**D. Y. Patil College of College of Engineering and Technology, Kolhapur**

**Department of Computer Science & Engineering**

**Class: SY-A Subject: AOOC**

**Experiment no: 15**

**Group No. G17 Mini Project**

**Group Members:**

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**Title of Mini-Project:**

Shopping Cart Console App

**Problem Statement:**

Develop a console-based shopping cart app to manage products, cart operations & checkout.

**Introduction:**

This report presents the development of a **Shopping Cart Console Application**, a simple yet functional program designed to simulate the process of selecting and purchasing items in a retail environment. The application allows users to add items to their cart, view cart contents, remove items, and calculate the total cost—all within a text-based interface. Developed using [mention your programming language, e.g., C++], the program emphasizes object-oriented principles, user interaction via console inputs, and efficient data management. This project demonstrates practical application development skills and provides a foundation for more complex e-commerce systems in the future.

**Module description or working of system:**

The Shopping Cart Console Application is structured into several logical modules that work together to provide a seamless shopping experience through a text-based interface. Each module is responsible for handling a specific part of the system’s functionality. Below is an overview of the main modules and their respective roles:

**1. Product Catalog Module**

* **Function:** Stores and displays a predefined list of available products with their names, prices, and unique IDs.
* **Working:** At the start of the application, a static or dynamically loaded list of products is presented to the user. This list serves as the reference for selecting items to add to the cart.

**2. User Interface / Input Handler Module**

* **Function:** Manages all interactions with the user through the console.
* **Working:** Displays menu options and receives input from the user to perform various operations such as viewing products, adding items, or exiting the application. Validates input to ensure smooth flow of execution.

**3. Cart Management Module**

* **Function:** Handles all operations related to the shopping cart.
* **Key Features:**
  + **Add Item to Cart:** Allows users to select an item and specify the quantity to add.
  + **Remove Item from Cart:** Enables deletion of specific items based on product ID or name.
  + **View Cart Contents:** Displays all items currently in the cart along with quantities, individual prices, and subtotal.
  + **Clear Cart (Optional):** Provides the ability to reset the cart to an empty state.

**4. Price Calculation Modue**

* **Function:** Computes the total cost of all items in the shopping cart.
* **Working:** Multiplies item quantity by unit price for each item in the cart and displays a running total along with the final amount due. Can also include tax or discount calculations if extended.

**5. Exit / Terminatin Module**

* **Function:** Allows users to exit the application safely.
* **Working:** Offers an option to quit the program while optionally displaying a final summary or thanking the user.

**Technologies Used:**

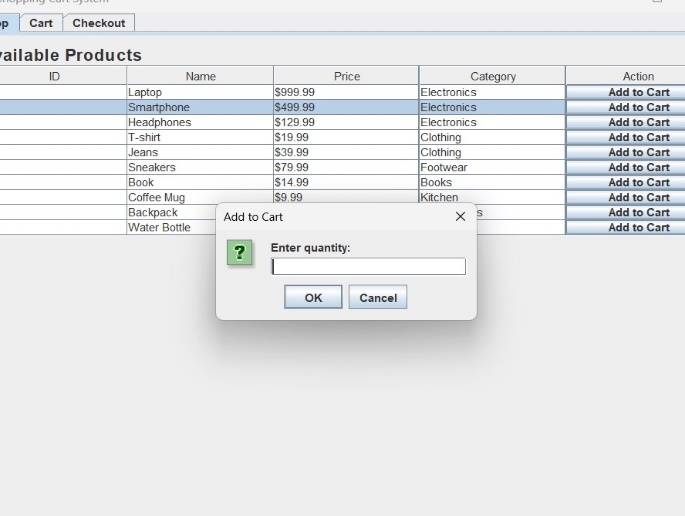
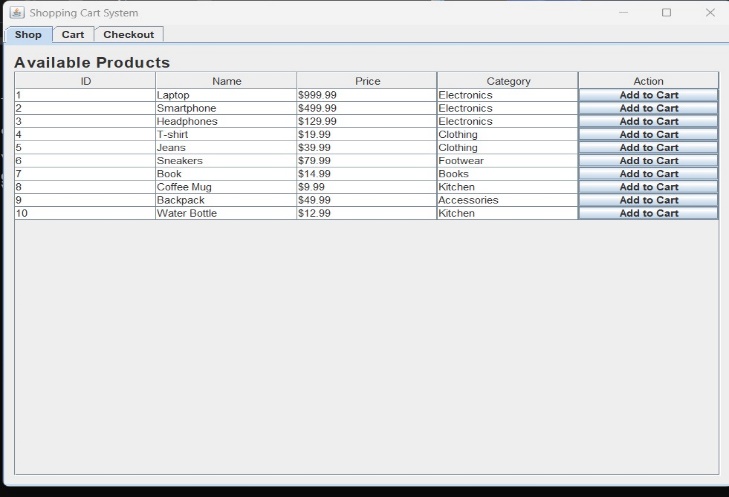
* **Programming Language**: Java
* **GUI Framework**: Java Swing (AWT + Swing Components)
* **Development Tools**: Any Java IDE (e.g., IntelliJ, Eclipse, NetBeans)

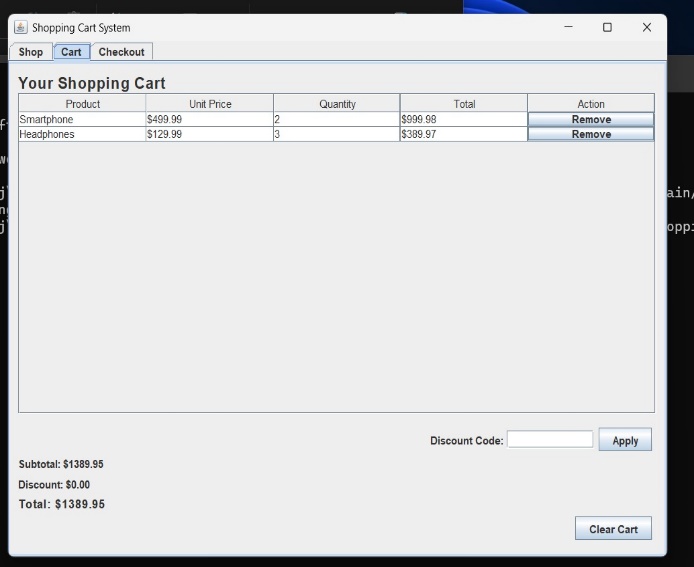
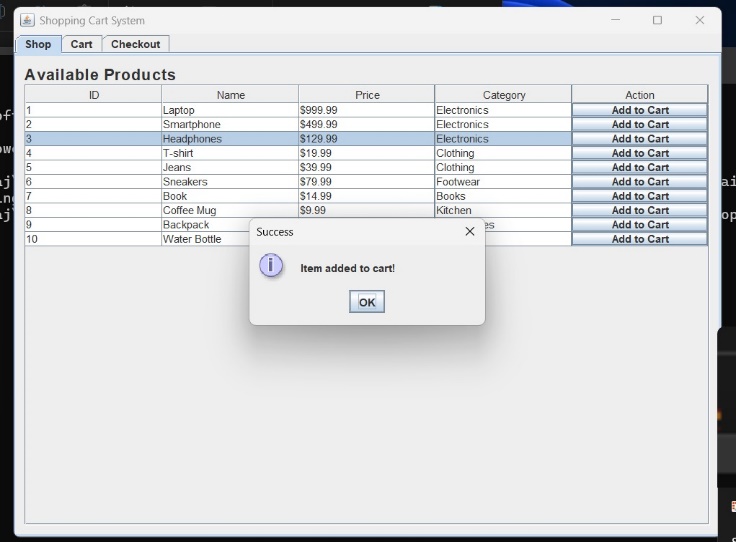
**System Architecture:**

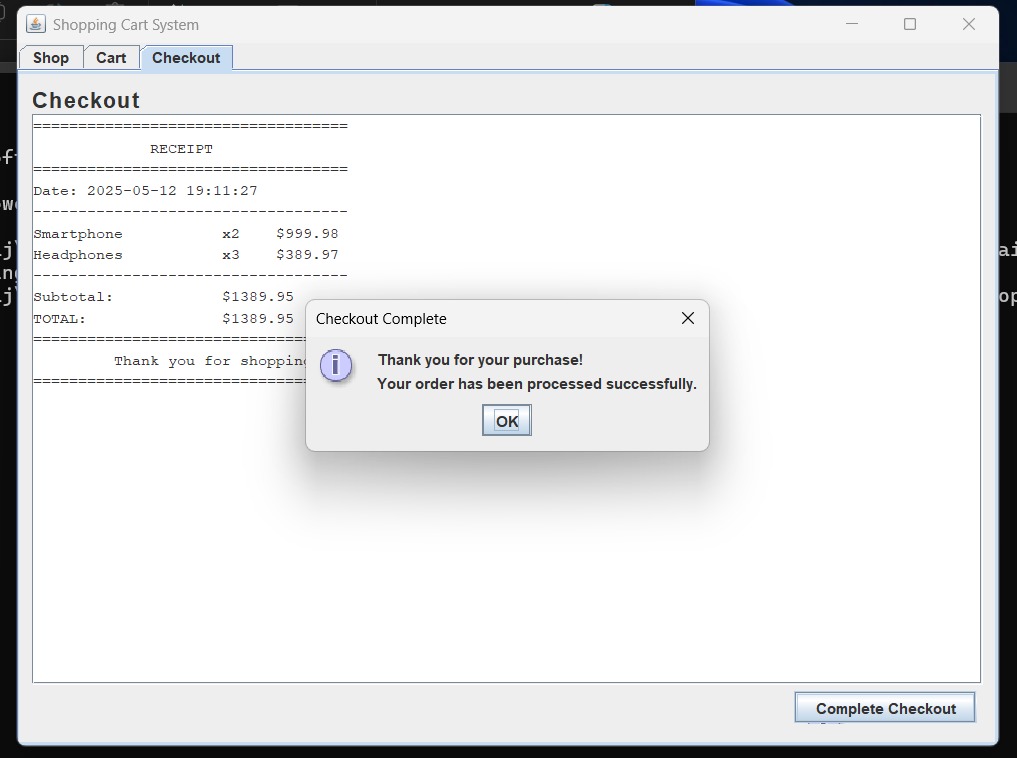
**A diagram of a product

Description automatically generated**

**Screenshots:**

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