Scenario-Well Money Bank

Well Money is a database system which keeps track of the information about customers and bank accounts for the Well Money Bank. A centralized database will help to provide general accessibility to this information as well as ensure the data are preserved more securely.

The Business Logic

The bank has users who are bank employees or customers. An employee can also be a customer. All users have a unique ID to identify them. The customer can add money to an account, remove money from an account, and view information about an account. A bank employee can create an account, delete an account, and view information about accounts. A customer deposit must accompany the opening of an account. If there is any balance, a customer withdrawal must accompany the closing of an account.

For each user, we maintain several pieces of information including first and last name, a password for authentication, two ID verification questions and answers, an email address, and one or more phone numbers. The security questions will come from a list of pre-designed questions. Each user will select a question and then provide an answer for that question.

There are two types of customers: standard and premium. All customers must be designated one of the two types. The difference between the two kinds of customers is that standard customers pay monthly service fees and premium customers do not.

Each customer can have multiple bank accounts. They can add money to any of the accounts. They can withdraw money from the account as long as there is at least as much money in the account as the withdrawal amount. If the withdrawal amount is more than the account balance, the transaction is not allowed.

There are two types of bank accounts, savings and checking. Each bank account is associated with one or more customers. Each account has a unique ten-digit account number, one or more transactions, a main branch, a service fee, and a calculated balance. A branch has a branch number, a manager who is a bank employee, a street address, a city, and a state.

There are three types of transactions: a withdrawal, a deposit, and a payment. Each transaction has an account, an amount and a date. A payment also has a payee. A withdrawal or a payment subtracts from the balance while a deposit adds to the balance. A transfer is a special type of interaction that is a withdrawal from one account and a deposit to another account for the same amount. This interaction actually produces two transactions. A savings account does not have payment transactions.