**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**



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

**foreign keys.**

create database Lab2;

use Lab2;

create table Branch(branch\_name varchar(30),branch\_city varchar(30),assests real, primary key(branch\_name));

desc Branch;



create table BankCustomer(customer\_name varchar(30),customer\_street varchar(30),customer\_city varchar(30), primary key(customer\_name));

desc BankCustomer;



create table BankAccount(

accno int,

branch\_name varchar(20),

balance real,

primary key(accno),

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

);

desc BankAccount;



create table Depositer(

customer\_name varchar(20),

accno int,

primary key(customer\_name,accno),

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

foreign key(accno) references BankAccount(accno)

);

desc Depositer;



create table Loan(

loan\_number int,

branch\_name varchar(20),

Amount real,

primary key(loan\_number),

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

);

desc Loan;



**ii. Enter at least five tuples for each relation.**

insert into Branch values('SBI\_Chamrajpet','Bangalore',50000);

insert into Branch values('SBI\_ResidencyRoad','Bangalore',10000);

insert into Branch values('SBI\_ShivajiRoad','Bombay',20000);

insert into Branch values('SBI\_ParlimentRoad','Delhi',10000);

insert into Branch values('SBI\_Jantarmantar','Delhi',20000);

select \*from Branch;



insert into Loan values(2,'SBI\_ResidencyRoad',2000);

insert into Loan values(1,'SBI\_Chamrajpet',1000);

insert into Loan values(3,'SBI\_ShivajiRoad',3000);

insert into Loan values(4,'SBI\_ParlimentRoad',4000);

insert into Loan values(5,'SBI\_Jantarmantar',3000);

select \*from Loan;



insert into BankAccount values(1,'SBI\_Chamrajpet',2000);

insert into BankAccount values(2,'SBI\_ResidencyRoad',5000);

insert into BankAccount values(3,'SBI\_ShivajiRoad',6000);

insert into BankAccount values(4,'SBI\_ParlimentRoad',9000);

insert into BankAccount values(5,'SBI\_Jantarmantar',8000);

insert into BankAccount values(6, 'SBI\_ShivajiRoad', 4000);

insert into BankAccount values(8, 'SBI\_ResidencyRoad', 4000);

insert into BankAccount values(9, 'SBI\_ParlimentRoad', 3000);

insert into BankAccount values(10, 'SBI\_ResidencyRoad', 5000);

insert into BankAccount values(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', 'National\_College\_Road', 'Bangalore');

insert into BankCustomer values ('Nikhil', 'Akbar\_Road', 'Delhi');

insert into BankCustomer values ('Ravi', 'Prithviraj\_Road', 'Delhi');

select \*from BankCustomer;



insert into Depositer values('Avinash', 1);

insert into Depositer values('Dinesh', 2);

insert into Depositer values('Nikhil', 4);

insert into Depositer values('Ravi', 5);

insert into Depositer values('Avinash', 8);

insert into Depositer values('Nikhil', 9);

insert into Depositer values('Dinesh', 10);

insert into Depositer values('Nikhil', 11);

select \*from Depositer;



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

select c.customer\_name

from BankCustomer c

where exists(

select d.customer\_name

from Depositer d, BankAccount ba

where

d.accno=ba.accno and

c.customer\_name=d.customer\_name and

ba.branch\_name='SBI\_ResidencyRoad'

group by d.customer\_name

having count(d.customer\_name)>=2

);



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

**specific city (Ex. Delhi).**

select distinct d.customer\_name from Depositer d where exists( select \* from BankAccount ba

where ba.accno=d.accno and exists (select \* from Branch b where b.branch\_name = ba.branch\_name and b.branch\_city='Delhi'));



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

**a specific city (Ex. Bombay).**

delete from BankAccount where branch\_name in (select branch\_name from branch where branch\_city = 'Bombay');

select \*from BankAccount;

