Programming Refresher Shopping App Project
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Introduction

This program is a simple online tea shop that sells four kinds of teas: black, green, white, and herbal. There is a welcome message, then a session ID generator. After that, the user logs in, and they are either classified as a regular user or an administrator. A regular user is able to add, delete, and edit a dummy cart that is created for them. An administrator has the power to add and delete products from the product database itself. After the user's shopping session is done, they are given a total. Then, they are given a platform to check out using Paypal or Venmo. While this program is bare bones and lacks some functionality, it is a blueprint for a possible larger and more functional project.

1. Welcome Message

This section is a simple greeting message that is displayed on the screen with the print function. This creates a welcoming feeling to the online store and starts the user experience.

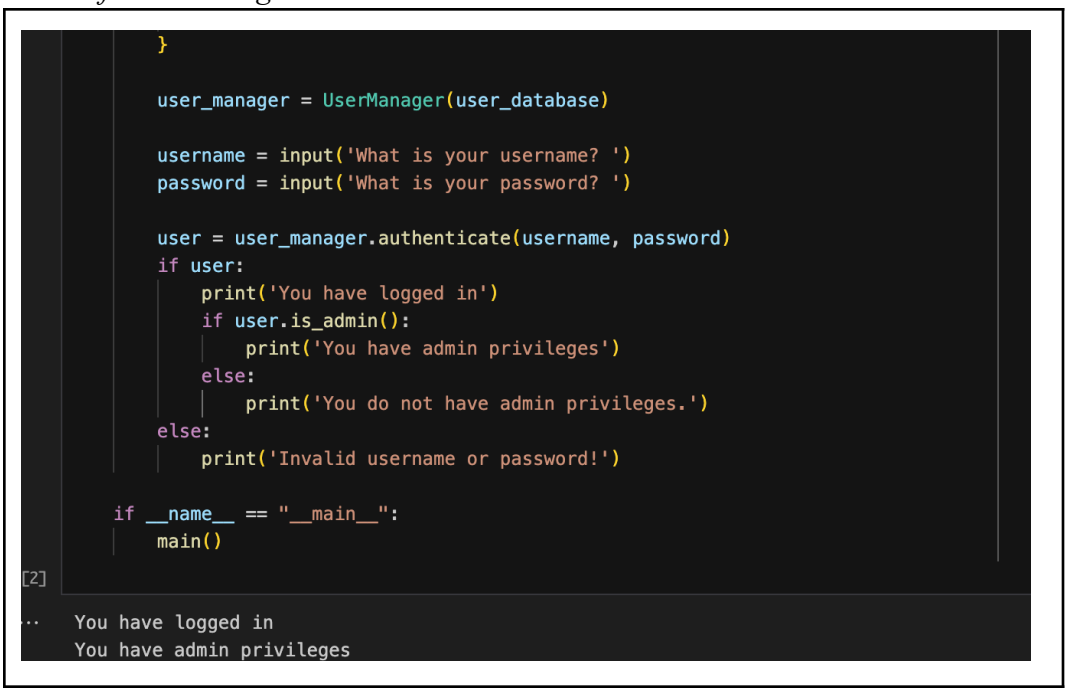
2. Generating a Session ID

The "Generating a Session ID" section imports the random library and uses .randrange() to generate an ID that can be used to identify this particular shopping session.

3. Login and Administrative Privileges

This section of the program allows the user to login. The username and password is then compared to the user database of four users, two admins and two normal users. There are three outcomes to this block of code: a successful administrative login, a successful regular user login, and an unsuccessful login attempt. If the username and password match an administrator account, that means that they are granted admin privileges such as editing the product database. If the username and password match a regular user account, then the program confirms that they have logged in successfully, but that they do not have admin privileges. Finally, if the user's username or password do not match the database, it will display that the user was unsuccessful in their attempt to login.

Successful admin login



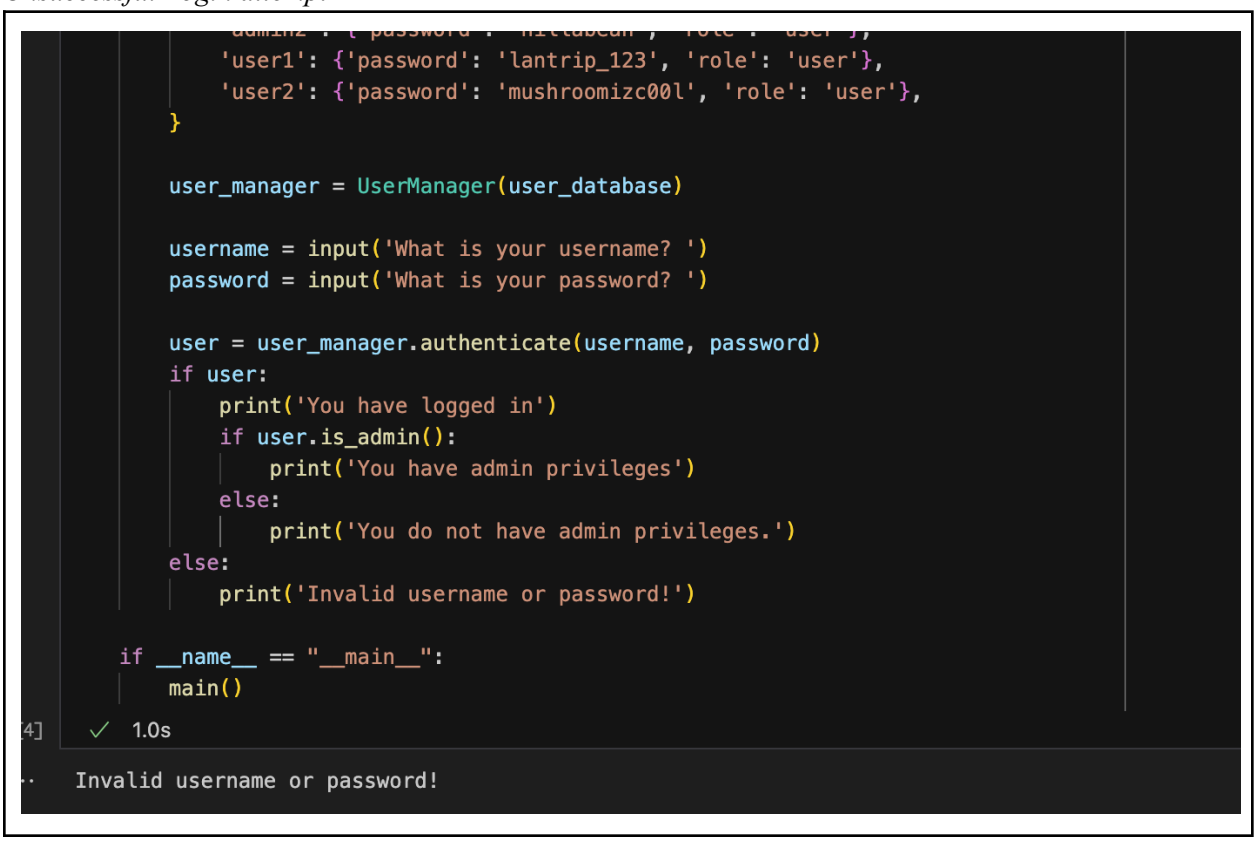
```
        }

        user_manager = UserManager(user_database)

        username = input('What is your username? ')
        password = input('What is your password? ')

        user = user_manager.authenticate(username, password)
        if user:
            print('You have logged in')
            if user.is_admin():
                print('You have admin privileges')
            else:
                print('You do not have admin privileges.')
        else:
            print('Invalid username or password!')

    if __name__ == "__main__":
        main()
[2]
...  You have logged in
     You have admin privileges
```

Successful user login

```
            'admin2': {'password': 'nillabean', 'role': 'user'},
            'user1': {'password': 'lantrip_123', 'role': 'user'},
            'user2': {'password': 'mushroomizc00l', 'role': 'user'},
        }

        user_manager = UserManager(user_database)

        username = input('What is your username? ')
        password = input('What is your password? ')

        user = user_manager.authenticate(username, password)
        if user:
            print('You have logged in')
            if user.is_admin():
                print('You have admin privileges')
            else:
                print('You do not have admin privileges.')
        else:
            print('Invalid username or password!')

    if __name__ == "__main__":
        main()
[3]  ✓ 4.3s
...  You have logged in
     You do not have admin privileges.
```

Click to add a breakpoint

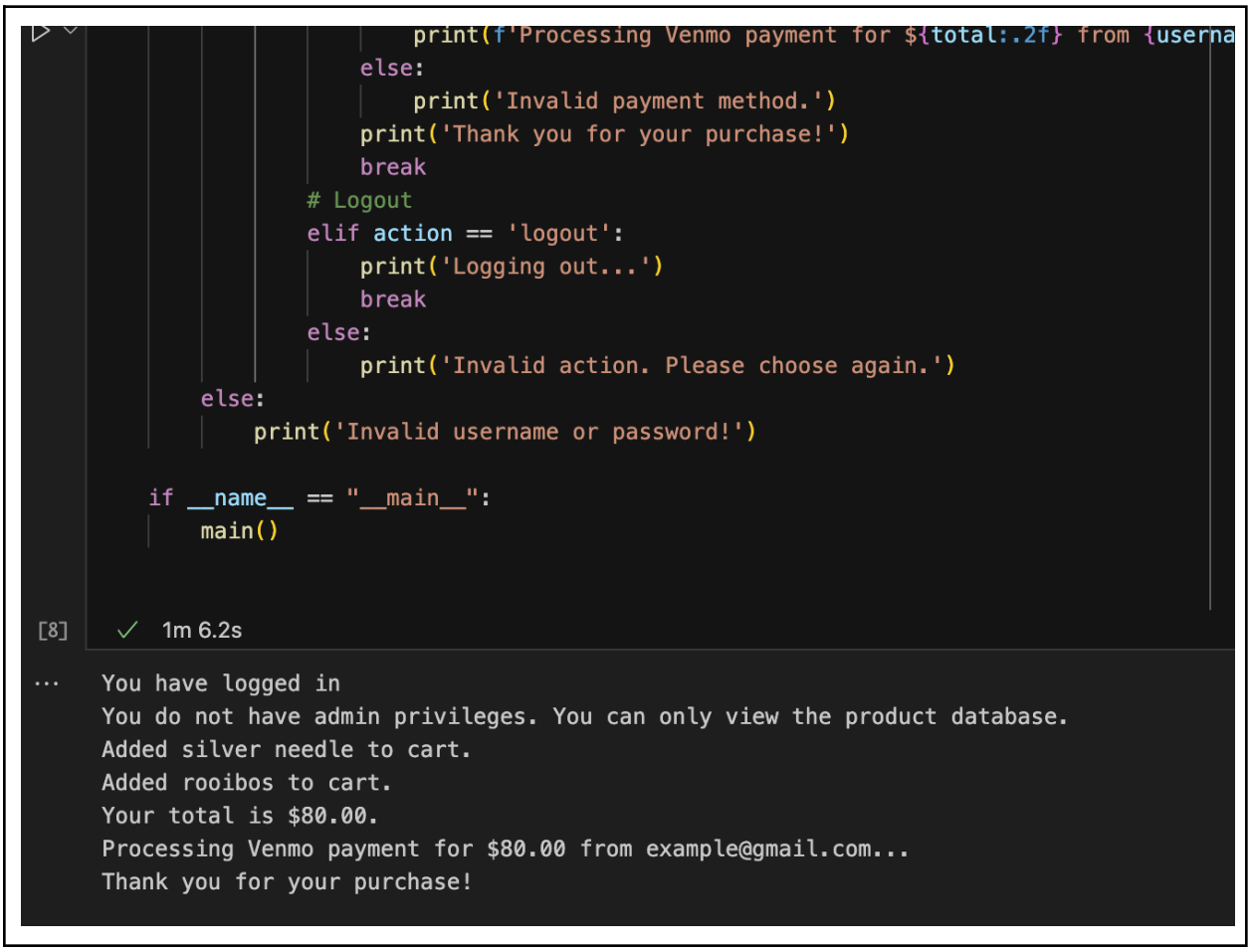
Unsuccessful Login attempt



4. Product Database and Shopping Actions

Now that the user has been welcomed, given a session ID, and logged in, the regular user is able to view the products and add or delete items in their cart. However, if they try to use admin privileges they will receive an error message. The administrator users, on the other hand, are able to edit the product database itself.

Successful regular user login, items added to cart, the total is calculated, and the user can checkout

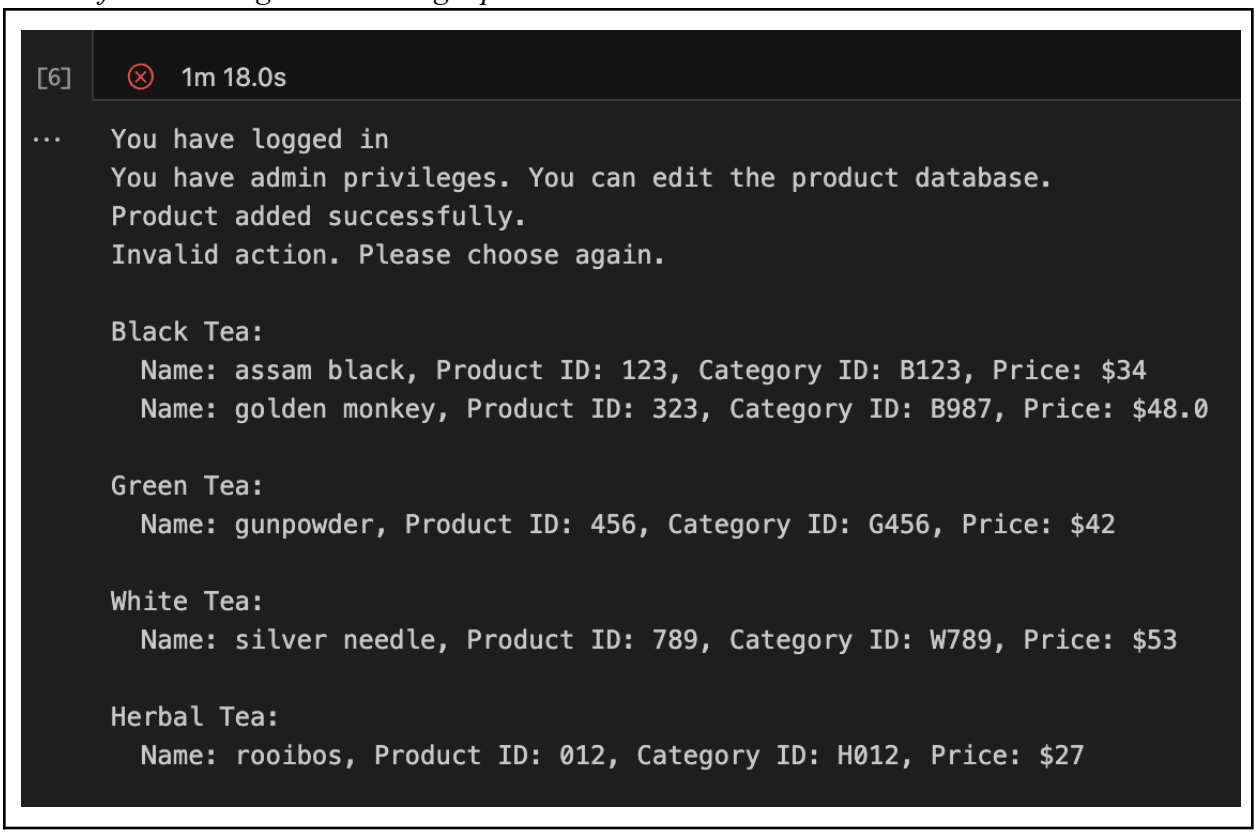


```
                        print(f'Processing Venmo payment for ${total:.2f} from {userna
                    else:
                        print('Invalid payment method.')
                    print('Thank you for your purchase!')
                    break
                # Logout
                elif action == 'logout':
                    print('Logging out...')
                    break
                else:
                    print('Invalid action. Please choose again.')
            else:
                print('Invalid username or password!')

    if __name__ == "__main__":
        main()
```

[8] ✓ 1m 6.2s

```
You have logged in
You do not have admin privileges. You can only view the product database.
Added silver needle to cart.
Added rooibos to cart.
Your total is $80.00.
Processing Venmo payment for $80.00 from example@gmail.com...
Thank you for your purchase!
```

Successful admin login and adding a product



In this case, the product that was added was Golden Monkey, a black tea from Yunnan, China.