

atm-interface

September 17, 2023

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[ ]: class Account:
    def __init__(self, user_id, pin):
        self.user_id = user_id
        self.pin = pin
        self.balance = 0
        self.transaction_history = []

    def deposit(self, amount):
        if amount > 0:
            self.balance += amount
            self.transaction_history.append(f"Deposited ${amount}")

    def withdraw(self, amount):
        if amount > 0 and self.balance >= amount:
            self.balance -= amount
            self.transaction_history.append(f"Withdrew ${amount}")

    def transfer(self, recipient, amount):
        if amount > 0 and self.balance >= amount:
            self.balance -= amount
            recipient.balance += amount
            self.transaction_history.append(f"Transferred ${amount} to_
↪{recipient.user_id}")
            recipient.transaction_history.append(f"Received ${amount} from_
↪{self.user_id}")

    def check_balance(self):
        return self.balance

    def view_transaction_history(self):
        return self.transaction_history

class ATM:
    def __init__(self):
        self.accounts = {}
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def add_account(self, user_id, pin):
    if user_id not in self.accounts:
        self.accounts[user_id] = Account(user_id, pin)

def authenticate(self, user_id, pin):
    if user_id in self.accounts and self.accounts[user_id].pin == pin:
        return True
    return False

def main():
    atm = ATM()

    # Create user accounts
    atm.add_account("user123", "1234")
    atm.add_account("user456", "5678")

    while True:
        print("Welcome to the ATM")
        user_id = input("Enter your User ID: ")
        pin = input("Enter your PIN: ")

        if atm.authenticate(user_id, pin):
            user_account = atm.accounts[user_id]

            while True:
                print("\nATM Menu:")
                print("1. Check Balance")
                print("2. Deposit")
                print("3. Withdraw")
                print("4. Transfer")
                print("5. View Transaction History")
                print("6. Logout")

                choice = input("Enter your choice: ")

                if choice == "1":
                    print(f"Current Balance: ${user_account.check_balance()}")
                elif choice == "2":
                    amount = float(input("Enter the deposit amount: $"))
                    user_account.deposit(amount)
                elif choice == "3":
                    amount = float(input("Enter the withdrawal amount: $"))
                    user_account.withdraw(amount)
                elif choice == "4":
                    recipient_id = input("Enter recipient's User ID: ")
                    if recipient_id in atm.accounts:

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        amount = float(input("Enter the transfer amount: $"))
        recipient_account = atm.accounts[recipient_id]
        user_account.transfer(recipient_account, amount)
    else:
        print("Recipient not found.")
    elif choice == "5":
        transactions = user_account.view_transaction_history()
        for transaction in transactions:
            print(transaction)
    elif choice == "6":
        print("Logging out...")
        break
    else:
        print("Invalid choice. Please try again.")

else:
    print("Authentication failed. Please try again.")

if __name__ == "__main__":
    main()

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Welcome to the ATM
Enter your User ID: user123
Enter your PIN: 1234

ATM Menu:
1. Check Balance
2. Deposit
3. Withdraw
4. Transfer
5. View Transaction History
6. Logout
Enter your choice: 1
Current Balance: \$0

ATM Menu:
1. Check Balance
2. Deposit
3. Withdraw
4. Transfer
5. View Transaction History
6. Logout
Enter your choice: 2
Enter the deposit amount: \$1000

ATM Menu:

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1. Check Balance
2. Deposit
3. Withdraw
4. Transfer
5. View Transaction History
6. Logout
Enter your choice: 3
Enter the withdrawal amount: $500
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ATM Menu:
1. Check Balance
2. Deposit
3. Withdraw
4. Transfer
5. View Transaction History
6. Logout
Enter your choice: 5
Deposited $1000.0
Withdrew $500.0
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ATM Menu:
1. Check Balance
2. Deposit
3. Withdraw
4. Transfer
5. View Transaction History
6. Logout
Enter your choice: 6
Logging out...
Welcome to the ATM
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