**TechStore**

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### Project Overview:

TechStore is a Java-based application developed for an Object-Oriented Programming (OOP) course. This simulation of an online store allows users to browse and purchase a variety of tech gadgets, ranging from smartphones to laptops. The project showcases an interactive user experience with real-life application.

### Key Requirements:

- Stability: A robust and crash-resistant program.  
- Clarity: Methods are well-documented and easy to understand.  
- OOP Principles: Incorporates two main classes - `Product` and `Cart` - to manage store inventory and user purchases.  
- Data Handling: Efficient use of Arrays or Lists for storing and manipulating product data.

### Program Instructions:

Upon launching TechStore, users are greeted with a simple menu to navigate through available products. Selecting a product shows its details and allows adding it to the cart. The cart can be reviewed before confirming the purchase, with an option to clear the cart and return to the main menu.

### Challenges and Solutions:

1. Product Duplication: Initially, products were duplicated due to a nested loop error. This was resolved by optimizing the loop structure to prevent repeated calls.  
2. Inventory Management: Products removed from the cart were not returning to the inventory correctly. A method was refined to update inventory in real time when items are added or removed from the cart.

### Reflections:

This project was both challenging and rewarding, offering a glimpse into real-world programming and its applications. It honed my problem-solving skills and deepened my understanding of OOP concepts.