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import time
class BankAccount:
    def init (self, account holder, initial balance=0, transaction pin=None):
        self.account holder = account holder
        self.balance = initial_balance
        self.transaction_pin = transaction_pin
        self.transaction_pin_attempts = 0 # Initialize transaction PIN attempts
        self.transaction_history = [] # List to store transaction history
        # Set global maximum withdrawal amount
        global MAX_WITHDRAWAL_AMOUNT
        MAX_WITHDRAWAL_AMOUNT = 10000
    def deposit(self, amount):
        if amount > 0:
            self.balance += amount
            self.transaction_history.append(f"Deposited {amount} Rs. New balance: {self.balance}")
        else:
            raise ValueError("Deposit amount must be greater than zero.")
    def withdraw(self, amount):
        # Check if transaction PIN is set
        if self.transaction_pin is None:
            print("transaction PIN is not set. Please set your transaction PIN.")
            return
        # Check if withdrawal amount is valid
        if 0 < amount <= self.balance:</pre>
            # Check if withdrawal amount exceeds maximum limit
            if amount <= MAX_WITHDRAWAL_AMOUNT and self.validate_transaction_pin():</pre>
                self.balance -= amount
                print(f"Withdraw {amount} Rs. New balance: {self.balance}")
                self.transaction_history.append(f"Withdraw {amount} Rs. New balance: {self.balance}")
            else:
                self.transaction_pin_attempts += 1
                if self.transaction_pin_attempts < 3:</pre>
                    print("Invalid PIN.")
                    print("Chances Left : ", 3 - self.transaction_pin_attempts)
                else:
                    print("Your account is locked. Please try again after 30 seconds.")
                    time.sleep(30)
        else:
            self.amount_attempts += 1
            if self.amount_attempts < 3:</pre>
                print("Withdrawal amount exceeds transaction limit")
                print("Chances Left : ", 3 - self.amount_attempts)
                return
    def check_balance(self):
        print(f"Current balance for {self.account_holder}: {self.balance}")
    def validate_transaction_pin(self):
        entered_pin = input("Enter your Transaction Pin ")
        return entered pin == self.transaction pin
    def change_transaction_pin(self, new_transaction_pin):
        if self.validate_transaction_pin():
            self.transaction_pin = new_transaction_pin
            print("Transaction PIN changed successfully.")
        else:
            raise ValueError("Invalid PIN. PIN not changed.")
    def get_transaction_history(self):
        return [*self.transaction_history]
def main():
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print("Welcome to Our Bank!")
        account_holder = input("Enter account holder's name: ")
        initial_balance = float(input("Enter initial balance: "))
        transaction pin = input("Set your Transaction PIN: ")
        user_account = BankAccount(account_holder, initial_balance, transaction_pin)
        flag = True
        while flag:
            print("\n Select an option.")
            print("1. Deposit")
            print("2. Withdraw")
            print("3. Check Balance")
            print("4. Check Transaction History")
            print("5. Change Transaction PIN")
            print("6. Exit")
            choice = input("Enter option number: ")
            if choice == "1":
                 amount = float(input("Enter deposit amount: "))
                 do_transaction(user_account, "deposit", amount)
            elif choice == "2":
                 amount = float(input("Enter withdrawal amount: "))
                 do_transaction(user_account, "withdraw", amount)
            elif choice == "3":
                 user account.check balance()
            elif choice == "4":
                 print(*user_account.get_transaction_history())
            elif choice == "5":
                 new_pin = input("Enter new Transaction PIN: ")
                 user_account.change_transaction_pin(new_pin)
            elif choice == "6":
                 print("Thank you for using our bank services!")
                 flag = False
            else:
                 print("Invalid choice. Please select a valid option.")
    except ValueError as e:
        print(e)
def do_transaction(account, transaction_type, amount):
   if transaction_type == "deposit":
        account.deposit(amount)
    elif transaction_type == "withdraw":
        account.withdraw(amount)
        raise ValueError("Invalid transaction type.")
if __name__ == "__main__":
  main()
    Welcome to Our Bank!
    Enter account holder's name: SANTANU
    Enter initial balance: 15000
    Set your Transaction PIN: 1235
     Select an option.
    1. Deposit
    2. Withdraw
    3. Check Balance
    4. Check Transaction History
    5. Change Transaction PIN
    6. Exit
    Enter option number: 1
    Enter deposit amount: 1000
     Select an option.
    1. Deposit
    2. Withdraw
    3. Check Balance
    4. Check Transaction History
    5. Change Transaction PIN
    6. Exit
    Enter option number: 3
    Current balance for SANTANU: 16000.0
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Select an option.
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- 1. Deposit
- 2. Withdraw
- 3. Check Balance
- 4. Check Transaction History
- 5. Change Transaction PIN
- 6. Exit

Enter option number: 2

Enter withdrawal amount: 3000

Enter your Transaction Pin 1235

Withdraw 3000.0 Rs. New balance: 13000.0

Select an option.

- 1. Deposit
- 2. Withdraw
- 3. Check Balance
- 4. Check Transaction History
- 5. Change Transaction PIN
- 6. Exit

Enter option number: 4

Deposited 1000.0 Rs. New balance: 16000.0 Withdraw 3000.0 Rs. New balance: 13000.0

Select an option.

- 1. Deposit
- 2. Withdraw
- 3. Check Balance
- 4. Check Transaction History
- 5. Change Transaction PIN
- 6. Exit

Enter option number: 5

Enter new Transaction PIN: 1238 Enter your Transaction Pin 1235

Transaction PIN changed successfully.

Colab paid products - Cancel contracts here

✓ 1m 28s completed at 23:07