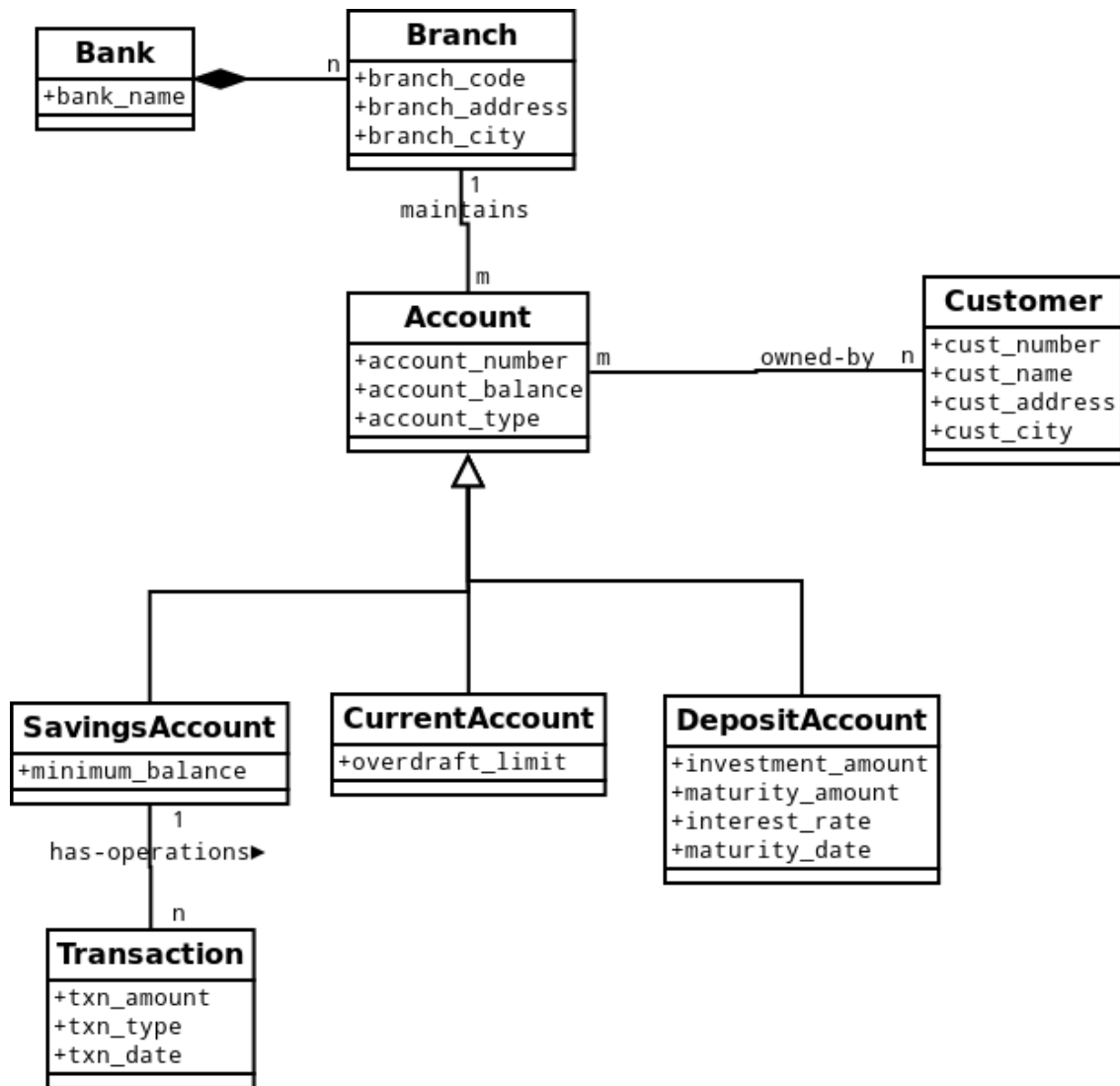# DB Lab 7

-Archit Sangal IMT2019012

1. UML class diagram

2. Relational Database Design

Table Name = BANK

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
bank_id	String	PK, Surrogate
bank_name	String	UNIQUE, NOT NULL

Table Name = BRANCH

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
branch_code	String	PK
branch_address	String	NOT NULL
branch_city	String	NOT NULL
bank_id	String	FK references BANK.bank_id, NOT NULL

Table Name = ACCOUNT

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
account_number	String	PK
account_balance	Double	NOT NULL
account_type	String	NOT NULL
branch_code	String	FK references BRANCH.branch_code, NOT NULL

Table Name = CUSTOMER

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
cust_number	String	PK
cust_name	String	NOT NULL
cust_address	String	NOT NULL
cust_city	String	NOT NULL

Table Name = ACCOUNT_CUSTOMER

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
account_customer_id	String	PK, Surrogate
account_number	String	FK references ACCOUNT.account_number , NOT NULL
cust_number	String	FK references CUSTOMER.cust_number, NOT NULL

We may have a composite key → {account_number,cust_number}, this can be used in account_customer_id.

Table Name = SAVING_ACCOUNT

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
saving_account_number	String	PK, Surrogate, FK references ACCOUNT.account_number, NOT NULL
minimum_balance	Double	NOT NULL

Table Name = CURRENT_ACCOUNT

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
current_account_number	String	PK, Surrogate, FK references ACCOUNT.account_number, NOT NULL
overdraft_limit	Double	NOT NULL

Table Name = DEPOSIT_ACCOUNT

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
deposit_account_number	String	PK, Surrogate, FK references ACCOUNT.account_number, NOT NULL
investment_amount	Double	NOT NULL
maturity_amount	Double	NOT NULL
interest_rate	Double	NOT NULL
maturity_rate	Double	NOT NULL

Table Name = TRANSACTION

Name of Column	Data Type	Constraints (PK, FK, Surrogate, UNIQUE, NOT NULL, etc.)
txn_id	String	PK, Surrogate
txn_amount	Double	NOT NULL
txn_type	String	NOT NULL
txn_date	Date	NOT NULL
saving_account_number	String	FK references SAVINGS_ACCOUNT. savings_account_number, NOT NULL

3. Populated Tables

Table Name = BANK

bank_id	bank_name
00001	Kubera Bank

Table Name = BRANCH

branch_code	branch_address	branch_city	bank_id
00001	xyz	Chennai	00001
00002	abc	Mumbai	00001
00003	lmn	Kolkata	00001
00004	opq	Delhi	00001

Table Name = ACCOUNT

account_number	account_balance	account_type	branch_code
348573	1000000.00	Current	00001
984753	10000.00	Saving	00002
938473	30983.00	Saving	00004

Table Name = CUSTOMER

cust_number	cust_name	cust_address	cust_city
0001	Ram	iop	Mumbai
0002	Shyam	plm	Delhi

Table Name = ACCOUNT_CUSTOMER

account_customer_id	account_number	cust_number
348573-0001	348573	0001
348573-0002	348573	0002
984753-0001	984753	0001
938473-0002	938473	0002

Table Name = SAVING_ACCOUNT

saving_account_number	minimum_balance
984753	5000.00
938473	5000.00

Table Name = CURRENT_ACCOUNT

current_account_number	overdraft_limit
348573	10000000.00

Table Name = TRANSACTION

txn_id	txn_amount	txn_type	txn_date	saving_account_number
0000001	20384.00	Salary credit	1-Sept-09	984753
0000002	10000.00	ATM withdrawal	10-Sept-09	984753
0000003	10000.00	Cheque deposit	18-Sept-09	984753