Nile E-Commerce Python Coding Challenge

Jeff Bezos, who started Amazon, has left Amazon to start a new e-commerce site that will be a direct competitor with Amazon but for a niche market - people who work with and/or love technology. He is calling it Nile (yes, another famous river). He plans to sell items from these categories: shirts, pants, sweaters, jewelry, and fun stuff. Each item can be customized with text obtained from the user at the time of order.

Assumptions

1. Users must have an account to purchase anything. If they don't have an existing account, one must be made for them. You must create an account object, then each account will be an object holding the information for that account.

2. There are no pictures of the items - just descriptions.

3. Users can buy multiple items or multiples of one item. For example, one order from a user could contain 2 shirts, 1 pant, and 1 fun stuff item.

4. Nile only takes credit cards for payment.

5. You can assume you have 2 of each item in inventory (so you can run out).

6. If you make any other assumptions, be sure to document them at the beginning of your program.

Functional Requirements

1. Create a program named nile.py for this project.

2. You will use a function for a 'credit card authorization' that randomly generates if they are authorized or not. If they are authorized, tell them their items will be shipped today. If not authorized, tell them there is a problem with their card and end the program.

3. Read in product data from the (large) products.txt file and account data from the accounts.txt file. Make sure to look through the file so you see what information comes with each product in a category. The file structure is shown below for each of them. They are both comma-delimited text files - meaning there is a comma between each item, Open them in a text editor to see how they look for reading in.

   products.csv  **(comma delimited text file)**
   item name
   item price
   item description

item size (this will be a word - small, medium, or large for clothes, 'nosize' for jewelry and fun stuff)
item category: shirt, pant, sweater, jewelry or fun stuff

accounts.csv (comma delimited text file)
first name
last name
purchase history; for each item, how many they have purchased of the item to date (stored by ID number). The first number is a product ID number, the second is the number purchased.

These are the people who already have accounts:
> Bob Smith
> May Snell
> Tom Banks
> Shelly Ambers

4. Store the products and accounts information in the program (but **don't** use a database - just use a data structure that you have learned about: lists, dictionaries, objects, tuples, etc.).

5. The user either logs in using their first name and last name, or creates a new account. If they log in incorrectly, give them two chances, then let them know and kill the program.

6. Display all the product categories and ask user to type in the one they want to see (do spell checking and remember, the user can use any case).

7. Display the items in the category of choice and ask the user to type in the name of the item they want to purchase and how many.

8. Go back to the beginning and repeat (ie choose a category) or pick Check Out time.

9. To check out, show them a summary of their current order.

10. If summary is correct, use code for a random number generator to decide if their credit card is authorized or not.

11. if their card authorizes, update their purchase history (DID NOT FIGURE OUT) and tell them the items are in the mail. Also tell them the top item other people who bought the same thing they did purchased. (TOTALED LONG HAND, DID NOT BASE ON WHAT THEY ORDERED SPECIFICALLY OR WHAT CATEGORY OF ITEMS ARE IN THEIR CART. Confusing description.) Note: base a 'top' rating on number sold. For example, if I purchased a red polo shirt and khaki pants, and all the other people who purchased red polo shirts also purchased a total of 3 sweaters and 2 pairs of earrings, then tell the customer about the fun things. Likewise,

if others who purchased khaki pants also purchased a total of 3 navy pants and 2 yellow shirts, tell them about the navy pants. This would look like this:
Other people who purchased what you did also purchased sweaters and navy pants.

12. If their card does not authorize, tell them so sorry and exit the program.

General

1. Make sure you document your code with your name as the first line, and comment any code that would benefit from an explanation.

2. All output to the user (prompts, questions, answers) should be formatted nicely.

3. Check all user entries to be sure they are correct (for the current question). Users can use any case they want - you have to handle this.