Product Inventory System

The problem I have chosen is the product inventory system. I plan on designing an electronics store that has computer hardware parts such as the CPU, GPU, and RAM; each is a respective section. As well as a section for software such as anti-viruses and operating systems. To keep track of prices, location, and quantity, I plan on writing and reading data into a text file where an admin can change the values in the text file. The IDE I want to use is Visual Studio Code. I realize that we need a .html file from BlueJ so I will import the project to BlueJ if necessary.

Each product will be inherited from an abstract “Product” class. They will specify into their respective sections (CPU, GPU, RAM, etc.). The section classes will be used as a wrapper class for the individual products. The individual products will be instantiated through a for loop designated by the quantity value in the of each section and given a random id number.

To purchase an item, an account will have to be made and before browsing the catalog the user will have to login. When shopping the user will have a cart which is an arraylist that add products to the cart depending on if the product in added to the cart. When a product is purchased, a Boolean value will say the product is purchased and an if statement will remove 1 product from the quantity value. Each user also has a money count where if they do not have the given funds then they cannot purchase the item. There will be an add money function that can add money to the account if money is needed.

Accounts can also be edited through the program by changing name, shipping information, password, email, and payment. Accounts will also be saved through a text file. Admin accounts will also be available so that an Admin can change the values and information of a product and keep the program up to date.

For user interaction, I plan on having the user interact through the terminal but if I can figure out how to make a GUI, I may switch to the GUI for a better user experience. I also want to experiment with my program as a web application, where info is stored via an SQL database with a Java based backend and html/JavaScript frontend. Depending on how long it takes me to understand web application development I may or may not make my application web based. However, if worst comes to worst, I still want to store my information via a web-based database where the program will read the text file from the website and apply it to the program.

To summarize everything, I want to use Visual Studio Code to make an application that simulates an electronics store selling products. Each product section will be inherited from the abstract product class with a product information stored in each type. There will be an account system with money where the user logs in. The user will have a shopping cart that adds products or removes them. When a product is purchased the quantity will be updated. All the data will be stored via a text file. The user interface will be the terminal unless I learn how to make a GUI or web application.