Python Group Project

DDL: Dec 31 23:55 p.m.

3 members for each team

In a bank, there are many accounts. An account can be a normal account or a VIP account. Account information is stored in a file in the following format (account.txt):

accountNo	accountName	password	Balance	VIP	updated_date
0123	Ryan	123456	100000.23	V	2018-01-01
0124	Eric	654321	100000.12	N	2018-02-03

Every account number (accountNo) contains four digits. Password would be a 6-sigits number. For every account, the client can inquiry, withdraw, save and transfer money. These transactions have the following features:

1. Withdraw

   - For normal account, the customer can withdraw atmost 2000 per time. For VIP account, the customer can withdraw 3000 per time. If a customer wants to get money that exceeds this limit, a warning should be given.
   - When a customer withdraws money from an account and the amount exceeds the budget in that account, the withdrawal fails. A warning must be given.

2. Deposit

   - A customer can deposit as much as possible.

3. Transfer

   - When transferring money, a VIP account can transfer at most 20000 and a normal account can transfer at most 10000. It is assumed that the accounts transferring from and transferring to are all in the account.txt.

4. Inquiry

   - When an account is inquired, the balance in this account is displayed.

5. accumulate_interest

   - For normal account, the interest rate is 0.001% per day (simple interest). For VIP account, the interest rate is 0.0012% per day (simple interest).

Notice: After each transaction including inquiry, the balance should be updated in the file if the

transaction succeed.

A menu is required for the customer to login and operate the account. There are three components in the menu.

1. Login system

   When the program start, a menu as following should prompt out.

   > Please input your account number:

   If a valid account can be found in account.txt, the user can process to next step. Otherwise, a warning will be given and back to the account input.

   > Please input you account password:

   Verify input with the password stored in the account.txt. If failed, a warning will be given and back to the account input.

2. Operation menu

   After customer log into the system, a menu as following should prompt out.

   > 1. Inquiry
   > 2. Deposit
   > 3. Withdraw
   > 4. Transfer
   > 5. Quit
   >
   > Please select:

   Customer can use number to select each operation.

   - Inquiry

     output the balance as following

     > Dear Ryan, your balance is 100000.23

   - Deposit

     Input how much money you want to deposit

     > Please input the amount to save: 10000

     Verify if it is a reasonable amount, and output the updated balance.

     > Dear Ryan, your balance has been updated to 110000.23

   - Withdraw

     Input the amount you want to withdraw

     > Please input the amount to withdraw: 10000

     Verify if it is a reasonable amount, and output the updated balance. Otherwise warning must be given.

     > Dear Ryan, your balance has been updated to 90000.23

   - Transfer

     Input the target account number

     > Please input the target account number:

Verify if it is a valid account. If not, a warning must be prompted. Next input the amount to transfer.

> Please input the amount to transfer:

Verify if it is a reasonable amount, and output the updated balance. Otherwise warning must be given.

> Transfer success! Your balance has been updated to

After each operation, you can choose

> 1. Continue //Back to Operation menu
> 2. Quit //Terminate the program

Notice

Use classes and inheritance.

Submission

compressed into one zip file includes:

1. code(.py files)

2. Document (one page)
   - User manual
   - Job allocation