

CS 4230

Project 3

The WeCheatEm Bank

You get to write a program to manage a handful of bank loans.

The requirements are as follows:

1. A customer has an account number, generated by the system.
 - a. A customer has one savings account (at all times, even if it is empty.)
 - b. A customer may have up to three loans at a time.
2. Each month, a customer may do the following:
 - a. Initiate a loan
 - i. Input amount
 - ii. Input monthly payments
 - iii. Cannot have more than 3 loans
 - b. Make a payment on a loan
 - i. Choose which loan
 - ii. Input amount
 - c. Deposit to savings
 - i. Input amount to deposit
 - d. Withdraw from savings
 - i. Input amount of withdraw
3. You must set the interest rates for loans at startup. These are **yearly** interest rates.
 - a. All interest rates are in increments of .25%
 - b. The loan interest rate must be between 6% and 18%, inclusive.
 - c. The savings rate is one fourth the loan rate.
4. One special command is “Advance to next month” which can be accessed by entering 6.
5. At the change of each month, do the following:
 - a. Calculate the interest on loans and savings accounts
 - b. Add the interest into the accounts.
 - c. Generate a statement for each customer that shows beginning balances, account activity during the month, interest applied, and ending balances.
6. If the minimum is not paid, a \$50 late fee is assessed (added to the loan balance).
7. The bill includes the minimum payment required. The minimum payment is the amount of interest due plus one percent of the principal, or \$10, whichever is greater.
 - a. BUT if the loan is delinquent (the customer didn’t pay enough last month), add \$50 to the minimum payment. (Note: if they miss two or more payments, the late fees keep getting added to the loan balance. But it’s always only \$50 added to the minimum payment.)
8. The maximum amount of a loan at origination is \$50,000. The minimum amount is \$500.

9. Loan payments above the minimum are accepted, but not above the balance.
10. A loan account is automatically closed when the balance is paid.

Note: Accounts never have fractions of cents. It rounds to the nearest cent.