

## **Software Engineering Schema**

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## Schema:

- Person(national\_id, birth\_date, password, address, name, email, phone\_number)
- Admin(national\_id , admin\_id)
- ChiefTechnicalOfficer(national\_id)
- RegularAdmin(national\_id)
- Banker(national\_id, banker\_id)
- Client(national\_id, client\_id, banker\_id , creditScore)

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Client.banker\_id references Banker.national\_id

- Normal\_Client(national\_id)
- Visually\_impaired\_client(national\_id)
- Report(report\_id, isResolved , description , client\_id)

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Report.client\_id references Client.client\_id

- BugsReport(report\_id)
- CreditCardReport(report\_id)
- Transaction(transaction\_id , date , isWithdraw, amount , account\_number)

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Transaction.account\_number references Bank\_Account.account\_number

- Account\_Transaction(transaction\_id)
- Credit\_Card\_Transaction(transaction\_id, card\_number)

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Credit\_Card\_Transaction. references Credit\_Card.card\_number

- Withdraw(transaction\_id)
- Deposit(transaction\_id)
- Transfer(transaction\_id , status, transfer\_id)
- Internal\_Transfer(transaction\_id, receiver\_account\_number)

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Internal\_Transfer.receiver\_account\_number references

Bank\_Account.account\_number

- Domestic\_Transfer(transaction\_id, bankName, receiverAccount)
- International\_Transfer(transaction\_id, receiverBankSwiftCode , senderBankSwiftCode , , currency , receiverIBAN , senderIBAN , purpose)

- Card(card\_number,cvv,expiration\_date, isPending , isAccepted , national\_id , account\_number ) .....

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Card.account\_number references Bank\_Account.account\_number

Card.national\_id references Banker.national\_id

- Debit\_card(card\_number)
- Credit\_card(card\_number , credit\_card\_points , limit)
- Prepaid\_card(card\_number , balance)
- Bank\_Account(account\_number,balance)
- BankAccount\_Client\_has(national\_id , account\_number)

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BankAccount\_Client.national\_id references Client.national\_id

BankAccount\_Client.account\_Number references Bank\_Account.account\_number

- Supported\_Third\_Party\_Apps(name)
- Third\_party\_app\_account(account\_number , app\_name , national\_id)

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Third\_party\_app\_account.app\_name references Supported\_Third\_Party\_Apps.name

Third\_party\_app\_account.national\_id references Client.national\_id

- Pending\_BankAccounts(national\_id , account\_number, status)

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Pending\_BankAccounts.national\_id references Client.national\_id

Pending\_BankAccounts.account\_Number references Bank\_Account.account\_number

- Bills(bill\_id , amount , due\_date , receiverAccountNumber , description , dateCreated , account\_number , unpaid\_partial\_full)

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Bills.account\_number references Bank\_Account.account\_number

- Utility\_Bills(bill\_id ,payment\_method,app\_account)

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Utility\_Bills.app\_account references Third\_party\_app\_account.account\_number

- Utility\_Companies(account\_number , name , type , bank\_name)
- Utility\_Bill\_to\_UTILITY\_Company(bill\_id , account\_number)

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Bill\_Payedto\_Company.bill\_id references Utility\_Bills.bill\_id

Bill\_Payedto\_Company.account\_number references Utility\_Companies.account\_number

- Credit\_Card\_Bills(bill\_id , billDate , payment\_Date , lateFee , isPaid, card\_number)

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Credit\_Card\_Bills.card\_number references Credit\_card.card\_number

- Loans(loan\_id , interest\_rate , dateCreated , description , status , installment , loan\_term , amount , isApproved , account\_number , national\_id , amountRemaining)

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Loans.account\_number references Bank\_Account.account\_number

Loans.national\_id references Banker.national\_id

- Personal\_Loans(loan\_id , income, purpose)
- Car\_Loans(loan\_id , vehicleIdentificationNumber, carValue , downPayment , model , make)