OOPs -Banking

In [62]:
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class Account:
    def __init__(self,acc_number,pin,balance=0):
        self.acc_number = acc_number
        self.pin = pin
        self.balance = balance
        self.transactions = []

    def __str__(self):
        return f"account_number : {self.acc_number},account balance :{self.balance}

    def login(self,entered_pin):
        if self.pin==entered_pin:
            return True
        else:
            return False

    def deposit(self,amount):
        if amount > 0:
            self.balance += amount
            self.transactions.append ({
                "type":"deposit",
                "Amount":amount,
                "balance":self.balance
            })

            return f"successfully deposited {amount}, new balance is :{self.balance
        else:
            return f"invalid deposit amount"

    def withdraw(self,amount):
        if amount > 0 and amount <= self.balance:
            self.balance -= amount
            self.transactions.append({
                "type":"withdraw",
                "Amount":amount,
                "balance":self.balance
            })
            return f"successfully withdrawed {amount}, new balance is :{self.balanc
        else:
            return f"invalid withdraw amount"

    def show_transaction_history(self):
        if not self.transactions:
            return f"no transactions available"
        history = " Transaction history:\n "
        for transaction in self.transactions:
            history += f"{transaction['type']} of {transaction['Amount']},\
            new balance:{transaction['balance']}\n"
        return history

    def change_pin(self, old_pin, new_pin):
        if old_pin == self.pin:
            self.pin = new_pin
            return "PIN changed successfully."
        else:
            return "Incorrect current PIN."

    def account_details(self):
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        return f"Account Number: {self.acc_number}\nCurrent Balance: {self.balance}"


def main_menu(account):
    print("Welcome to the Banking System!")
    while True:
        print("\nMain Menu:")
        print("1. View Account Details")
        print("2. Check Balance")
        print("3. Deposit Money")
        print("4. Withdraw Money")
        print("5. View Transaction History")
        print("6. Change PIN")
        print("7. Exit")

        choice = input("Enter your choice (1-7): ")

        if choice == "1":
            print(account.account_details())

        elif choice == "2":
            print(f"Current balance: {account.balance}")

        elif choice == "3":
            amount = float(input("Enter the amount to deposit: "))
            print(account.deposit(amount))

        elif choice == "4":
            amount = float(input("Enter the amount to withdraw: "))
            print(account.withdraw(amount))

        elif choice == "5":
            print(account.show_transaction_history())

        elif choice == "6":
            old_pin = input("Enter your current PIN: ")
            new_pin = input("Enter your new PIN: ")
            print(account.change_pin(old_pin, new_pin))

        elif choice == "7":
            print("Thank you for using the Banking System. Goodbye!")
            break

        else:
            print("Invalid choice. Please enter a number between 1 and 7.")

# Dictionary to store multiple accounts
accounts = {
    "12345": Account("12345", "0000", 500),
    "67890": Account("67890", "1111", 1000),
    "11223": Account("11223", "2222", 1500),
    "44556": Account("44556", "3333", 2000)
}

# Login process
acc_number = input("Enter your account number: ")
pin = input("Enter your PIN: ")

# Check if account exists and login is successful
if acc_number in accounts and accounts[acc_number].login(pin):
    main_menu(accounts[acc_number])
else:
    print("Invalid account number or PIN.")
```

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Welcome to the Banking System!

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

Account Number: 12345
Current Balance: 500

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

successfully deposited 3333.0, new balance is :3833.0

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

Current balance: 3833.0

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

successfully deposited 9897.0, new balance is :13730.0

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit
```

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successfully withdrawed 10000.0, new balance is :3730.0

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

 Transaction history:
 deposit of 3333.0,            new balance:3833.0
deposit of 9897.0,            new balance:13730.0
withdraw of 10000.0,            new balance:3730.0


Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

PIN changed successfully.

Main Menu:
1. View Account Details
2. Check Balance
3. Deposit Money
4. Withdraw Money
5. View Transaction History
6. Change PIN
7. Exit

Thank you for using the Banking System. Goodbye!
```

In [ ]: