

The German University in Cairo

Faculty of Media Engineering and Technology

**(CSEN 603) Software Engineering**

Milestone 2:

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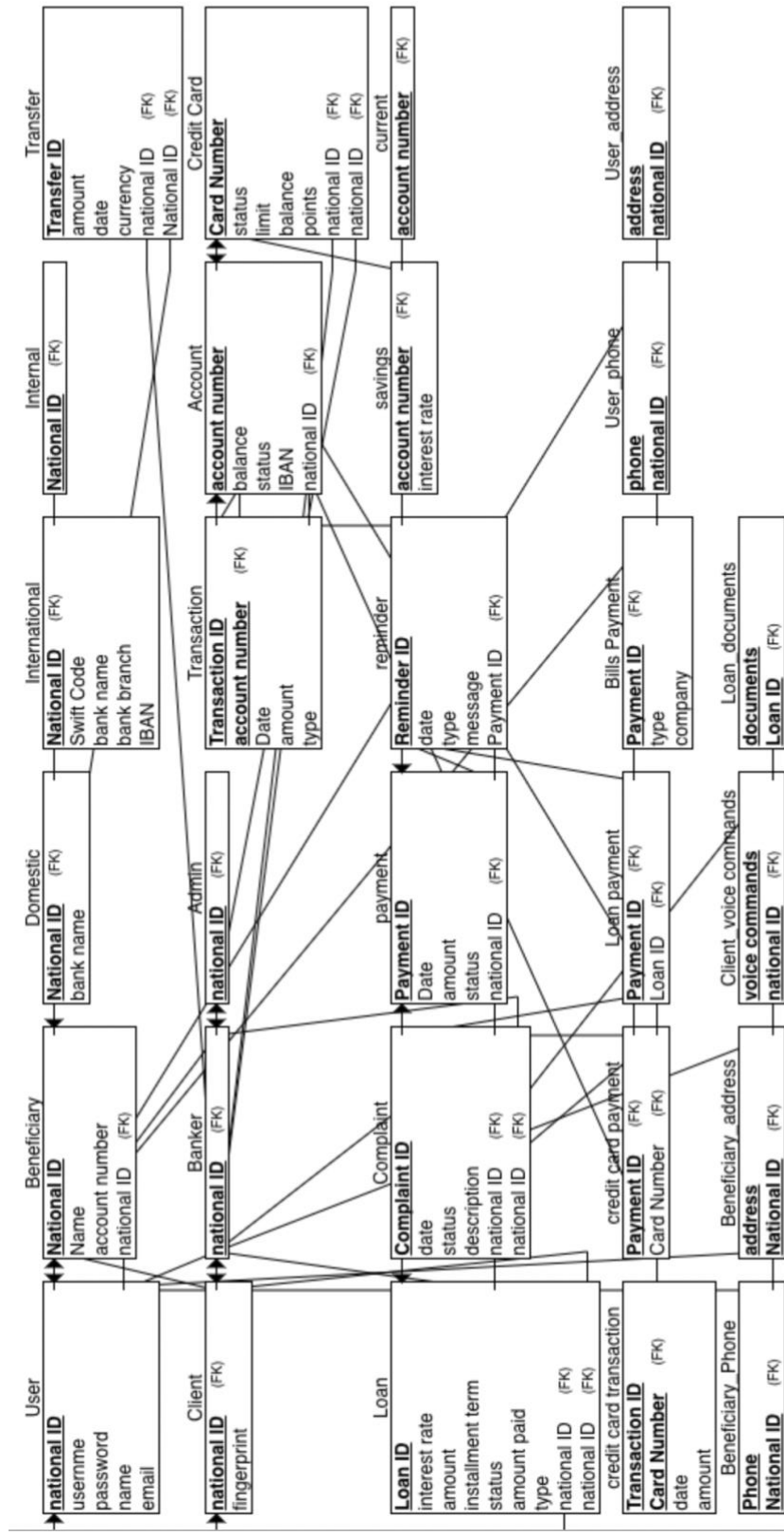
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## **Relational Schema**

User (national\_ID, username, password, name, email)

UserPhone (national\_ID, phone)

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UserPhone.national\_ID *references* User

UserAddress (national\_ID, address)

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UserAddress.national\_ID *references* User

Client (national\_ID, fingerprint)

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Client.national\_ID *references* User

ClientVoiceCommands (voice\_commands, national\_ID)

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ClientVoiceCommands.national\_ID *references* Client

Banker (national\_ID)

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Banker.national\_ID *references* User

Admin (national\_ID)

-----

Admin.national\_ID *references* User

Account (account\_number, balance, status, IBAN, national\_ID)

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Account.national\_ID *references* Client

Current (account\_number)

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Current.account\_number *references* Account

Savings (account\_number, interest\_rate)

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Savings.account\_number *references* Account

Transaction (transaction\_ID, account\_number, date, amount, type)

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Transaction.account\_number *references* Account

CreditCard (card\_number, status, limit, balance, points, client\_national\_ID,

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banker\_national\_ID)

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CreditCard.client\_national\_ID *references* Client

CreditCard.banker\_national\_ID *references* Banker

CreditCardTransaction (transaction\_ID, card\_number, date, amount)

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CreditCardTransaction.card\_number *references* CreditCard

Loan (loan\_ID, interest\_rate, amount, installment\_term, status, amount\_paid,  
type, client\_national\_ID, banker\_national\_ID)

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Loan.client\_national\_ID *references* Client

Loan.banker\_national\_ID *references* Banker

LoanDocuments (documents, loan\_ID)

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LoanDocuments.loan\_ID *references* Loan

Payment (payment\_ID, date, amount, status, national\_ID)

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Payment.national\_ID *references* Client

BillsPayment (payment\_ID, type, company)

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BillsPayment.payment\_ID *references* Payment

CreditCardPayment (payment\_ID, card\_number)

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CreditCardPayment.payment\_ID *references* Payment

CreditCardPayment.card\_number *references* CreditCard

LoanPayment (payment\_ID, loan\_ID)

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LoanPayment.payment\_ID *references* payment\_ID

LoanPayment.loan\_ID *references* Loan

Reminder (reminder\_ID, date, type, message, payment\_ID)

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Reminder.payment\_ID *references* Payment

Complaint (complaint\_ID, date, status, description, client\_national\_ID,

admin\_national\_ID)

Complaint.client\_national\_ID *references* Client

Complaint.admin\_national\_ID *references* Admin

Beneficiary (national\_ID, name, account\_number)

BeneficiaryPhone (phone, national\_ID)

BeneficiaryPhone.national\_ID *references* Beneficiary

BeneficiaryAddress (address, national\_ID)

BeneficiaryAddress.national\_ID *references* Beneficiary

Internal (national\_ID)

Internal.national\_ID *references* Beneficiary

Domestic (national\_ID, bank\_name)

Domestic.national\_ID *references* Beneficiary

International (national\_ID, swift\_code, bank\_name, bank\_branch, IBAN)

International.national\_ID *references* Beneficiary

Transfer (transfer\_ID, amount, date, currency, client\_national\_ID,

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beneficiary\_national\_ID)

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Transfer.client\_national\_ID *references* Transfer

Transfer.beneficiary\_national\_ID *references* Transfer