**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

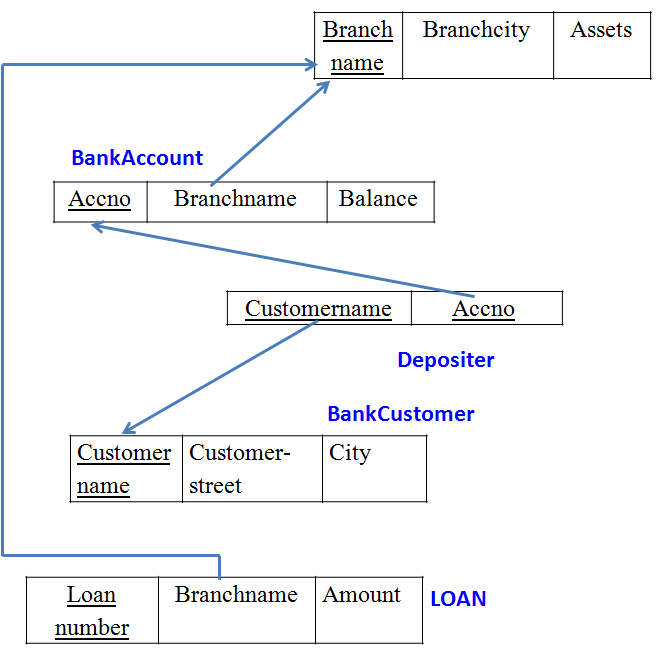
specific city (Ex. Delhi).

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

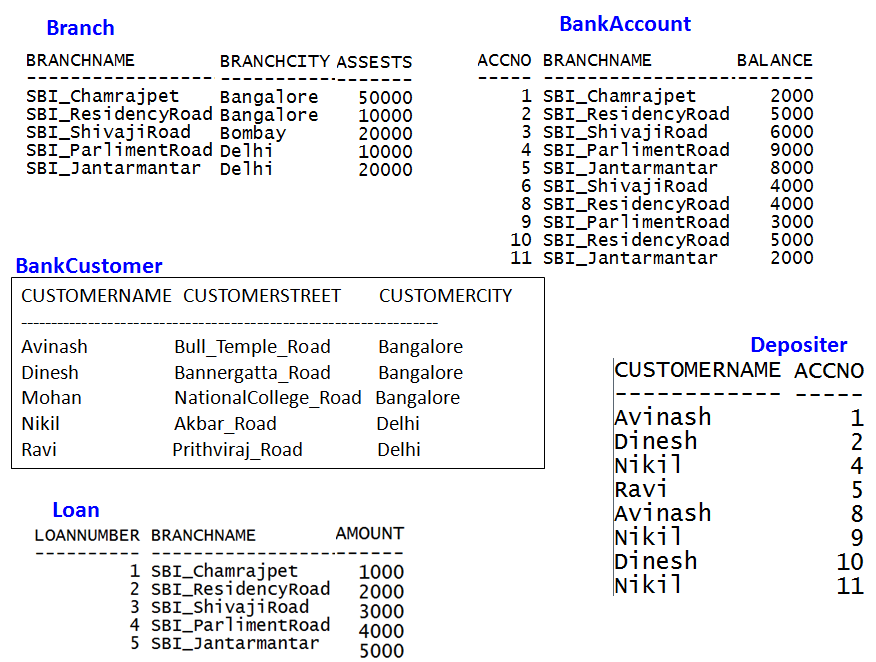
a specific city (Ex. Bombay).

**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 Bankingenterprise;

use Bankingenterprise;

CREATE TABLE BRANCH

(

branch\_name varchar(50),

branch\_city varchar(50),

assets real,

primary key(branch\_name)

);

CREATE TABLE BankAccount

(

accno int,

branch\_name varchar(50),

balance real,

primary key(accno),

FOREIGN KEY(branch\_name) REFERENCES BRANCH(branch\_name) ON DELETE SET NULL ON UPDATE CASCADE

);

CREATE TABLE BankCustomer

(

customer\_name varchar(50) primary key,

customer\_street varchar(50),

customer\_city varchar (50)

);

CREATE TABLE Depositor

(

customer\_name varchar(50),

accno int,

foreign key(accno) references BankAccount(accno),

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

);

CREATE TABLE Loan

(

loan\_number int,

branch\_name varchar(50),

amount real,

primary key(loan\_number),

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

);

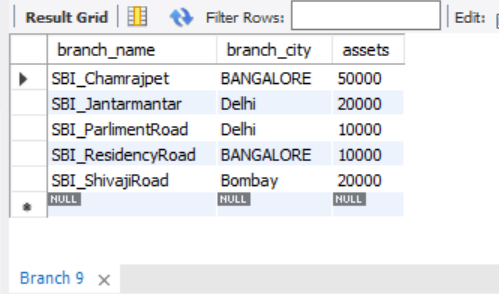
INSERT INTO Branch

VALUES ("SBI\_Chamrajpet", "BANGALORE",50000),("SBI\_ResidencyRoad", "BANGALORE",10000),

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

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

select \* from Branch;



INSERT INTO BankAccount

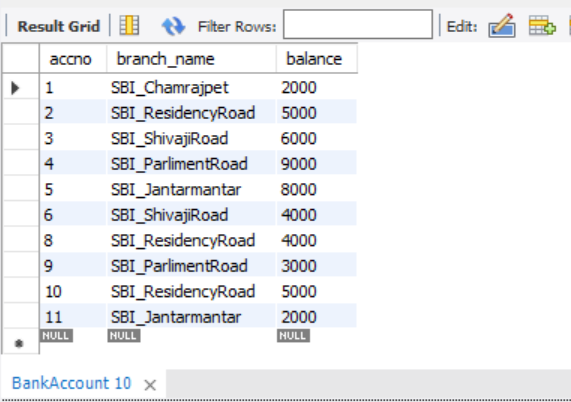
VALUES (1,"SBI\_Chamrajpet",2000),(2,"SBI\_ResidencyRoad",5000),

(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);

select \* from BankAccount;



INSERT INTO BankCustomer

VALUES ("Avinash","Bull\_Temple\_Road","Bangalore");

INSERT INTO BankCustomer

VALUES("Dinesh","Bannergatta\_Road","Bangalore");

INSERT INTO BankCustomer

VALUES ("Mohan","NationtalCollege\_\_Road","Bangalore");

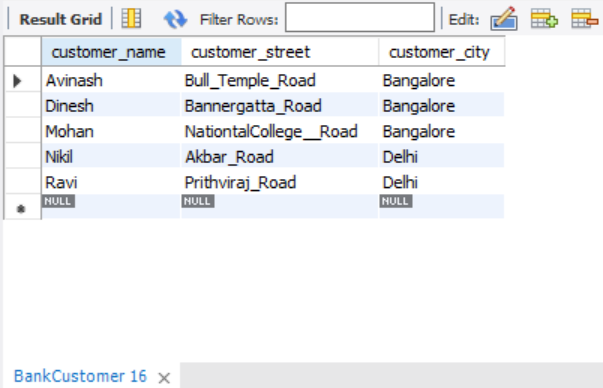
INSERT INTO BankCustomer

VALUES("Nikil","Akbar\_Road","Delhi");

INSERT INTO BankCustomer

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

select \* from BankCustomer;

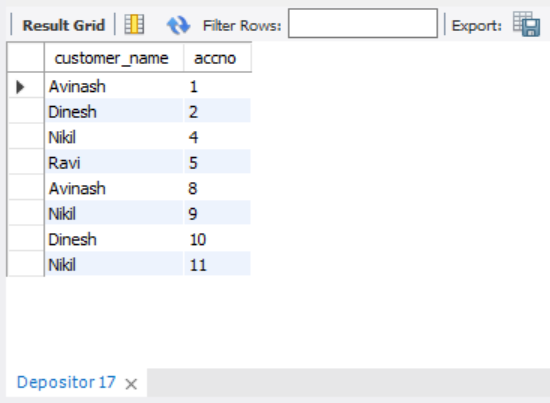


INSERT INTO Depositor

VALUES("Avinash",1),("Dinesh",2),("Nikil",4),

("Ravi",5),("Avinash",8),("Nikil",9),("Dinesh",10),("Nikil",11);

select \* from Depositor;

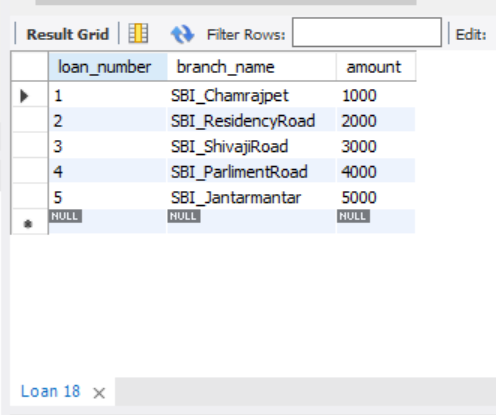


INSERT INTO Loan

VALUES (1,"SBI\_Chamrajpet",1000),(2,"SBI\_ResidencyRoad",2000),(3,"SBI\_ShivajiRoad",3000),

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

select \* from Loan;



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

SELECT \*

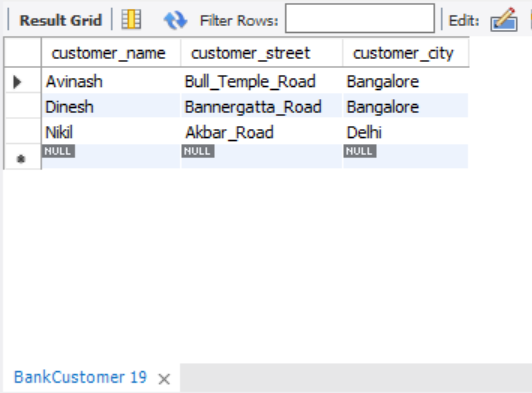
FROM BankCustomer

WHERE customer\_name IN ( SELECT customer\_name

FROM depositor

group by customer\_name

having COUNT(customer\_name)>=2);



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

specific city (Ex. Delhi).

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"

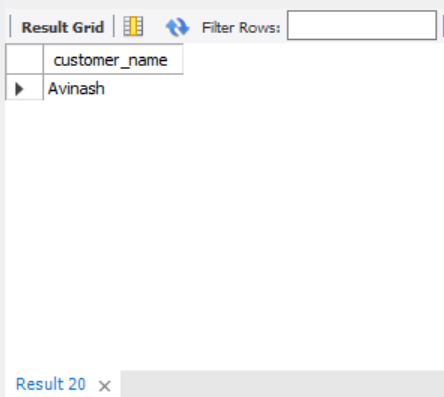
GROUP BY d.customer\_name

HAVING count(distinct b.branch\_name)=

(SELECT COUNT(branch\_name)

FROM branch

WHERE branch\_city="Bangalore");



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

a specific city (Ex. Bombay).

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;

