

## PROGRAM 2: BANKING ENTERPRISE

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).

```
create database bank;
```

```
use bank;
```

```
create table branch(  
  branch_name varchar(30) primary key,  
  branch_city varchar(30),  
  assests decimal(6,2)  
);
```

```
drop table accounts;
```

```
create table accounts(  

```

```
accno int primary key,  
branch_name varchar(30),  
balance decimal(7,2),  
foreign key(branch_name) references branch(branch_name)  
);
```

```
create table depositor(  
customer_name varchar(30),  
customer_street varchar(30),  
customer_city varchar(30)  
);
```

```
alter table depositor  
add column accno int;
```

```
alter table depositor  
add constraint fori  
foreign key(accno) references accounts(accno);
```

```
alter table depositor  
drop foreign key fori;
```

```
create table loan(  
loan_number int primary key,  
branch_name varchar(30),  
amt decimal(7,2)  
);
```
















```
alter table loan  
add constraint fk_1  
foreign key(branch_name) references branch(branch_name);
```

```
create table borrower(
customer_name varchar(30),
loan_number int,
foreign key(loan_number) references loan(loan_number)
);
```

```
desc branch;
desc accounts;
desc depositor;
desc loan;
desc borrower;
```

```
truncate table depositor;
```

```
insert into branch(branch_name,branch_city,assests) values('SBH RAICHUR','RAICHUR',1234.56),('SBI HOSPET','HOSPET',4567.89),('SBI BANGLORE','BANGLORE RURAL',9687.25),('SBI GADAG','GADAG',1000.25),('SBI RAICHUR','RAICHUR',2000.24);
```

				branch_name	branch_city	assests
<input type="checkbox"/>		 Copy	 Delete	SBH RAICHUR	RAICHUR	1234.56
<input type="checkbox"/>		 Copy	 Delete	SBI BANGLORE	BANGLORE RURAL	9687.25
<input type="checkbox"/>		 Copy	 Delete	SBI GADAG	GADAG	1000.25
<input type="checkbox"/>		 Copy	 Delete	SBI HOSPET	HOSPET	4567.89
<input type="checkbox"/>		 Copy	 Delete	SBI RAICHUR	RAICHUR	2000.24

```
insert into accounts(accno,branch_name,balance) values(1234,'SBH RAICHUR ',40000.00),(4567,'SBI BANGLORE',50000.00),(2345,'SBI BANGLORE',60000.00),(1000,'SBI GADAG',70000.00),(1024,'SBI RAICHUR',10000.00);
```

				accno	branch_name	balance
<input type="checkbox"/>				1000	SBI GADAG	70000.00
<input type="checkbox"/>				1024	SBI RAICHUR	10000.00
<input type="checkbox"/>				1234	SBH RAICHUR	40000.00
<input type="checkbox"/>				2345	SBI BANGLORE	60000.00
<input type="checkbox"/>				4567	SBI BANGLORE	50000.00

```
insert into depositor(customer_name,customer_street,customer_city,accno)
values('Hari','ALMERI','KOPPAL',1234),('Saquib','BTM
LAYOUT','BANGLORE',4567),('Praveen','SINDHNUR',' RAICHUR
',2345),('Subhas','CHAMRAJPET','BIJAPUR',1000),('BalaJi','MUDIRABAD','KOLAR',1024);
```

customer_name	customer_street	customer_city	accno
Hari	ALMERI	KOPPAL	1234
Saquib	BTM LAYOUT	BANGLORE	4567
Praveen	SINDHNUR	RAICHUR	2345
Subhas	CHAMRAJPET	BIJAPUR	1000
BalaJi	MUDIRABAD	KOLAR	1024
Pramod	Vasavi Nagar	Sindhanur	1233
Pramod	Vasavi Nagar	RAICHUR	1232
Hari	GADAG ROAD	RAICHUR	1220
Hari	GADAG ROAD	RAICHUR	1221
Arya	MANNUR ROAD	RAICHUR	1220
Arya	MANNUR ROAD	RAICHUR	1220

```
insert into loan(loan_number,branch_name,amt) values(1,'SBI GADAG',10000.00),(2,'SBI RAICHUR
',15000.00),(3,'SBH RAICHUR,20000.00),(4,'SBI BANGLORE',25000.00),(5,'SBI BANGLORE',24000.00);
```

				loan_number	branch_name	amt
<input type="checkbox"/>				1	SBI GADAG	10000.00
<input type="checkbox"/>				2	SBI RAICHUR	15000.00
<input type="checkbox"/>				3	SBH RAICHUR	20000.00
<input type="checkbox"/>				4	SBI BANGLORE	25000.00
<input type="checkbox"/>				5	SBI BANGLORE	24000.00

```
insert into borrower(customer_name,loan_number)
values('Mayur',1),('Pooja',2),('Gagan',3),('Sufail',4),('Akash',5);
```

customer_name	loan_number
Mayur	1
Pooja	2
Gagan	3
Sufail	4
Akash	5

```
insert into branch(branch_name,branch_city,assests) values('SBI KOPPAL','KOPPAL',1234.56);
```

```
insert into accounts(accno,branch_name,balance) values(1233,'SBH KOPPAL',40000.00);
```

```
insert into accounts(accno,branch_name,balance) values(1232,'SBI KOPPAL',40000.00);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Pramod','Vasavi
Nagar','Sindhaur',1233);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Pramod','Vasavi
Nagar',' RAICHUR ',1232);
```

```
insert into accounts(accno,branch_name,balance) values(1220,'SBH KOPPAL',40000.00);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Hari','GADAG
ROAD',' RAICHUR ',1220);
```

```
insert into accounts(accno,branch_name,balance) values(1221,'SBH KOPPAL',40000.00);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Hari','GADAG
ROAD',' RAICHUR ',1221);
```

```
insert into accounts(accno,branch_name,balance) values(1120,'SBH KOPPAL',40000.00);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Arya','MANNUR
ROAD',' RAICHUR ',1220);
```

```
insert into accounts(accno,branch_name,balance) values(1128,'SBH KOPPAL',40000.00);
```

```
insert into depositor(customer_name,customer_street,customer_city,accno) values('Arya','MANNUR
ROAD',' RAICHUR ',1220);
```

customer_name	customer_street	customer_city	accno
Hari	ALMERI	KOPPAL	1234
Saquiib	BTM LAYOUT	BANGLORE	4567
Praveen	SINDHNUR	RAICHUR	2345
Subhas	CHAMRAJPET	BIJAPUR	1000
BalaJi	MUDIRABAD	KOLAR	1024
Pramod	Vasavi Nagar	Sindhanur	1233
Pramod	Vasavi Nagar	RAICHUR	1232
Hari	GADAG ROAD	RAICHUR	1220
Hari	GADAG ROAD	RAICHUR	1221
Arya	MANNUR ROAD	RAICHUR	1220
Arya	MANNUR ROAD	RAICHUR	1220

```
select * from branch;
```

```
select * from accounts;
```

```
select * from depositor;
```

```
select * from loan;
```

```
select * from borrower;
```

```
select c.customer_name,a.branch_name from depositor c join accounts a on c.accno=a.accno group
by c.customer_name having count(*)>1;
```

```
create table joined as(
```

```
select br.branch_city,acn.branch_name from branch br left join accounts acn on
br.branch_name=acn.branch_name
);
```

```
create table final as(
```

```
select bran.branch_name,anc.accno from branch bran join accounts anc on
bran.branch_name=anc.branch_name
);
```

```
select * from final;
```

```
select * from joined;
```

```
select dpt.customer_name from depositor dpt left join joined jn on
dpt.branch_name=jn.branch_name where jn.branch_city='RAICHUR';
```

branch_city	branch_name
RAICHUR	SBH RAICHUR
RAICHUR	SBH RAICHUR
RAICHUR	SBH RAICHUR
RAICHUR	SBH RAICHUR
RAICHUR	SBH RAICHUR
BANGLORE RURAL	NULL
GADAG	NULL
HOSPET	NULL
RAICHUR	SBI RAICHUR

```
create table f_join as(
```

```
select fl.branch_name,fl.accno,bc.branch_city from final fl join branch bc on
fl.branch_name=bc.branch_name
```

```
);
```

```
select * from f_join;
```

```
select distinct customer_name,branch_city from depositor f,f_join fn where f.accno=fn.accno and
fn.branch_city='RAICHUR';
```

branch_name	accno	branch_city
SBH RAICHUR	1120	RAICHUR
SBH RAICHUR	1128	RAICHUR
SBH RAICHUR	1220	RAICHUR
SBH RAICHUR	1221	RAICHUR
SBH RAICHUR	1233	RAICHUR
SBI RAICHUR	1232	RAICHUR

```
SET SQL_SAFE_UPDATES=0;
```

```
delete from accounts
```

```
where branch_name in(
```

```
select branch_name from branch where branch_city='RAICHUR'
```

```
);
```

✓ 2 rows affected. (Query took 0.1337 seconds.)

```
delete from accounts where branch_name in( select branch_name from branch where branch_city='RAICHUR' )
```

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