E-Commerce Cart System in Java

"OOP-based Gender-Specific Product Selection with Delivery Option"

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Program Overview

- • Developed in Java using Object-Oriented Programming principles
- • Allows user to select gender
- • Displays gender-specific and unisex products
- • Enables adding products to a shopping cart
- • Displays total price of items in cart
- • Collects delivery address before checkout

Class Structure

- 1. **Product Class:**
- -> Attributes: name, price, genderCategory
- -> Methods: getName(), getPrice(), getGenderCategory()

- 2. **Cart Class:**
- -> Holds a list of Product objects
- ->Methods: addProduct(), showCart(), isEmpty(), getTotalAmount()

- 3. **Main Class:**
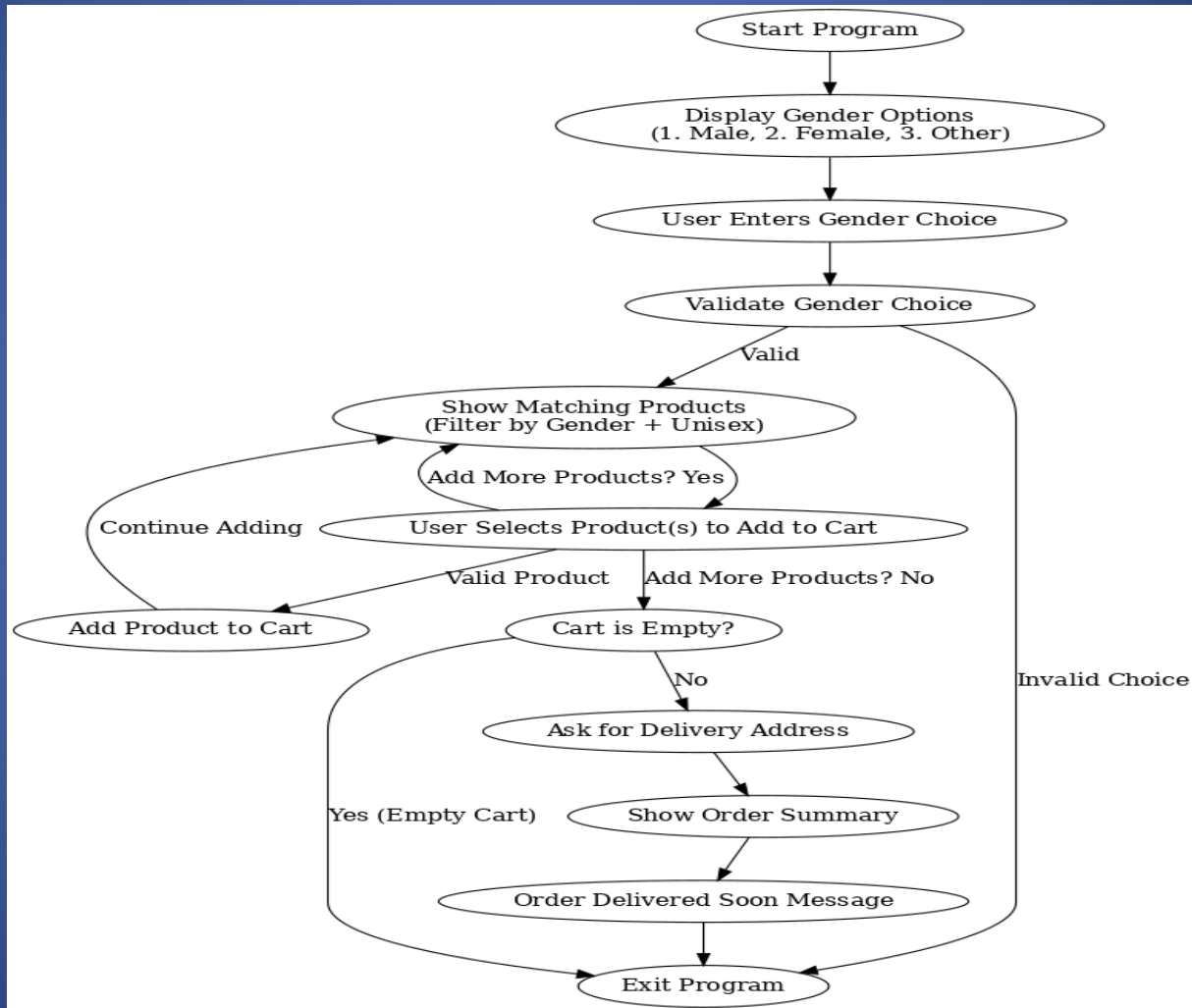- -> Handles user interaction and program flow

Program Flow

- 1. User selects gender
- 2. Program filters and displays matching products
- 3. User adds products to the cart
- 4. Program shows cart with total amount
- 5. User enters delivery address
- 6. Program displays order summary

Key OOP Concepts Used

- • Encapsulation: Private attributes with public getter methods

- • Composition: Cart contains a list of Product objects

- • Abstraction: Separation of data (Product) and functionality (Cart)

- • Modularity: Separate classes for better maintainability

<FLOW DIAGRAM >

Sample Output

- === Select Your Gender ===

- 1. Male

- 2. Female

- 3. Other

- Enter your choice: 2

- You selected: Female

- === Products for Female ===

- 1. Women's Dress - ₹2000

- 2. Women's Handbag - ₹1800

- …

- ▢   Women's Dress added to cart!

- ▢ Order Summary: Total Amount ₹3500

- Delivery Address: 123, Green Street, Chennai

- Your order will be delivered soon….