**Bank Management System**

**Users** can be of 2 types:

* Account Holders
  + Can open a new account
  + Can close an account
  + Can see the account details
  + Can change the pin/key or username of his accounts’ cards
* Admins
  + Can see all the account holders
  + See all accounts
  + Can open an account for an user
  + Can close an account of a user

**Accounts** can be of 2 types:

* Savings
  + Limited number of extractions/transactions for those
  + Has a safety deposit box with a random generated key and an id
    - The user can change the random generated key
  + Rate: base rate – 25%
  + Has an account number starting with 1
  + Operation performed:
    - Max 6 transactions
    - Max 6 withdrawls
    - Any number of deposits
* Checking
  + Unlimited number of extractions/transaction cand be performed
  + Has a debit card with a random generated pin and a card number
    - The user can change the random generated pin
  + Rate: 15% from the base rate
  + Has an account number starting with 2
  + Operation performed:
    - Any number of transactions
    - Any number of withdrawls
    - Any number of deposits

Each account

* Has one single owner (user), but an account holder cand hold multiple accounts of any type.
* Has a transaction hystory (a list of transactions)

**Transactions** can be made between accounts (not between users, because a user can have multiple accounts) or between an account and an external user (like a shop for exemple). For those cases, I keep a string with the name of the external receiver.

Database Constraints

* Value of the transaction > 0
* Initial deposit > 0
* All dates < currentDate
* Cnp unique, fixed nr of digits
* Id unique and not null
* Password has more than 4 letters/digits
* Balance > 0
* Account number – a fixed number of digits