
Develop a software to model Bank Accounts. The system should be capable of creating bank account by providing account Holder name and initial amount. Each account will have a unique account number, which is a thirteen digit number. We should be able to query current balance from an account.

Accounts should support accruing interest (that is, adding interest to balance periodically where rate of interest, periodicity is dependent on the type of account). We should be able to associate email id and mobile number of the account holder with an account optionally, if the holder provides those info. Some accounts may be transferable.

There are different kind of accounts as follows:

Mainly there are three types accounts - CaSa, Deposit and Loan.

Further CaSa accounts have sub types - Current account and Savings Account.

Deposit accounts have subtypes - Fixed and Recurring.

Loan Accounts have subtypes - House Loan, Vehicle Loan and Personal Loan

Accounts have a behavior that you can deposit (add) money to an account and withdraw money from the account. These operations affect the current balance of the account. But, every account need not necessarily support these two operation. Rules are below

- CaSa accounts support both deposit and withdraw.
- Among Deposit Accounts, Fixed Deposit supports a one time initial deposit operation , but not withdraw operation. Recurring Deposit supports deposit operation but not withdraw.
- Loan accounts support only deposit operation.

Accounts CaSa, Recurring and Loans support printing Account Statement operation, which displays last ten deposit/withdraw operation activity on the account.

Two account instances are equal if their account numbers are

equal.

It would be nice to use Account instances as keys of Dictionary.

Your program needs to have an AccountManager which holds a list of accounts. You should be able to iterate over this list and perform operations - print current balance, print account details, print account statement as applicable.

The account manager should provide facility to deposit money to allowed account types and withdraw money from an allowed account.

Accrue interest affect the balance as $\text{balance} = \text{balance} * (\text{balance} * \text{interest_rate} / 365)$ for all accounts except for deposits it is $\text{balance} = \text{balance} + \text{balance} * \text{interest_rate} * \text{term of deposit}$.
