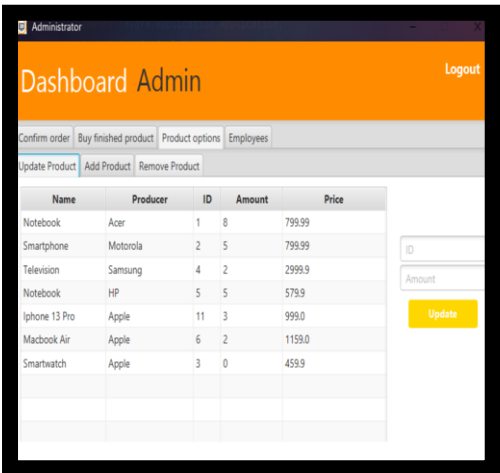
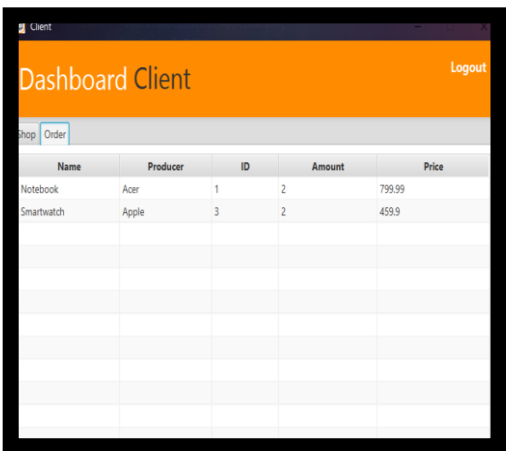
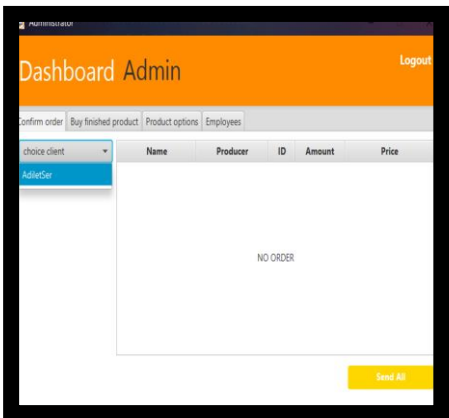
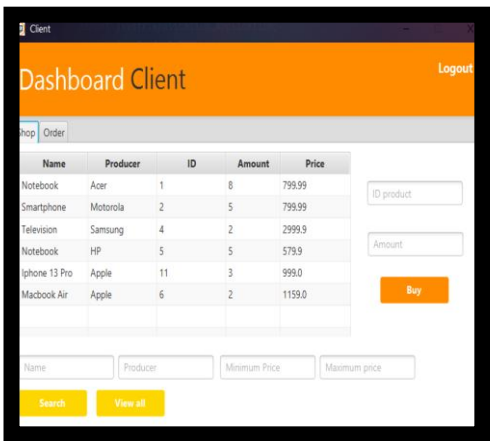
The OnlineStore uses XML files to simulate database tables for simplicity and ease of management:

- **Customers.xml**: Contains records for each customer, including personal details and purchase history.
- **Products.xml**: Stores product information, including name, ID, quantity, and pricing.
- **Orders.xml**: Holds order data to track customer purchases and order statuses.
- **Employees.xml**: Manages records of current employees, their roles, and login credentials.

Technologies Used

- **Java**: Core programming language used for application logic.
- **JavaFX**: Framework for building the graphical user interface.
- **XML**: Data format used for storing records on customers, orders, products, and employees.
- **FXML**: XML-based markup for defining the JavaFX UI structure.

Screenshots



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