Readme.P1

1, To create tables :

db2 -tvf p1_create.sql

It creates two tables: p1.customer and p1.account.

```
[db2inst1@29bbc3a82590 157A]$ db2 "connect to cs157A"

  Database Connection Information

 Database server        = DB2/LINUXX8664 11.5.5.0
 SQL authorization ID   = DB2INST1
 Local database alias   = CS157A

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.customer"

ID          NAME             GENDER AGE          PIN
----------- ---------------- ------ ------------ -----------

  0 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER      ID          BALANCE     TYPE STATUS
----------- ----------- ----------- ---- ------

  0 record(s) selected.

[db2inst1@29bbc3a82590 157A]$
```

2, To create original records for the tables and check the methods in BankingSystem.java.

C:\java\p1_test\src>**javac *.java**

C:\java\p1_test\src>**java -cp ";.\db2jcc4.jar" ProgramLauncher .\db.properties>test1.out**

After running the above commands in Java, we can check some records are created. And a file **test1.out** is created. Its content is similar to **test_full.out**. It means all the methods in BankingSystem.java run well.

```
[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.customer"

ID          NAME            GENDER AGE         PIN
----------- --------------- ------ ----------- -----------

  0 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.customer"

ID          NAME            GENDER AGE         PIN
----------- --------------- ------ ----------- -----------
        100 Ash             M               10        1010
        101 Pikachu         M               25          25
        102 Misty           F               12        6666
        103 Brock           M               17        8888
        104 Joy             F               27        2951
        105 Jenny           F               30        9837

  6 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER      ID          BALANCE     TYPE STATUS
----------- ----------- ----------- ---- ------
       1000         100         110 C    A
       1001         101        2500 S    A
       1002         102         300 C    A
       1003         102        9500 S    A
       1004         103        1000 C    A
       1005         103        6007 S    A
       1006         104           0 C    I
       1007         104        9500 S    A
       1008         104        4500 S    A
       1009         105        5100 C    A
       1010         105        8000 S    A
       1011         105           0 S    I

  12 record(s) selected.

[db2inst1@29bbc3a82590 157A]$
```

3, Begin to test P1.java

C:\java\p1_test\src>**java -cp ";.\db2jcc4.jar" P1 .\db.properties**

3.1, Screen#1.1---**To create a new customer**.

```
C:\java\p1_test\src>java -cp ";.\db2jcc4.jar" P1 .\db.properties
:: PROGRAM START
:: TEST - CONNECTING TO DATABASE
:: TEST - SUCCESSFULLY CONNECTED TO DATABASE


Main Menu--Welcome to the Self Services banking System!
1. New Customer
2. Customer Login
3. Exit
1
To create a new customer
Please input your information follow the order: Name->Gender->Age->Pin:
Name(should be letters or space), Gender(M or F), Age(numbers), Pin(numbers)
Lifan Zeng
M
38
1234
:: CREATE NEW CUSTOMER - RUNNING
Your Customer ID is:
106
:: CREATE NEW CUSTOMER - SUCCESS


Main Menu--Welcome to the Self Services banking System!
1. New Customer
2. Customer Login
3. Exit
▯
```

```
[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.customer"

ID          NAME            GENDER AGE         PIN
----------- --------------- ------ ----------- -----------
        100 Ash             M               10        1010
        101 Pikachu         M               25          25
        102 Misty           F               12        6666
        103 Brock           M               17        8888
        104 Joy             F               27        2951
        105 Jenny           F               30        9837
        106 Lifan Zeng      M               38        1234

  7 record(s) selected.
```

Screen#1.2---**Customer login & Exit**

```
Main Menu--Welcome to the Self Services banking System!
1. New Customer
2. Customer Login
3. Exit
2
Please input your Customer ID and PIN:
106
1234
Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
7
Main Menu--Welcome to the Self Services banking System!
1. New Customer
2. Customer Login
3. Exit
▯
```

3.2, Screen #3

Screen 3.1---**Open account**

```
Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
1
To open a new account
Please input the information follow the order: Customer ID->Type->Initial amount:
Customer ID(Numbers. If no, to open a new customer), Type(C for Checking; S for Saving), Initial amoun
t(Numbers. >=0)
106
S
1600
:: OPEN ACCOUNT - RUNNING
:: OPEN ACCOUNT - SUCCESS

Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
⎕
```

```
[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER       ID          BALANCE      TYPE STATUS
-----------  -----------  -----------  ----  ------
      1000          100         110 C     A
      1001          101        2500 S     A
      1002          102         300 C     A
      1003          102        9500 S     A
      1004          103        1000 C     A
      1005          103        6007 S     A
      1006          104           0 C     I
      1007          104        9500 S     A
      1008          104        4500 S     A
      1009          105        5100 C     A
      1010          105        8000 S     A
      1011          105           0 S     I
      1012          106        1600 S     A

  13 record(s) selected.
```

Screen 3.1---**Close account**

```
Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
2
To close an account
Please input your Account Number:
1012
:: CLOSE ACCOUNT - RUNNING
:: CLOSE ACCOUNT - SUCCESS

Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
▯
```

```
      1012          106          1600 S     A

  13 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER      ID           BALANCE      TYPE STATUS
----------- ------------ ------------ ---- ------
      1000          100           110 C     A
      1001          101          2500 S     A
      1002          102           300 C     A
      1003          102          9500 S     A
      1004          103          1000 C     A
      1005          103          6007 S     A
      1006          104             0 C     I
      1007          104          9500 S     A
      1008          104          4500 S     A
      1009          105          5100 C     A
      1010          105          8000 S     A
      1011          105             0 S     I
      1012          106             0 S     I

  13 record(s) selected.

[db2inst1@29bbc3a82590 157A]$
```

Screen 3.3---**Deposit** (create new account 1013 for 106, then deposit 2000)

```
7. Exit
1
To open a new account
Please input the information follow the order: Customer ID->Type->Initial amount:
Customer ID(Numbers. If no, to open a new customer), Type(C for Checking; S for Saving), Initial amoun
t(Numbers. >=0)
106
S
1800
:: OPEN ACCOUNT - RUNNING
:: OPEN ACCOUNT - SUCCESS

Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
3
To deposit money to account
Please input your information follow the order: Account number->Deposit Amount:
Account number(your account number), Amount(numbers, >=0)
1013
2000
:: DEPOSIT - RUNNING
:: OPEN ACCOUNT - SUCCESS

Customer Main Menu
```

```
       1012          106              0 S    I
       1013          106           1800 S    A

 14 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER       ID           BALANCE      TYPE STATUS
-----------  -----------  -----------  ---- ------
       1000          100           110 C    A
       1001          101          2500 S    A
       1002          102           300 C    A
       1003          102          9500 S    A
       1004          103          1000 C    A
       1005          103          6007 S    A
       1006          104             0 C    I
       1007          104          9500 S    A
       1008          104          4500 S    A
       1009          105          5100 C    A
       1010          105          8000 S    A
       1011          105             0 S    I
       1012          106             0 S    I
       1013          106          3800 S    A

 14 record(s) selected.

[db2inst1@29bbc3a82590 157A]$
```

Screen 3.4---**Withdraw**

```
7. Exit
4
To withdraw money from account
Please input your information follow the order: Account number->Withdraw Amount:
Account number(your account number), Amount(numbers, >=0)
1013
1000
:: WITHDRAW - RUNNING
:: WITHDRAW - SUCCESS

Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
□
```

```
       1012          106             0 S    I
       1013          106          3800 S    A

  14 record(s) selected.

[db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

NUMBER      ID           BALANCE      TYPE STATUS
----------- ----------- ----------- ---- ------
       1000          100           110 C    A
       1001          101          2500 S    A
       1002          102           300 C    A
       1003          102          9500 S    A
       1004          103          1000 C    A
       1005          103          6007 S    A
       1006          104             0 C    I
       1007          104          9500 S    A
       1008          104          4500 S    A
       1009          105          5100 C    A
       1010          105          8000 S    A
       1011          105             0 S    I
       1012          106             0 S    I
       1013          106          2800 S    A

  14 record(s) selected.

[db2inst1@29bbc3a82590 157A]$
```

Screen 3.5---**Transfer (** From 1013 to 1010, transfer 800**)**

```
Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
5
To transfer money from source account to destination account
Please input your information follow the order: Source account->Destination account->Transfer amount:
1013
1010
800
:: TRANSFER - RUNNING
:: TRANSFER - SUCCESS

Customer Main Menu
1. Open Account
```

```
     1009         105         5100 C      A
     1010         105         8000 S      A
     1011         105            0 S      I
     1012         106            0 S      I
     1013         106         2800 S      A

 14 record(s) selected.

db2inst1@29bbc3a82590 157A]$ db2 "select * from p1.account"

UMBER       ID          BALANCE     TYPE STATUS
----------  ----------- ----------- ---- ------
     1000         100          110 C      A
     1001         101         2500 S      A
     1002         102          300 C      A
     1003         102         9500 S      A
     1004         103         1000 C      A
     1005         103         6007 S      A
     1006         104            0 C      I
     1007         104         9500 S      A
     1008         104         4500 S      A
     1009         105         5100 C      A
     1010         105         8800 S      A
     1011         105            0 S      I
     1012         106            0 S      I
     1013         106         2000 S      A

 14 record(s) selected.

db2inst1@29bbc3a82590 157A]$
```

Screen 3.6---**Display all accounts**

```
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
6
Account summary
Please input your Customer ID:
106
:: ACCOUNT SUMMARY - RUNNING
NUMBER, BALANCE
-----------------------------
1013,   2000
-----------------------------
Name,   ID,    Total
Lifan Zeng,    106,   2000
:: ACCOUNT SUMMARY - SUCCESS

Customer Main Menu
1. Open Account
2. Close Account
3. Deposit
4. Withdraw
5. Transfer
6. Account Summary
7. Exit
[]
```

The other functions, please run the program.