

PROGRAM 2: BANKING ENTERPRISE DATABASE

Consider the following database for a banking enterprise.

BRANCH (branch-name: String, branch-city: String, assets: real)

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

DEPOSITOR (customer-name: String, customer-street: String, customer-city: String)

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

BORROWER (customer-name: String, loan-number: int)

- 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.
- iv. Find all the customers who have an account at all the branches located in a specific city.
- v. Demonstrate how you delete all account tuples at every branch located in a specific city.

```
create database banking_enterprise;
```

```
use banking_enterprise;
```

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

```
create table branch(branch_name varchar(10),branch_city varchar(10),assets  
int,primary key(branch_name));
```

```
create table account(accno int,branch_name varchar(10),balance int,primary  
key(accno));
```

```
create table customer(customer_name varchar(10),customer_street  
varchar(10),customer_city varchar(10),primary key(customer_name));
```

```
create table depositor(customer_name varchar(10),accno int,primary  
key(customer_name,accno),foreign key(customer_name) references  
customer(customer_name),foreign key(accno) references account(accno) on delete  
cascade);
```

```
create table loan(loan_number int,branch_name varchar(10),amount int,primary  
key(loan_number),foreign key(branch_name) references branch(branch_name));
```

```
create table borrower(customer_name varchar(10),loan_number int,primary
key(customer_name,loan_number),foreign key(customer_name) references
customer(customer_name),foreign key(loan_number) references loan(loan_number));
```

ii. Enter at least five tuples for each relation.

```
insert into branch values('SBI','Kanakapura',1);
insert into branch values('HDFC','south end',2);
insert into branch values('BB','trinity',2);
insert into branch values('SBH','labagh',3);
insert into branch values('ICICI','cross',1);
select * from branch;
```

```
insert into account values(1001,'BB',12000);
insert into account values(1002,'HDFC',60000);
insert into account values(1003,'ICICI',24000);
insert into account values(1004,'SBH',35000);
insert into account values(1005,'SBI',110000);
select * from account;
```

```
insert into customer values('Prathik','gf2','bangalore');
insert into customer values('Karthik','mantri','mysore');
insert into customer values('Vikas','Tranquil','hubli');
insert into customer values('Vittal','pest','chennai');
insert into customer values('Sandesh','sg1','kengeri');
select * from customer;
```

```
insert into depositor values('Karthik',1001);
insert into depositor values('Prathik',1002);
insert into depositor values('Sandesh',1003);
insert into depositor values('Vikas',1004);
insert into depositor values('Vittal',1005);
select * from depositor;
```

```
insert into loan values(01,'BB',120000);
insert into loan values(02,'HDFC',340000);
insert into loan values(03,'ICICI',40000);
insert into loan values(04,'SBH',350000);
insert into loan values(05,'SBI',650000);
```

```
select * from loan;
```

```
insert into borrower values('Prathik',1);  
insert into borrower values('Karthik',2);  
insert into borrower values('Sandesh',3);  
insert into borrower values('Vikas',4);  
insert into borrower values('Vittal',5);  
select * from borrower;
```

iii. Find all the customers who have at least two accounts at the Main branch.

```
select d.customer_name from depositor d,account a where a.accno=d.accno and  
a.branch_name='KRMarket' group by d.customer_name having count(*)>=2;
```

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

```
SELECT d.customer_name FROM account a,branch b,depositor d WHERE  
b.branch_name=a.branch_name AND a.accno=d.accno AND b.branch_city='trinity'  
GROUP BY d.customer_name HAVING COUNT(distinct b.branch_name)=(SELECT  
COUNT(branch_name) FROM branch WHERE branch_city='trinity');
```

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

```
DELETE FROM account WHERE branch_name IN(SELECT branch_name FROM  
branch WHERE branch_city='trinity');
```