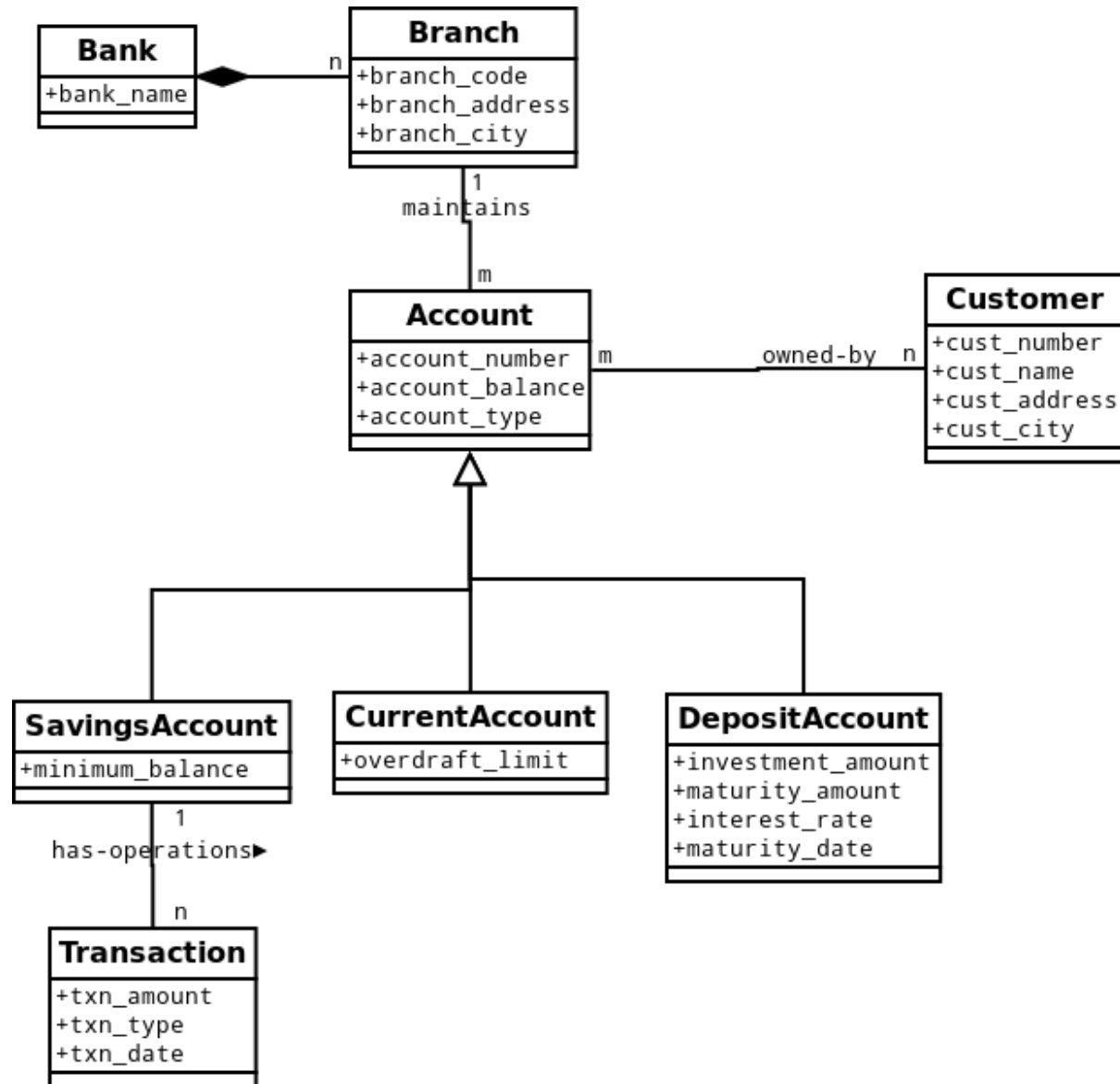


Database Lab assignment 7

IMT2020051-Naitiksinh Solanki

1. UML class diagram for Bank Database.



Tables in the Relational Schema formed after the OR mapping from the above diagram are as follows:

1. Table name = Bank

Name of attribute/column	Data type	Constraints
Bank_ID	Int	PK, Surrogate
Bank_name	String	NOT NULL, UNIQUE

2. Table name = Branch

Name of attribute/column	Data type	Constraints
Branch_ID	Int	PK, Surrogate
Branch_code	Int	NOT NULL, UNIQUE
Branch_address	Int	NOT NULL, UNIQUE
Branch_city	Int	NOT NULL
Bank_ID	Int	FK references Bank.Bank_ID, NOT NULL

3. Table name = Acc

Name of attribute/column	Data type	Constraints
Acc_ID	Int	PK, Surrogate
Acc_Int	Int	NOT NULL, UNIQUE
Acc_balance	Int	NOT NULL
Acc_type	Int	Must be name among relations = {"SavingsAcc", "CurrentAcc", "DepositAcc"}
Branch_ID	Int	FK references Branch.Branch_ID, NOT NULL

4. Table name = Customer

Name of attribute/column	Data type	Constraints
Customer_ID	Int	PK, Surrogate
Cust_Int	Int	NOT NULL, UNIQUE
Cust_name	String	NOT NULL
Cust_address	String	NOT NULL
Cust_city	String	NOT NULL

5. Table name = Owned_By

Name of attribute/column	Data type	Constraints
Owned_By_ID	Int	PK, Surrogate
Acc_ID	Int	FK references Acc.Acc_ID, NOT_NULL
Customer_ID	Int	FK references Customer.Customer_ID, NOT_NULL

Acc_Customer_Link	String	Concatenation of Acc_ID and Customer_ID , Composite Key role
-------------------	--------	--

6. Table name = CurrentAcc

Name of attribute/column	Data type	Constraints
CurrentAcc_ID	Int	PK, Surrogate, FK references Acc.Acc_ID
Overdraft_limit	Int	NOT_NULL

7. Table name = DepositAcc

Name of attribute/column	Data type	Constraints
DepositAcc_ID	Int	PK, Surrogate, FK references Acc.Acc_ID
Investment_amount	Int	NOT NULL
Maturity_amount	Int	NOT NULL
Interest_rate	Int	NOT NULL
Maturity_date	Date	NOT NULL

8. Table name = SavingsAcc

Name of attribute/column	Data type	Constraints
SavingsAcc_ID	Int	PK, Surrogate, FK references Acc.Acc_ID
Minimum_balance	Int	NOT NULL

9. Table name = Transaction

Name of attribute/column	Data type	Constraints
Transaction_ID	Int	PK, Surrogate
Txn_amount	Int	NOT NULL
Txn_type	String	
Txn_date	Date	NOT NULL
SavingsAcc_ID	Int	FK, references SavingsAcc.SavingsAcc_ID, NOT NULL