

## **Relational Schema**

User (user\_id, username, password, first\_name, last\_name, email, national\_id)

Client (user\_id, phone\_number, date\_of\_birth, country, city, street, credit\_score, income, employee\_status)

Client.user\_id references User

Banker (user\_id, hire\_date, years\_of\_experience)

Bank.user\_id references User

Bank.years\_of\_experience As Year (current\_date) – Year(hire\_date)

Admin (user\_id)

Admin.user\_id references User

Account (account\_number, iban, balance, interest\_rate, type, date\_opened, client\_id, banker\_id)

Account.client\_id references Client

Account.banker\_id references Banker

Credit Card (credit\_card\_id, amount, type, credit\_limit, credit\_score, interest\_rate, date\_opened, client\_id)

Credit Card.client\_id references Client

Credit Card Bill (bill\_id, amount, type, due\_date, credit\_card\_id, account\_number, reminder\_id, client\_id)

Credit Card Bill.credit\_card\_id references Credit Card

Credit Card Bill.account\_number references Account

Credit Card Bill.(reminder\_id,user\_id) references Payment Reminder

Reward Points (credit\_card\_id, points\_id, number)

Reward Points.credit\_card\_id references Credit Card

Loan (loan\_id, amount, interest\_rate, start\_date, due\_date, credit\_score, duration, client\_id)

Loan.client\_id references Client

Loan.duration As Current(date\_time) – (start\_date)

Personal Loan (loan\_id)

Personal Loan.loan\_id references Loan

Car Loan (loan\_id, car\_model, car\_model\_year)

Car Loan.loan\_id references Loan

Bank Transfer (transfer\_id, amount, transfer\_date, transfer\_status, sender\_account\_number, receiver\_id)

Bank Transfer.sender\_account\_number references Account

Bank Transfer.receiver\_id references Beneficiary

Own (transfer\_id)

Own.transfer\_id references Bank Transfer

Internal (transfer\_id)

Internal.transfer\_id references Bank Transfer

Domestic (transfer\_id, city, bank\_name)

Domestic.transfer\_id references Bank Transfer

International (transfer\_id, country, city, bank\_name)

International.transfer\_id references Bank Transfer

Beneficiary (beneficiary\_id, beneficiary\_name, receiver\_account\_number, receiver\_iban)

Payment Reminder (client\_id, reminder\_id, type, amount, due\_date\_time, bill\_id)

Payment Reminder.client\_id references Client

Payment Reminder.bill\_id references Bill

Bill (bill\_id, bill\_amount, late\_payment\_fee, bill\_type, due\_date, status, owner\_account\_number)

Bill.owner\_account\_number references Account

Reports (report\_id, type, status, date\_time, description, banker\_id, client\_id)

Reports.banker\_id references Banker

Reports.client\_id references Client

Request (request\_id, amount, interest\_rate, issued\_date, type, banker\_id, client\_id)

Loan Request (request\_id, documents, payment\_option)

Loan Request.request\_id references Request

Credit Card Request (request\_id)

Credit Card Request.request\_id references Request