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IBM19CS057

DBMS Lab Test - 1

1) Banking Enterprise

Ans:

```
create database banking-enterprise;

use banking-enterprise;

create table branch (
    branch-name varchar(30),
    branch-city varchar(30),
    assets real,
    primary key (branch-name)
);

create table accounts (
    accno int,
    branch-name varchar(30),
    balance real,
    primary key (accno),
    foreign key (branch-name) references branch(branch-name)
    on delete cascade
);

create table customer (
    customer-name varchar(30),
    customer-street varchar(20),
    customer-city varchar(20),
    primary key (customer-name)
);
```

create table depositor(

customer_name varchar(30),

accno int,

primary key (customer_name, accno),

foreign key (customer_name) references customer(customer_name)
on update cascade,

foreign key (accno) references accounts(accno) on delete cascade

);

create table loan(

loan_number int

branch_name varchar(30),

amount real,

primary key (loan_number),

foreign key (branch_name) references branch(branch_name) on
delete cascade

);

create table borrower(

customer_name varchar(30),

loan_number int,

primary key (customer_name, loan_number),

foreign key (customer_name) reference customer(customer_name) on
update cascade,

foreign key (loan_number) reference loan(loan_number) on
delete cascade

);

insert into branch values ("SBI PD NAGAR", "MUMBAI", 200000);
insert into branch values ("SBI RAJATI NAGAR", "BANGALORE", 500000);
insert into branch values ("SBI ~~VIJAY~~^{JAYA} NAGAR", "CHENNAI", 860000);
insert into branch values ("SBI VIJAY NAGAR", "BANGALORE", 270000);
insert into branch values ("SBI HOSAKEREHALLI", "DELHI", 950000);

select * from branch;

insert into account values (1234602, "SBI HOSAKEREHALLI", 5000);
insert into account values (1234603, "SBI VIJAY NAGAR", 5000);
insert into account values (1234604, "SBI JAYANAGAR", 5000);
insert into account values (1234605, "SBI RAJATI NAGAR", 10000);
insert into account values (1234503, "SBI VIJAY NAGAR", 40000);
insert into account values (1234504, "SBI PD NAGAR", 4000);

select * from accounts;

insert into customer values ("VINOD", "MG ROAD", "MUMBAI");
insert into customer values ("INDIA", "ST MARKS ROAD", "BANGALORE");
insert into customer values ("RAHUL", "AUGSTEN ROAD", "CHENNAI");
insert into customer values ("BHARAT", "VS ROAD", "BANGALORE");
insert into customer values ("RAJ", "RESIDENCY ROAD", "DELHI");
insert into customer values ("RAJEEV", "DICKSEW ROAD", "BANGALORE");
insert into customer values ("RAJEEV", "DICKSEW ROAD", "BANGALORE");

select * from customers;

insert into loan values (10011, "SBI JAYANAGAR", 10000);
insert into loan values (10012, "SBI VIJAY NAGAR", 5000);
insert into loan values (10013, "SBI HOSAKEREHALLI", 20000);
insert into loan values (10014, "SBI PD NAGAR", 15000);
insert into loan values (10015, "SBI RAJATI NAGAR", 25000);
insert into loan values (10015, "SBI RAJATI NAGAR", 25000);

select * from loan;

insert into borrower values ("VINOD", 10011);
insert into borrower values ("INDIA", 10012);
insert into borrower values ("RAHUL", 10013);
insert into borrower values ("BHARAT", 10014);
insert into borrower values ("INDIA", 10015);

select * from borrower;

insert into depositor values ("INDIA", 1234503);
insert into depositor values ("INDIA", 1234503);
insert into depositor values ("VINOD", 1234604);
insert into depositor values ("RAHUL", 1234602);
insert into depositor values ("BHARAT", 1234504);

select * from depositor;

1/1 Query 1

select customer_name from depositor d, accounts a
where d.aceno = a.aceno
and a.branch_name = "SBI VIJAY NAGAR"
group by d.customer_name having count(d.customer_name) >= 2;

1/2 Query 1

select d.customer_name from accounts a, branch b, depositor d
where b.branchname = a.branch_name and
a.aceno = d.aceno and b.branchcity = "BANGALORE"
group by d.customer_name having count(distinct b.branchname)
= (select count(branch_name) from branch where
branch-city = "BANGALORE");

/Query 3/

```
delete from accounts where branch_name in (select  
branch_name from branch where branch_city = "BANGALORE"),  
select * from accounts;
```

/Query 4/

```
alter table accounts accounts  
add account_type varchar(20);
```

/Query 5/

```
select  
c.customer_name, c.customer_street, c.customer_city, l.branch_name,  
b.loan_number, l.amount  
from customer c join borrower b on c.customer_name =  
b.customer_name join loan l on l.loan_number = b.loan_number  
where l.amount > 20000;
```