

PROGRAM-2: BANKING ENTERPRISE DATABASE

```
CREATE DATABASE bank
CREATE TABLE branch( branch_name VARCHAR(20) NOT NULL, branch_city VARCHAR(20) NOT NULL, assets REAL NOT NULL, PRIMARY KEY(branch_name) )
desc branch
```

Field	Type	Null	Key	Default	Extra
branch_name	varchar(20)	NO	PRI	NULL	
branch_city	varchar(20)	NO		NULL	
assets	double	NO		NULL	

```
CREATE TABLE bank_account( accno INT NOT NULL, branch_name VARCHAR(20) NOT NULL, balance REAL NOT NULL, PRIMARY KEY(accno), FOREIGN KEY(branch_name) REFERENCES branch(branch_name) )
ALTER TABLE bank_account RENAME TO bank_account
desc bank_account
```

Field	Type	Null	Key	Default	Extra
accno	int(11)	NO	PRI	NULL	
branch_name	varchar(20)	NO	MUL	NULL	
balance	double	NO		NULL	

```
CREATE TABLE bank_customer( customer_name VARCHAR(20) NOT NULL, customer_street VARCHAR(30) NOT NULL, city VARCHAR(20) NOT NULL, PRIMARY KEY(customer_name) )
DESC bank_customer
```

Field	Type	Null	Key	Default	Extra
customer_name	varchar(20)	NO	PRI	NULL	
customer_street	varchar(30)	NO		NULL	
city	varchar(20)	NO		NULL	

```
CREATE TABLE depositor( customer_name VARCHAR(20) NOT NULL, accno INT NOT NULL, FOREIGN KEY(customer_name) REFERENCES bank_customer(customer_name), FOREIGN KEY (accno) REFERENCES bank_account(accno) )
```

```
DESC depositor
```

Field	Type	Null	Key	Default	Extra
customer_name	varchar(20)	NO	MUL	NULL	
accno	int(11)	NO	MUL	NULL	

```
CREATE TABLE loan( loan_number INT NOT NULL, branch_name VARCHAR(20) NOT NULL, amount REAL NOT NULL, FOREIGN KEY(branch_name) REFERENCES branch(branch_name) )
```

```
DESC loan
```

Field	Type	Null	Key	Default	Extra
loan_number	int(11)	NO		NULL	
branch_name	varchar(20)	NO	MUL	NULL	
amount	double	NO		NULL	

```
INSERT INTO branch (branch_name,branch_city,assets) VALUES ('SBI_Chamrajpet','Bangalore',50000), ('SBI_ResidencyRoad','Bangalore',10000), ('SBI_ShivajiRoad','Bangalore',20000), ('SBI_ParliamentRoad','Delhi',10000), ('SBI_Jantarmanatar','Delhi',20000)
```

```
SELECT * FROM branch
```

			branch_name	branch_city	assets
Edit	Copy	Delete	SBI_Chamrajpet	Bangalore	50000
Edit	Copy	Delete	SBI_Jantarmanatar	Delhi	20000
Edit	Copy	Delete	SBI_ParliamentRoad	Delhi	10000
Edit	Copy	Delete	SBI_ResidencyRoad	Bangalore	10000
Edit	Copy	Delete	SBI_ShivajiRoad	Bangalore	20000

```
INSERT INTO loan (branch_name,loan_number,amount) VALUES ('SBI_Chamrajpet',1,1000), ('SBI_ResidencyRoad',2,2000), ('SBI_ShivajiRoad',3,3000), ('SBI_ParliamentRoad',4,4000), ('SBI_Jantarmanatar',5,5000)
```

```
SELECT * FROM loan
```

loan_number	branch_name	amount
-------------	-------------	--------

1	SBI_Chamrajpet	1000
2	SBI_ResidencyRoad	2000
3	SBI_ShivajiRoad	3000
4	SBI_ParliamentRoad	4000
5	SBI_Jantarmanatar	5000

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (5,'SBI_Jantarmanatar',8000);
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (11,'SBI_Jantarmanatar',8000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (10,'SBI_ResidencyRoad',5000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (8,'SBI_ResidencyRoad',4000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (9,'SBI_ParliamentRoad',3000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (6,'SBI_ShivajiRoad',4000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (4,'SBI_ParliamentRoad',5000);
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (1,'SBI_Chamrajpet',2000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (2,'SBI_ResidencyRoad',3000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (3,'SBI_ShivajiRoad',4000)
```

```
INSERT INTO bank_account (accno, branch_name, balance) VALUES (4,'ParliamentRoad',5000);
```

```
SELECT * FROM `bank_account`
```

← T →			accno	branch_name	balance
Edit	Copy	Delete	1	SBI_Chamrajpet	2000
Edit	Copy	Delete	2	SBI_ResidencyRoad	3000
Edit	Copy	Delete	3	SBI_ShivajiRoad	4000

Edit	Copy	Delete	4	SBI_ParliamentRoad	5000
Edit	Copy	Delete	5	SBI_Jantarmanantar	8000
Edit	Copy	Delete	6	SBI_ShivajiRoad	4000
Edit	Copy	Delete	8	SBI_ResidencyRoad	4000
Edit	Copy	Delete	9	SBI_ParliamentRoad	3000
Edit	Copy	Delete	10	SBI_ResidencyRoad	5000
Edit	Copy	Delete	11	SBI_Jantarmanantar	8000

```
insert into bank_customer (customer_name,customer_street,city) VALUES ('Avinash','a','Bangalore')
```

```
insert into bank_customer (customer_name,customer_street,city) VALUES ('Dinesh','b','Bangalore')
```

```
insert into bank_customer (customer_name,customer_street,city) VALUES ('Mohan','c','Bangalore')
```

```
insert into bank_customer (customer_name,customer_street,city) VALUES ('Nikil','d','Delhi')
```

```
insert into bank_customer (customer_name,customer_street,city) VALUES ('Ravi','e','Delhi')
```

```
select * from bank_customer
```

			customer_name	customer_street	city
Edit	Copy	Delete	Avinash	a	Bangalore
Edit	Copy	Delete	Dinesh	b	Bangalore
Edit	Copy	Delete	Mohan	c	Bangalore
Edit	Copy	Delete	Nikil	d	Delhi
Edit	Copy	Delete	Ravi	e	Delhi

```
insert into depositor (customer_name,accno) VALUES ('Avinash',1)
```

```
insert into depositor (customer_name,accno) VALUES ('Avinash',8)
```

```
insert into depositor (customer_name,accno) VALUES ('Dinesh',2)
```

```
insert into depositor (customer_name,accno) VALUES ('Dinesh',10)
```

```
insert into depositor (customer_name,accno) VALUES ('Nikil',4)
```

```
insert into depositor (customer_name,accno) VALUES ('Nikil',9)
insert into depositor (customer_name,accno) VALUES ('Nikil',11)
insert into depositor (customer_name,accno) VALUES ('Ravi',5)
```

```
select * from depositor
```

customer_name	accno	1
Avinash	1	
Dinesh	2	
Nikil	4	
Ravi	5	
Avinash	8	
Nikil	9	
Dinesh	10	
Nikil	11	

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

```
use bank;
select customer_name from depositor
where acc_no in (select acc_no from bank_account where branch_name =
'SBI_RESIDENCYROAD')
group by customer_name HAVING count(customer_name) >= 2;
```

DINESH

```
select customer_name from depositor
where acc_no in (select acc_no from bank_account where branch_name =
'SBI_PARLIAMENTROAD')
group by customer_name HAVING count(customer_name) >= 2
```

NIKIL

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

```
use bank
```

```
SELECT distinct S.customer_name FROM depositor as S
WHERE not exists (
  (SELECT branch_name
   FROM branch
   WHERE branch_city = 'DELHI')
  EXCEPT
  (SELECT R.branch_name
   FROM depositor as T, bank_account as R
   WHERE T.acc_no = R.acc_no and
         S.customer_name = T.customer_name ))
```

NIKIL

```
alter table bank_account
add foreign key(branch_name) references branch(branch_name) on delete
CASCADE;
```