

# **CS 591 P1 Assignment 7 SecurityBankATM README**

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## **\*\*Content\*\***

### **1 Preparation**

### **2 Create the local database**

### **3 How to build the code**

### **4 Running Sample**

# 1 Preparation

## 1.1 Unzip the file

```
$tar tar xvzf file.tar.gz
```

e.g.:

```
$tar xvzf fisrtname_lastname_SecurityBankATM.tar.gz
```

## 1.2 Description

This assignment includes 4 folders (lib, doc, src, sql) as follows:

```
~/SecureBank/  
  ~/lib/  
    ~/mysql-connector-java-8.0.18.jar  
  ~/doc/  
    ~/README.pdf  
    ~/DesignDoc.pdf  
  ~/src/  
    ~/JDBC/  
      ~/*.java  
    ~/Models/  
      ~/*.java  
    ~/Views/  
      ~/*.java  
  ~/sql/  
    ~/atm.sql
```

### 1.2.1 lib

The lib folder includes mysql-connector-java-8.0.18.jar.

### 1.2.2 doc

The doc folder includes README.pdf and DesignDoc.pdf.

### 1.2.3 src

The src folder includes folders JDBC, Models and Views.

#### 1)JDBC

The JDBC folder includes all java files (DB.java and MySQLHelper.java) that are used to connect to the database. All the database configuration is defined in MySQLHelper.java.

#### 2)Models

The Models folder includes all java files(e.g. Account.java, Transaction.java, etc.) that define the model classes used to store the data in the program.

### 3)Views

The Views folder includes all java files (e.g. LoginWin.java, CustomerWin.java, etc.) that define the view classes for each user interface.

#### 1.2.4 sql

Run atm.sql to initialize the database.

## 2 Create the local database

### 2.1 Log in Mysql

This program uses Mysql as the database.

The username and password for the program is configured in the file src/JDBC/MySQLHelper.java.

e.g.:

```
$ mysql -u root -p
```

```
Enter password: *****
```

### 2.2 Run the script atm.sql

After logging in, run the script atm.sql.

```
mysql> source *file_path*/atm.sql
```

*Note: \*file\_path\* is the folder where the script is located.  
for example: mysql> source /users/admin/Desktop/atm.sql*

## 3 How to build the code

1)import jar mysql-connector-java-8.0.18.jar

2)run the main() method in ATM.java.

## 4 Running Sample

### 4.1 Predefined available account

Manager Info:

Username: Happy admin Password: money

Customer Info:

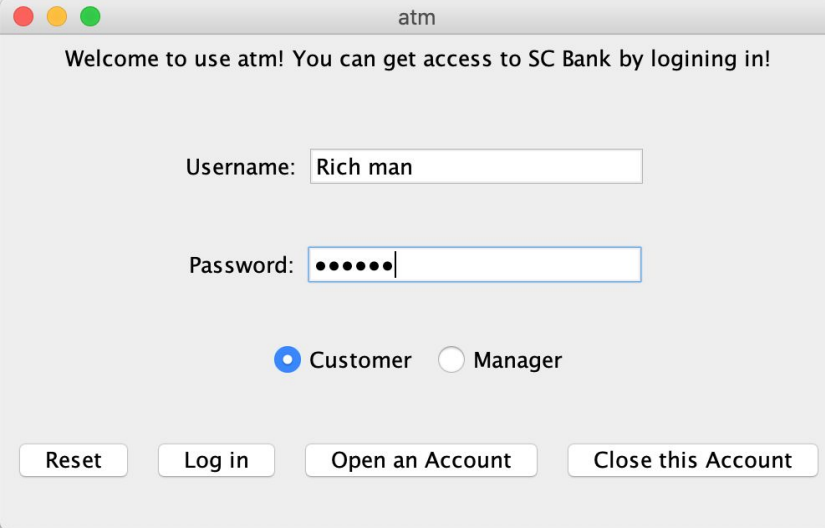
Username: Rich man Password: 123456

Username: Poor man Password: 123456

Username: Customer Password: 123456

## 4.2 Sample

### 1)Login:



atm

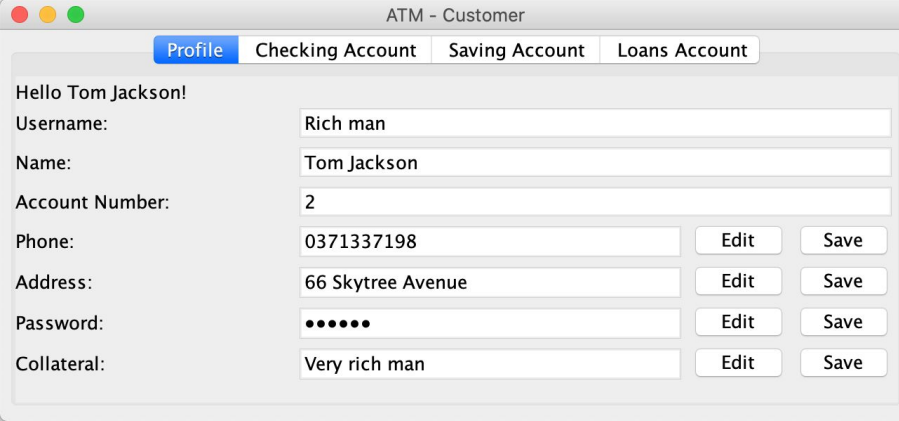
Welcome to use atm! You can get access to SC Bank by logining in!

Username:

Password:

☒ Customer ☐ Manager

### 2)Customer:



ATM - Customer

**Profile** Checking Account Saving Account Loans Account

Hello Tom Jackson!

Username:

Name:

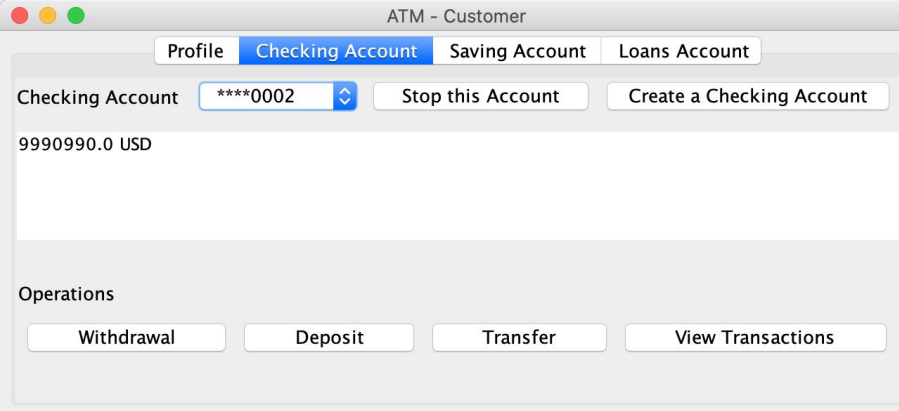
Account Number:

Phone:

Address:

Password:

Collateral:



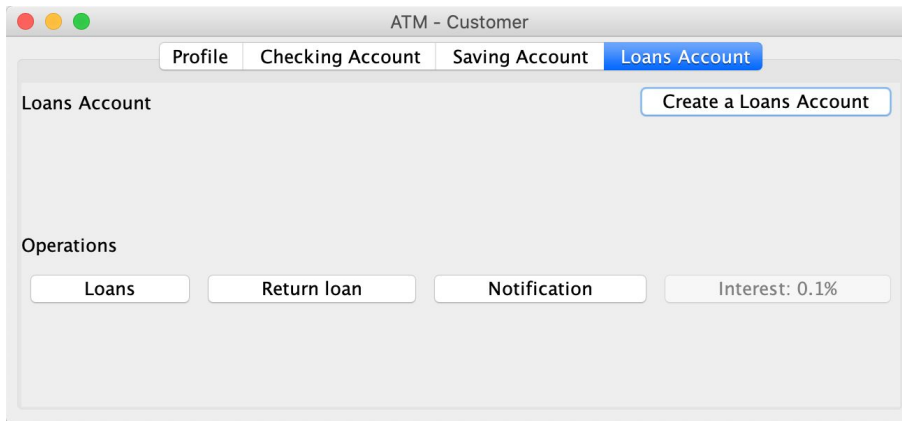
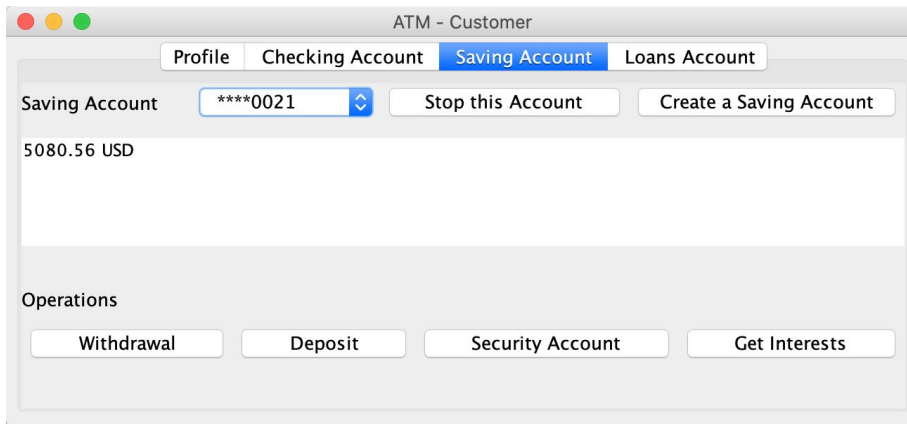
ATM - Customer

**Profile** **Checking Account** Saving Account Loans Account

Checking Account

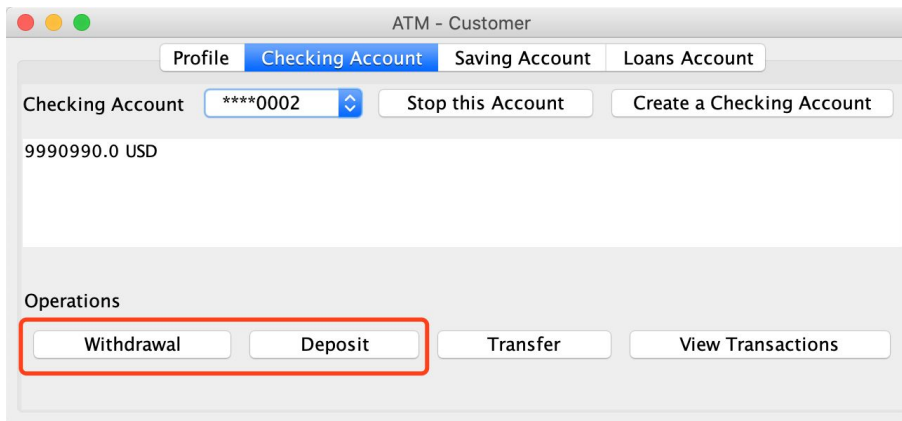
9990990.0 USD

Operations



### 3)Withdrawal/Deposit

Click “Withdrawal” or “Deposit” button to move on to the next window.



Also, you can modify your decision.

Withdrawal:

Transaction


Your account number: 00000002

Transaction Type: ☒ Withdrawal ☐ Deposit

Input amount:

Transaction

Message



Now get the money.

Input amount:

Then it will return the last window after you click “OK”.

ATM - Customer

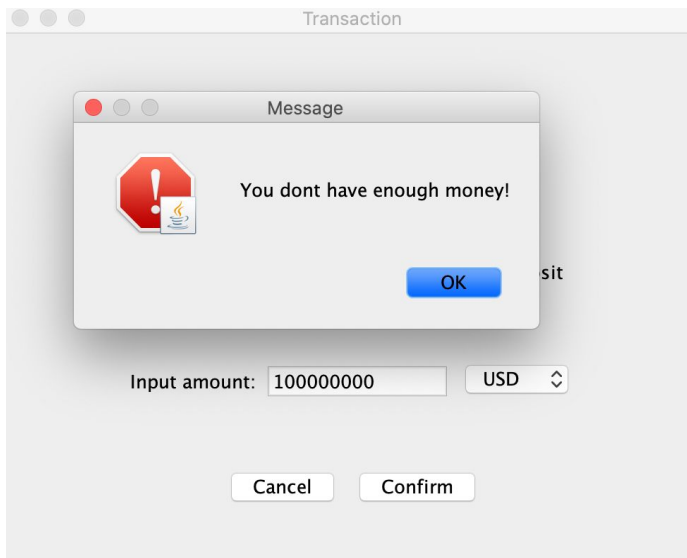
Profile **Checking Account** Saving Account Loans Account

Checking Account

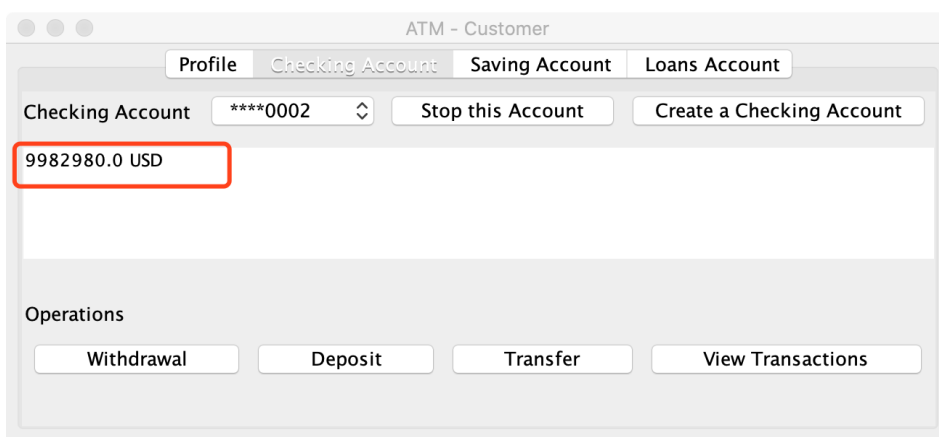
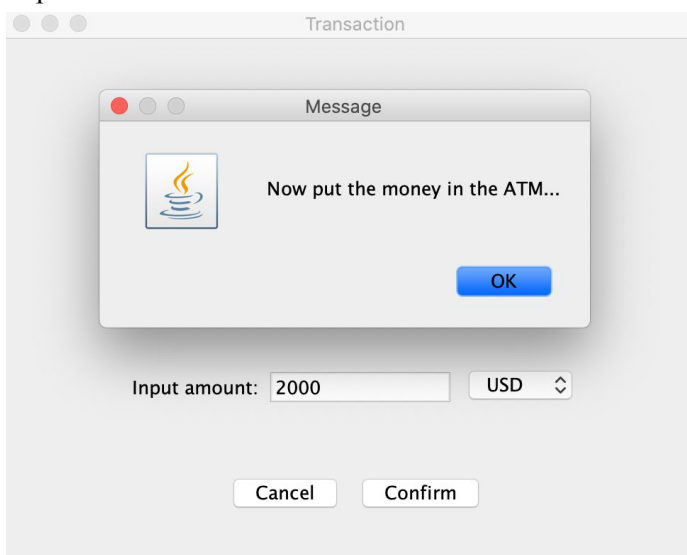
**9980990.0 USD**

Operations

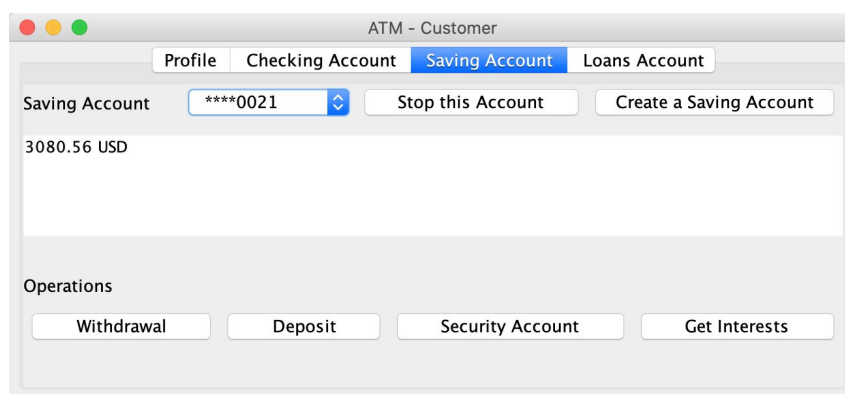
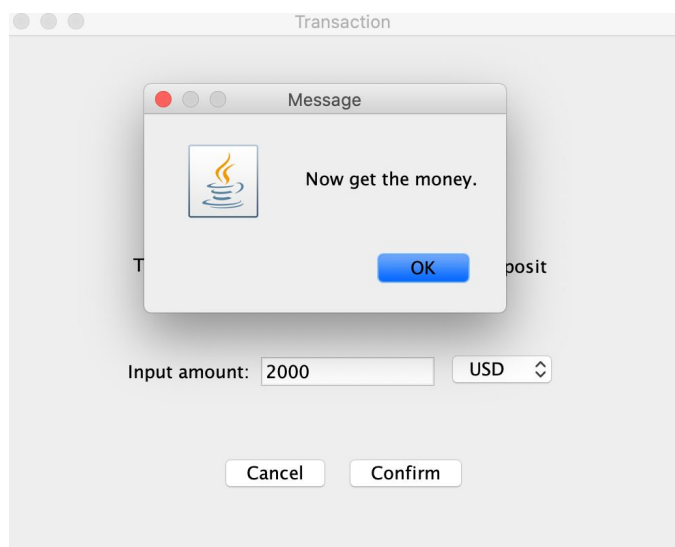
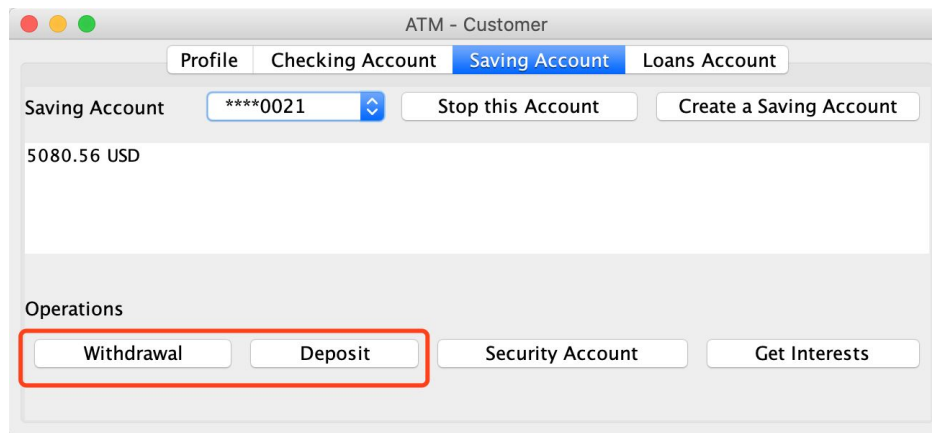
If you don't have enough money...



Deposit:



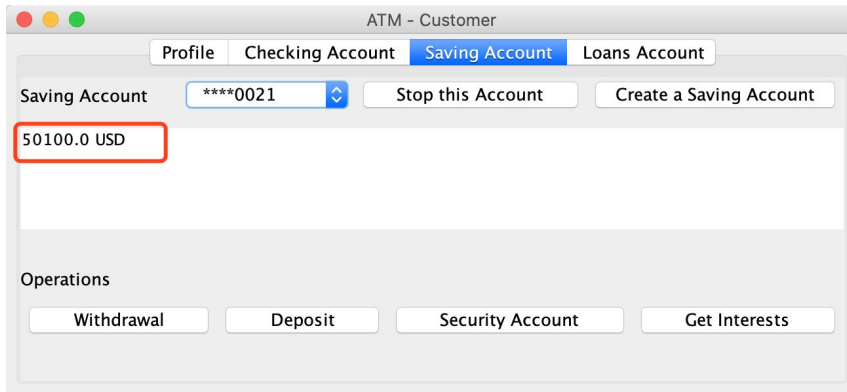
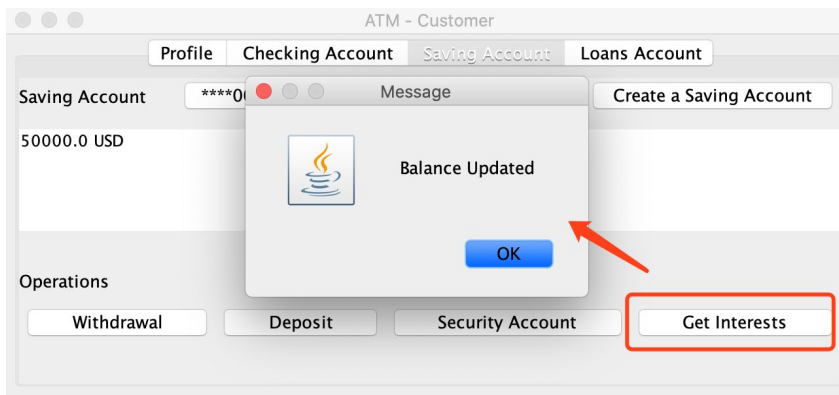
In saving account, the withdrawal and deposit operations are the same with that in checking account.



#### 4)Get interests

Click 'Get interests' to get the interests of all your saving accounts.

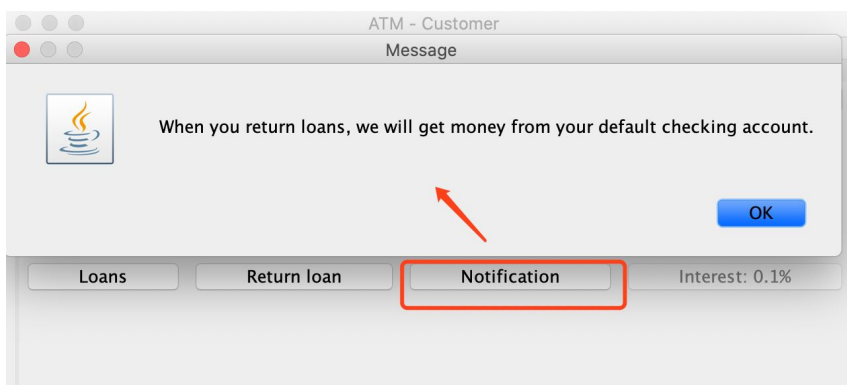
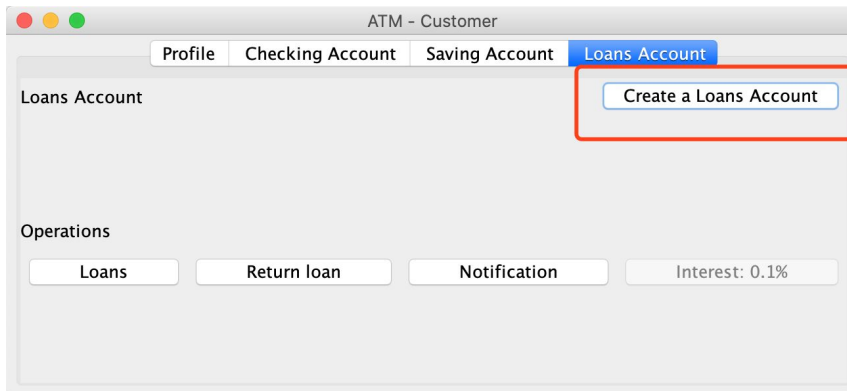




## 5) Loan account

If you don't have a collateral, you could not create a loans account.

After creating a loans account, you could make loans or return loans.



ATM - Customer

Profile Checking Account Saving Account **Loans Account**

Loans Account \*\*\*\*0021 Stop this Account Create a Loans Account

0.0 USD

Operations

Loans Return loan Notification Interest: 0.1%

Click "Loans" button to make loans or return loans:

ATM - Customer

Profile Checking Account Saving Account **Loans Account**

Loans Account \*\*\*\*0021 Stop this Account Create a Loans Account

0.0 USD

Operations

**Loans** Return loan Notification Interest: 0.1%

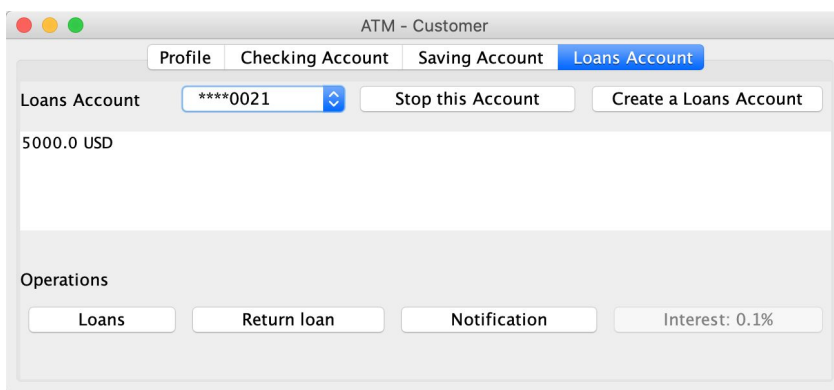
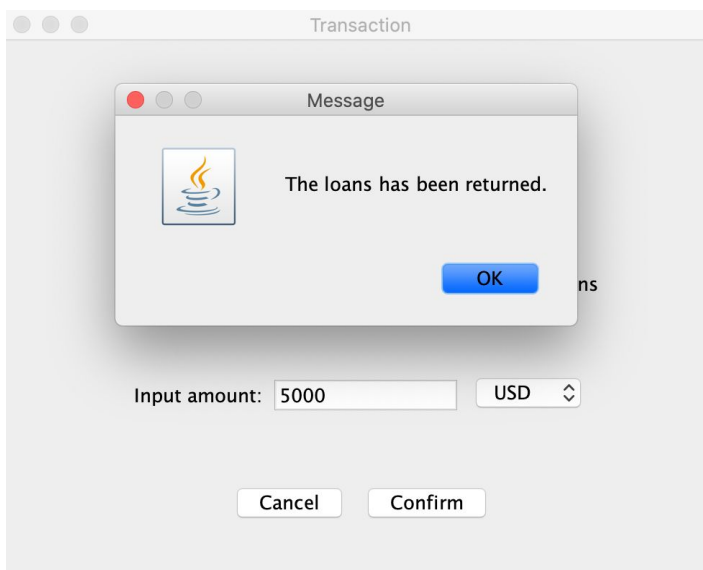
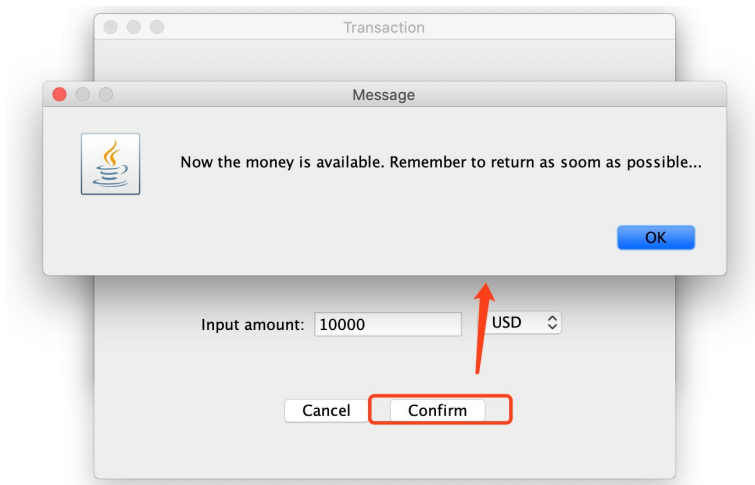
Transaction

Your account number: 00000021

Transaction Type: ☒ Make loans ☐ Return loans

Input amount: 10000 USD

Cancel Confirm



## 6)Transfer

You can transfer from an account to another account. These two accounts may belong to different banks and different customers. Now we transfer money from checking account to our saving account.

ATM - Customer

Profile Checking Account Saving Account Loans Account

Checking Account \*\*\*\*\*0002 Stop this Account Create a Checking Account

9981620.0 USD

Operations

Withdrawal Deposit **Transfer** View Transactions

Target account:

ATM - Customer

Profile Checking Account Saving Account Loans Account

Checking Account \*\*\*\*\*0010 Stop this Account Create a Checking Account


200.0 USD

Operations

Withdrawal Deposit Transfer View Transactions

Transfer

Message

 The money has been delivered.

OK

Recipient's Account Number: 00000010

Amount: 10000 USD

Cancel **Confirm**

ATM - Customer

Profile Checking Account Saving Account Loans Account

Checking Account \*\*\*\*0010 Stop this Account Create a Checking Account

10200.0 USD

Operations

Withdrawal Deposit Transfer View Transactions

In the page of checking account, clicking 'view transaction', you can view your transaction history.

ATM - Customer

Profile Checking Account Saving Account Loans Account

Checking Account \*\*\*\*0002 Stop this Account Create a Checking Account

9971490.0 USD

Operations

Withdrawal Deposit Transfer View Transactions

ATM - Transaction

Mon Nov 11 19:53:36 EST 2019 transactions:

Tom Jackson	00000002	Withdrawing cash from checking account	100.0 USD
Tom Jackson	00000002	Saving Money to Checking Account	100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-90.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000002	Transfer Money (to 00000010)	-100.0 USD
Tom Jackson	00000010	Transfer Money (from 00000002)	100.0 USD
Tom Jackson	00000006	Withdrawing cash from saving account	100.0 USD
Tom Jackson	00000006	Withdrawing cash from saving account	2000.0 USD
Tom Jackson	00000006	Saving Money to Saving Account	100.0 USD
Tom Jackson	00000012	Requesting loans	100.0 USD
Tom Jackson	00000002	Returning loans	-100.0 USD

7)Manager:

Welcome to use atm! You can get access to SC Bank by logining in!

Username:

Password:

☐ Customer ☒ Manager

Reset Log in Open an Account Close this Account

ATM - Manager

Transaction & Info Stocks

Hello Happy admin!

Find View his transaction Today's transaction

All customers:

Lucy	Lucy Lucky	1
Rich man	Tom Jackson	2
Customer	James Joseph	3

By clicking the list item and the button "find", the manager could view the customer 's information. However, he cannot do any operation.

ATM - Manager

Transaction & Info Stocks

Hello Happy admin!

Find View his transaction Today's transaction

All customers:

Lucy	Lucy Lucky	1
Rich man	Tom Jackson	2

ATM - Customer

Profile Checking Account Saving Account Loans Account

Information

Username:

Name:

Account Number:

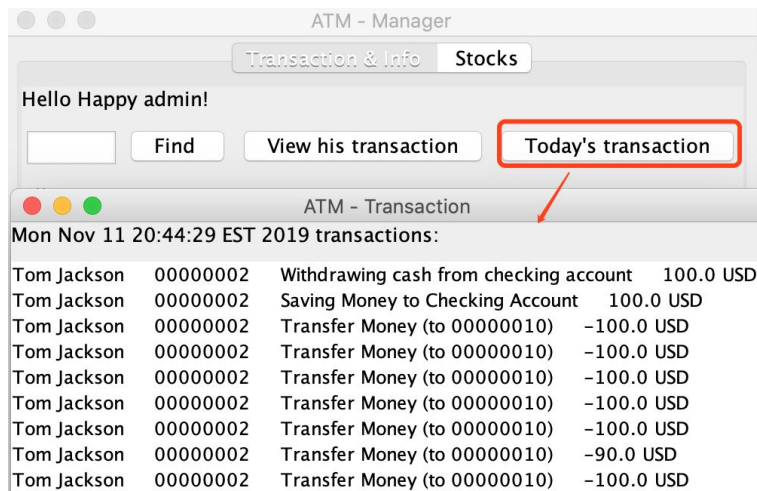
Phone:  Edit Save

Address:  Edit Save

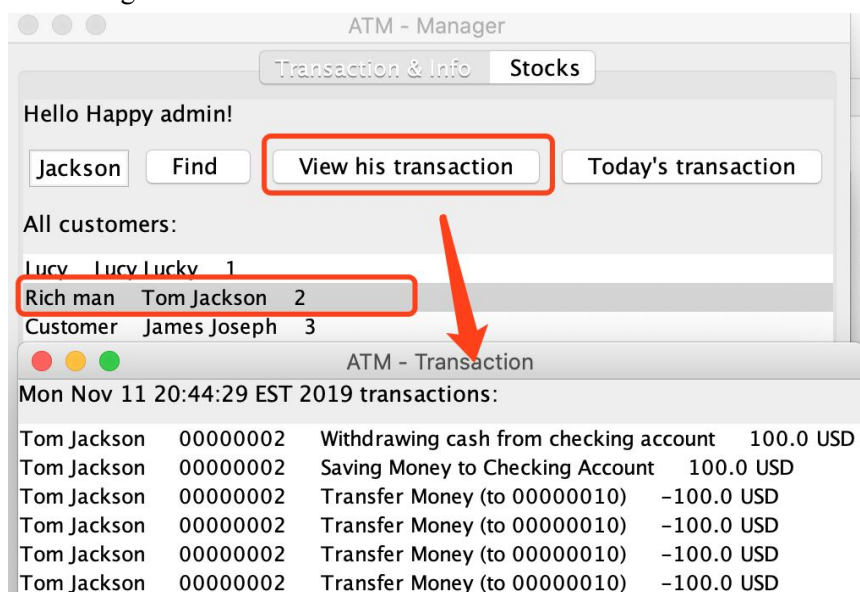
Password:  Edit Save

Collateral:  Edit Save

The manager could get today 's transaction report by clicking the following button.

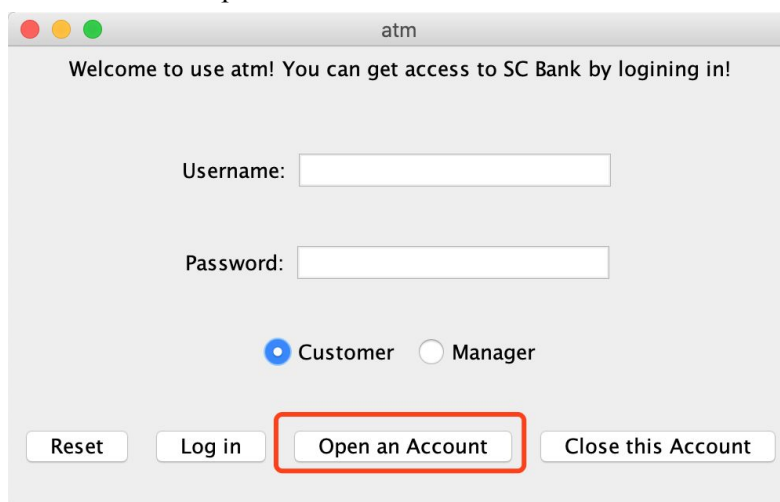


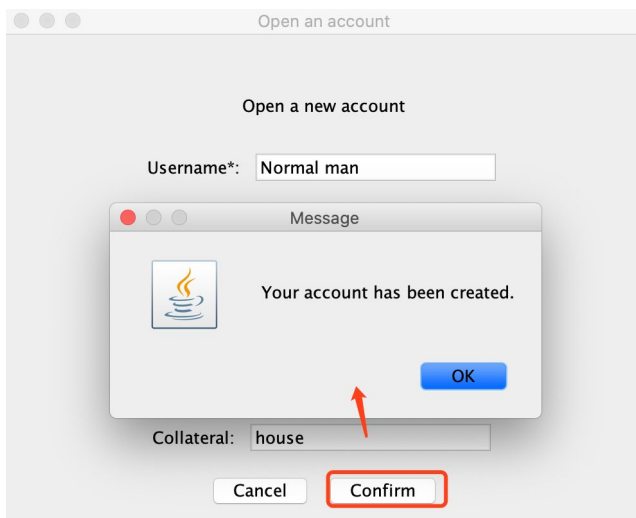
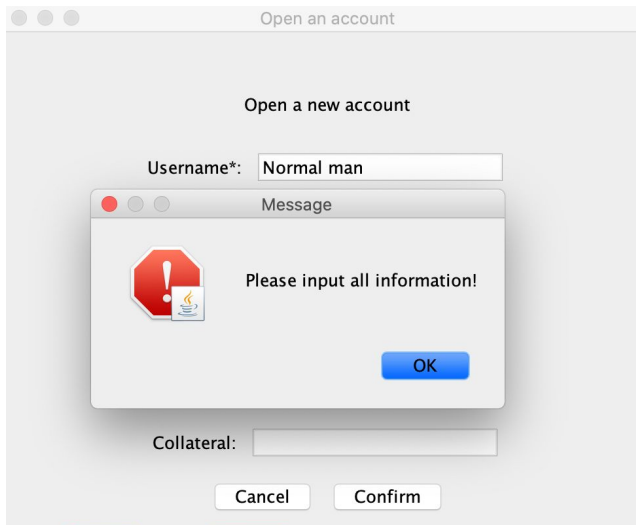
The manager could also click 'view his transaction' to view a customer's transaction.



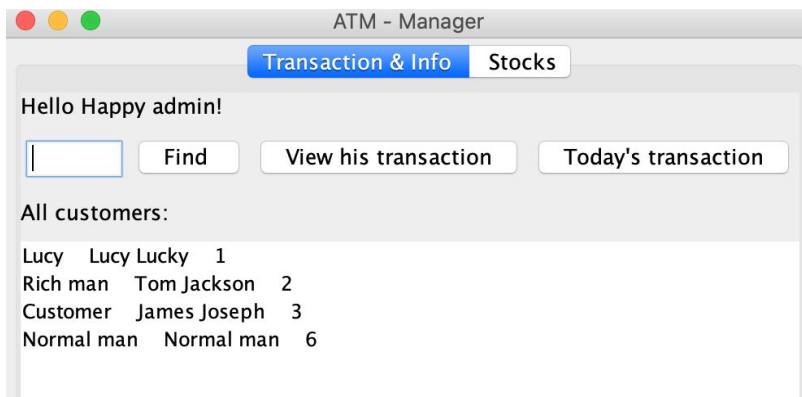
## 8)Open Account

The user should input all \* information to create an account.





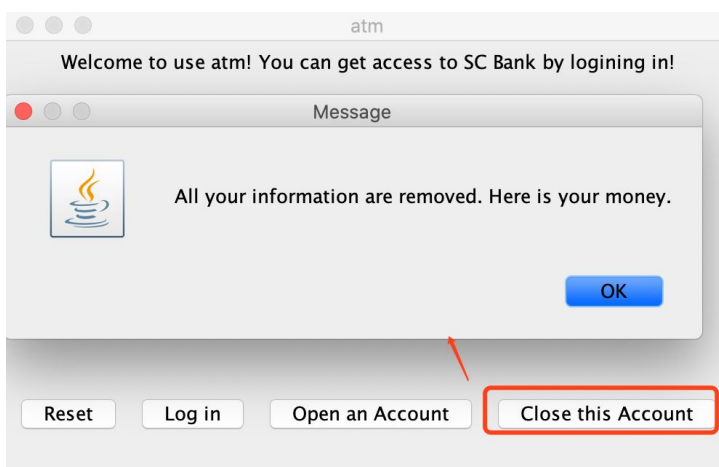
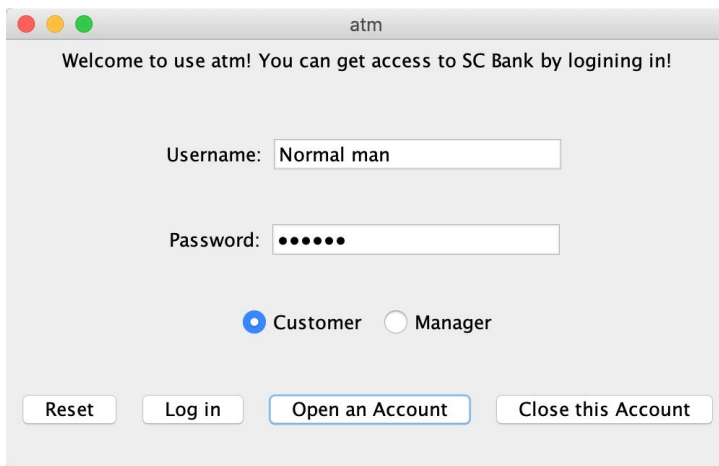
And these information would be updated in the manager window.



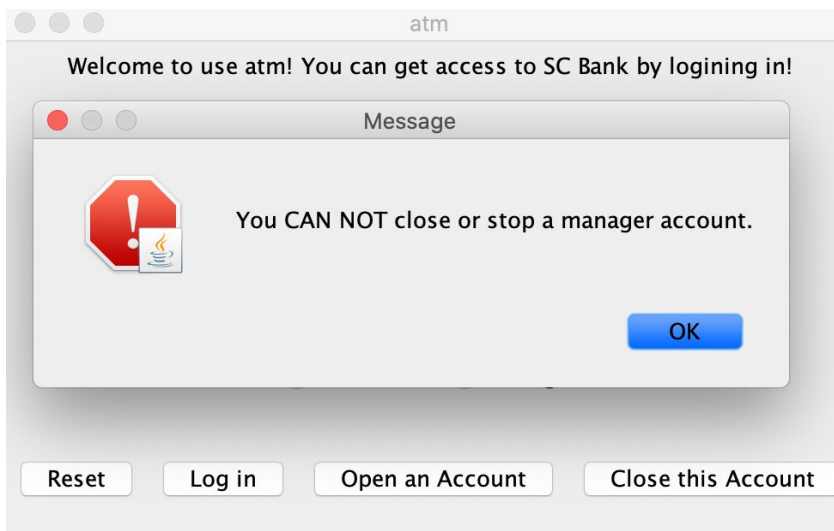
## 9)Close Account

Input Username and Password, then click "Close this Account":





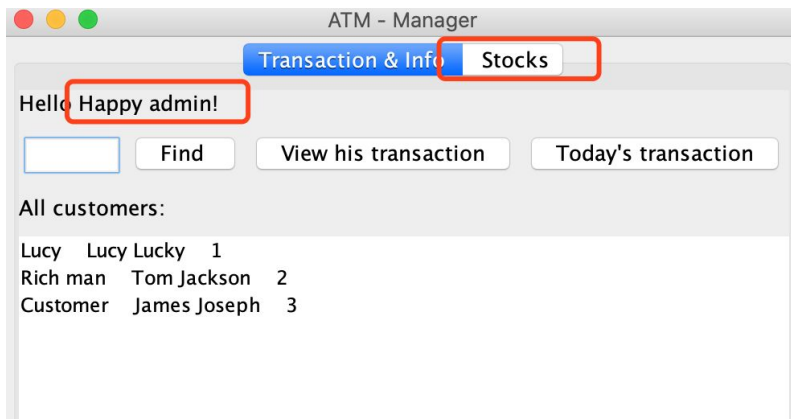
Of course you cannot stop or close the manager's account:



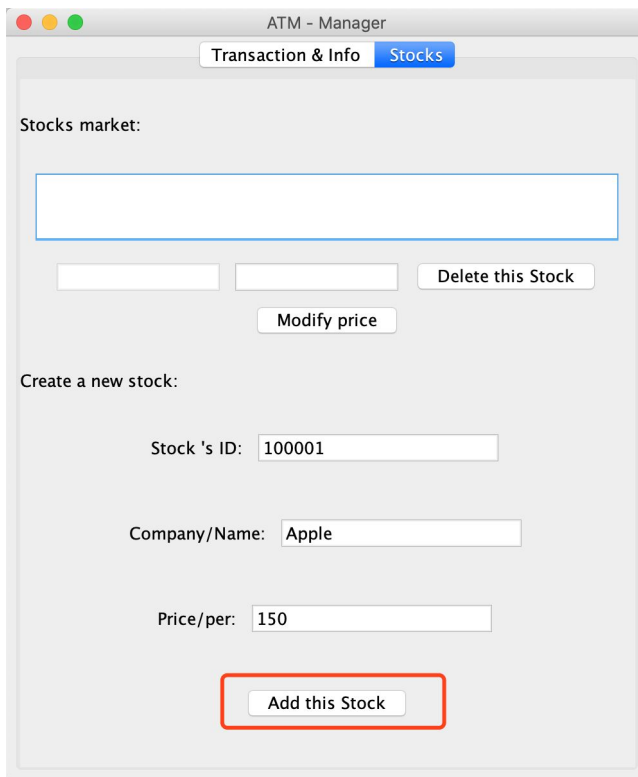
10)Stock

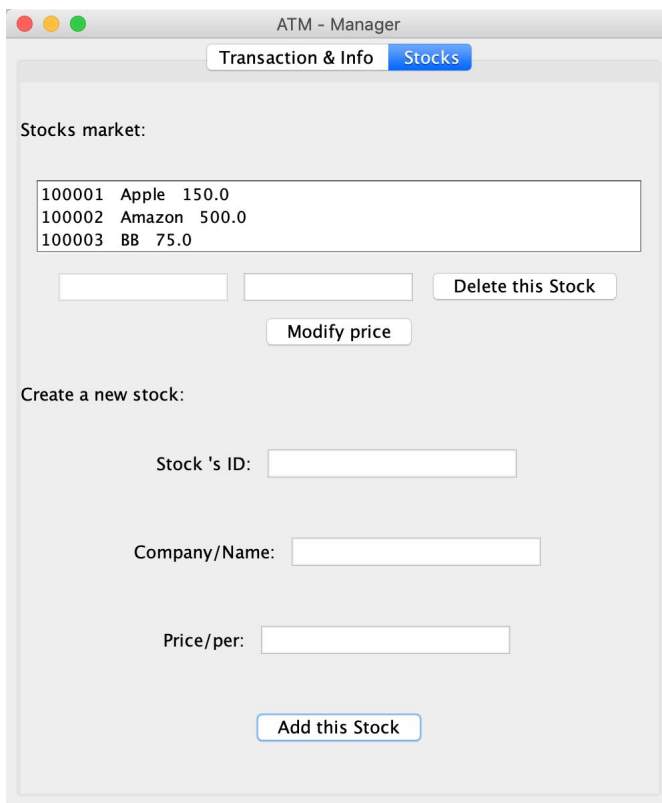
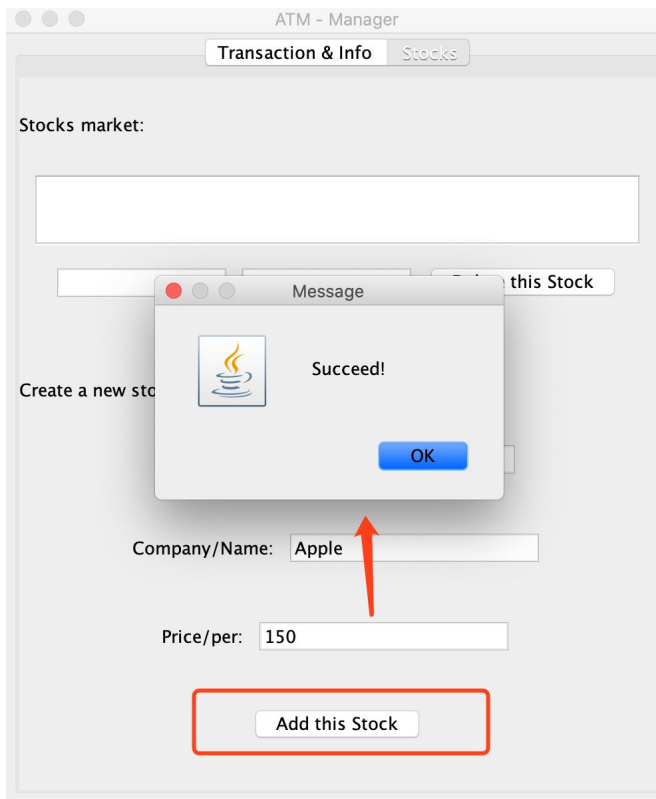
10.1)Add Stock

Click "Stock" button to check the information of stocks.



Input ID, Name and Price, stock can be added to the stock list.





The admin can delete a chosen stock as long as no one owns the stock or even modify its price if needed.

ATM - Manager

Transaction & Info Stocks

Stocks market:

100001	Apple	149.75
100002	Amazon	549.5
100003	BB	75.02

100001 149.75 Delete this Stock

Modify price

Create a new stock:

Stock 's ID:

Company/Name:

Price/per:

Add this Stock

## 10.2) Buy stock

Click "Security Account" button to create security account after logging in as a customer.

ATM - Customer

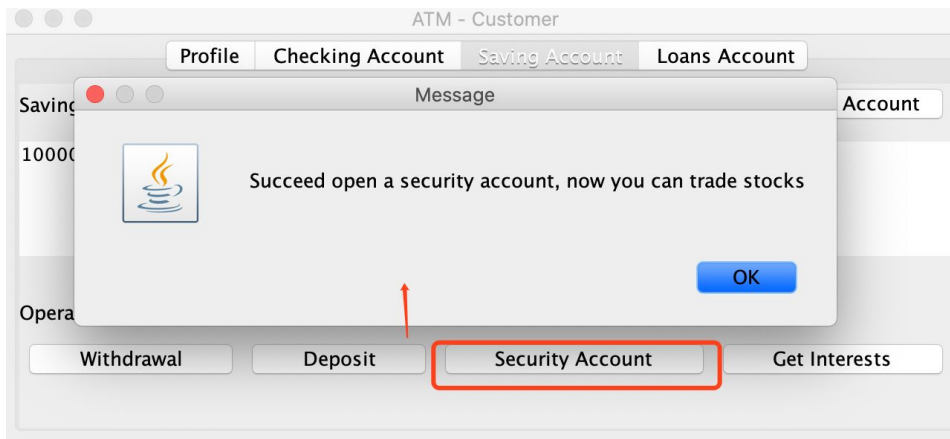
Profile Checking Account Saving Account Loans Account

Saving Account \*\*\*\*0020 Stop this Account Create a Saving Account

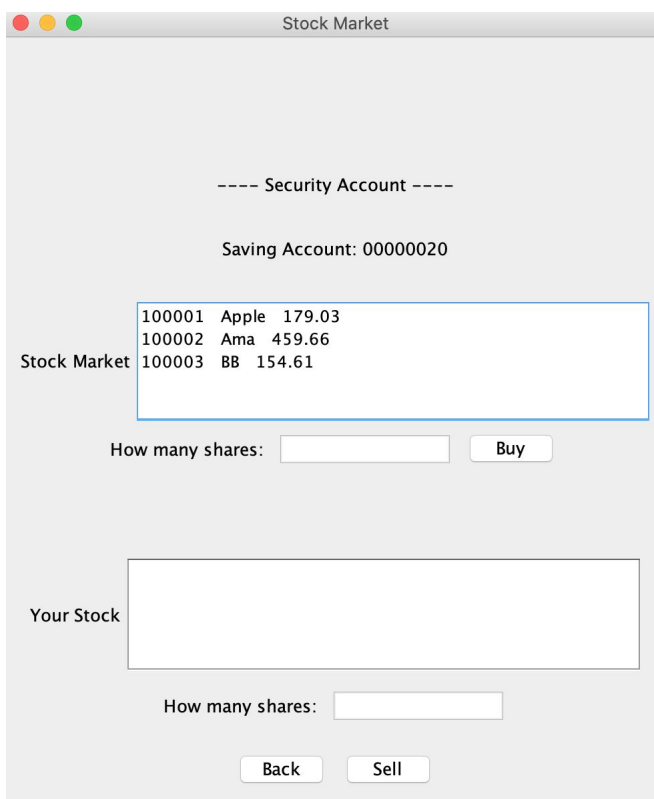
100000.0 USD

Operations

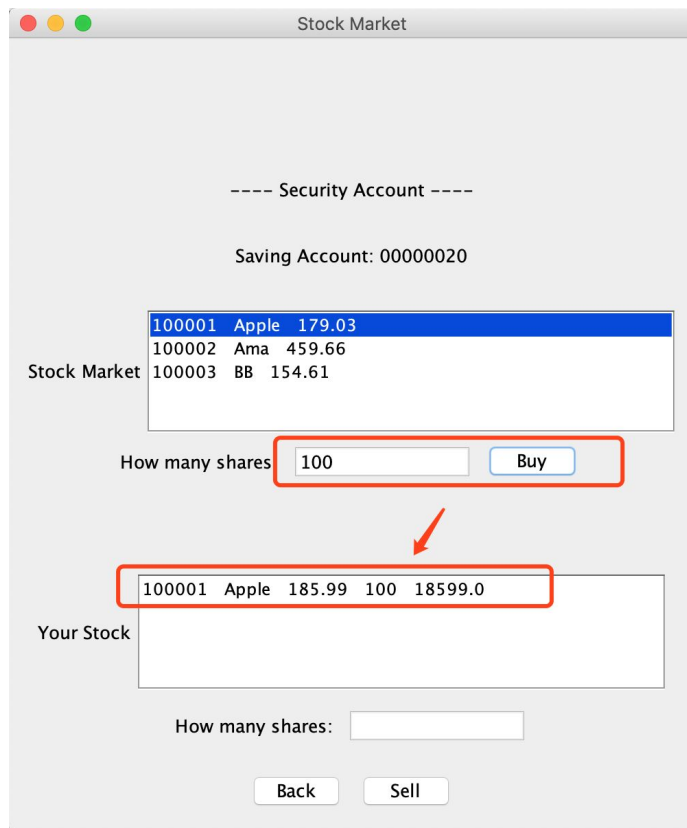
Withdrawal Deposit Security Account Get Interests



Stock Market:



Click the stock you want to buy, and input the number of shares, and then click “Buy” button. The stocks you have will be shown in the window below:



If you want to sell your stock, input the number of shares you want to sell and click “Sell” button:

