

Class description:

Account:

The super class for checking account and saving account. It is abstract so user has to claim the account to be a checking or saving account. There are username and password for each account, along with balance, loan and transactions. Operations include get Username, get Password, set loan, and pay loan. These things are both used by checking account and saving account.

BankATM:

BankATM is the main class. The only things he needs to do are setting up two frames to run the GUI for ATM and Manager, and using a static variable to keep tracking all the accounts and the current account.

Currency:

Use a HashMap to store the exchange rate. Can be initialized from another currency instance or String+Double like USD 10.5. Method include set currency, add value, decrease value, merge two different currencies, and toString, etc. Almost every class use Currency except for the Date class.

Date:

Can create a Date default today's date, or specify which date to represent. Has toString method and equals method.

GUI\_ATM:

Is responsible for checking whether the user has logged in. If not, create the Login GUI, if yes, create the Query GUI.

GUI\_Login:

Actually a JTextField, a JPasswordField and some JButtons.

Can create a manager GUI from login.

GUI\_Manager:

Manager can check a specific user of transactions on one day. He can also check

all transactions directly. If the GUI\_Manager window is closed, user can create a new GUI\_Manager from the GUI\_Login.

#### GUI\_Query:

Contains 5 panels and a lot of buttons. When user click on deposit, he needs to specify the currency and amount he want to deposit. If the input is ok, the make-deposit button will be activated, by clicking that button, a deposit transaction will be finished. Same for the other transactions.

The finish button will set current user name to empty, and get back to GUI\_login.

#### Loan:

Loan record contains the username, Currency, start date, term in month, interest, and whether its paid or not.

#### Report:

Can create a GUI and show all the transactions that passed to it. If a date is passed to it together with the transactions, it will filter the transactions on that day and show them. A JTable is used to show the transactions.

Report can be reused by both the user GUI and manager GUI.

#### Transaction:

Has many attributes like date, from user, to user, value, charge, balance left and description for this transaction.