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**PROGRAM 2: BANKING ENTERPRISE** **DATABASE**

Consider the following database for a banking enterprise.

**Branch** (branch-name: String, branch-city: String, assets: real)

**BankAccount**(accno: int, branch-name: String, balance: real)

**BankCustomer** (customer-name: String, customer-street: String, customer-city: String)

**Depositer**(customer-name: String, accno: int)

**Loan** (loan-number: int, branch-name: String, amount: real)

i. Create the above tables by properly specifying the primary keys and the

foreign keys.

ii. Enter at least five tuples for each relation.

iii. Find all the customers who have at least two accounts at the *Main* branch (ex. SBI\_ResidencyRoad).

iv. Find all the customers who have an account at *all* the branches located in a

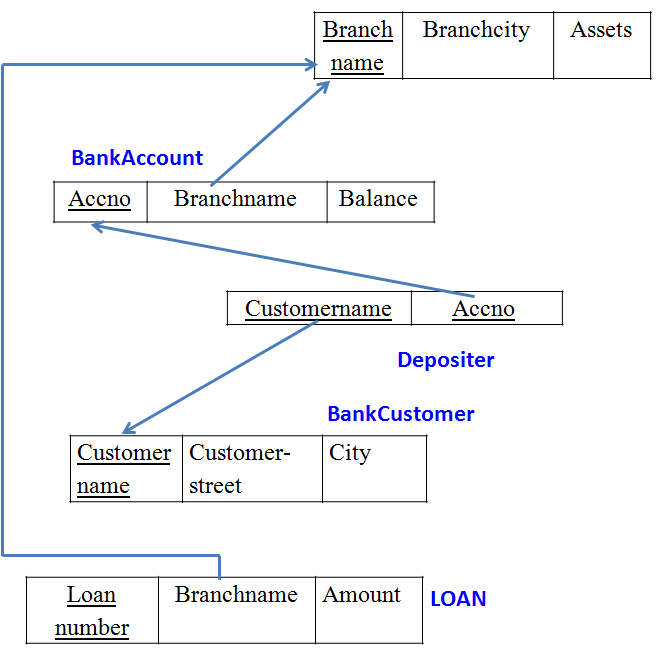
specific city (Ex. Delhi).

v. Demonstrate how you delete all account tuples at every branch located in

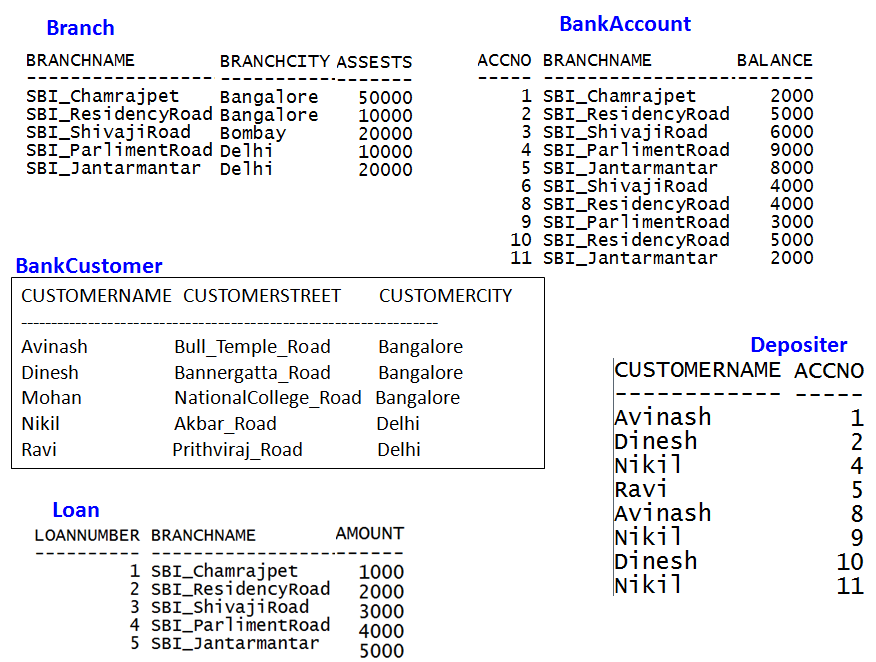
a specific city (Ex. Bombay).

**INTRODUCTION:** This database is developed for supporting banking facilities. Details of the branch along with the accounts and loans handled by them are recorded. Also details of the depositors of the corresponding branches are maintained.

**Schema Diagram**



**Sample Table data**



CREATE DATABASE Banking\_enterprise\_database;

USE Banking\_enterprise\_database;

CREATE TABLE Branch(

branch\_name varchar(20) primary key,

branch\_city varchar(40),

assets real

);

CREATE TABLE BankAccount(

accno int primary key,

branch\_name varchar(20),

balance real,

foreign key(branch\_name) references BRANCH(branch\_name)

);

CREATE TABLE BankCustomer(

customer\_name varchar(20) primary key,

customer\_street varchar(40),

customer\_city varchar (20)

);

CREATE TABLE Depositor(

customer\_name varchar(20),

accno int,

foreign key(accno) references BankAccount(accno),

foreign key(customer\_name) references BankCustomer(customer\_name)

);

CREATE TABLE Loan(

loan\_number int primary key,

branch\_name varchar(20),

amoount real,

foreign key(branch\_name) references Branch(branch\_name)

);

INSERT INTO Branch VALUES('SBI\_Chamrajpet', 'BANGALORE',50000),('SBI\_ResidencyRoad', 'BANGALORE',10000),

('SBI\_ShivajiRoad', 'Bombay',20000),('SBI\_ParlimentRoad', 'Delhi',10000),

('SBI\_Jantarmantar', 'Delhi',20000);

INSERT INTO BankAccount VALUES(1,'SBI\_Chamrajpet',2000),(2,'SBI\_ResidencyRoad',5000),

(3,'SBI\_ShivajiRoad',6000),(4,'SBI\_ParlimentRoad',9000),(5,'SBI\_Jantarmantar',8000),(6,'SBI\_ShivajiRoad',4000),

(8,'SBI\_ResidencyRoad',4000),(9,'SBI\_ParlimentRoad',3000),(10,'SBI\_ResidencyRoad',5000),

(11,'SBI\_Jantarmantar',2000);

INSERT INTO BankCustomer VALUES ("Avinash","Bull\_Temple\_Road","Bangalore"),("Dinesh","Bannergatta\_Road","Bangalore"),

("Mohan","NationtalCollege\_\_Road","Bangalore"),("Nikil","Akbar\_Road","Delhi"),

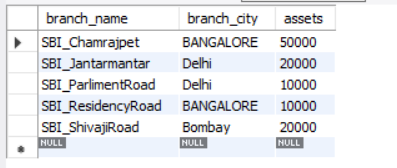
("Ravi","Prithviraj\_Road","Delhi");

INSERT INTO Loan VALUES (1,'SBI\_Chamrajpet',1000),(2,'SBI\_ResidencyRoad',2000),(3,'SBI\_ShivajiRoad',3000),

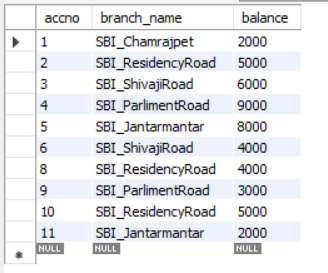
(4,'SBI\_ParlimentRoad',4000),(5,'SBI\_Jantarmantar',5000);

INSERT INTO Depositor VALUES ("Avinash",1),("Dinesh",2),("Nikil",4),("Ravi",5),("Avinash",8),("Nikil",9),("Dinesh",10),("Nikil",11);

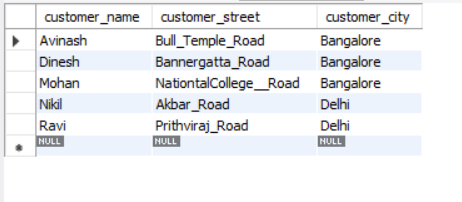
SELECT \* FROM BRANCH;



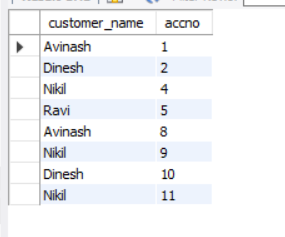
SELECT \* FROM BankAccount;



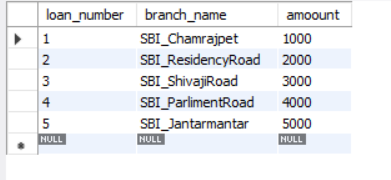
SELECT \* FROM BankCustomer;



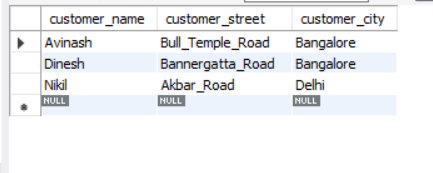
SELECT \* FROM Depositor;



SELECT \* FROM Loan;



SELECT \* FROM BankCustomer WHERE customer\_name IN(SELECT customer\_name FROM depositor group by customer\_name having COUNT(customer\_name)>=2);



SELECT d.customer\_name

FROM BankAccount a, Depositor d, Branch b

WHERE d.accno=a.accno AND b.branch\_name=a.branch\_name AND b.branch\_city="Bangalore"

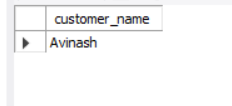
GROUP BY d.customer\_name

HAVING count(distinct b.branch\_name)=

(SELECT COUNT(branch\_name)

FROM branch

WHERE branch\_city="Bangalore");



DELETE FROM depositor

WHERE accno IN

(SELECT accno

FROM Branch b, BankAccount a

WHERE branch\_city = 'delhi' and b.branch\_name = a.branch\_name);

DELETE FROM BankAccount WHERE branch\_name IN(SELECT branch\_name FROM BRANCH WHERE branch\_city='delhi');

SELECT \* FROM BankAccount;

