

```
create database 1BM21CS046BankDb;
```

```
use 1BM21CS046BankDb;
```

```
create table branch(  
branch_name varchar(20),  
branch_city varchar(10),  
assets real,  
PRIMARY KEY(branch_name)  
);
```

```
create table bankCustomer(  
customer_name varchar(20),  
customer_street varchar(20),  
customer_city varchar(15),  
PRIMARY KEY(customer_name)  
);
```

```
create table loan(  
loan_no int,  
branch_name varchar(20),  
amount real,  
PRIMARY KEY(loan_no),  
FOREIGN KEY(branch_name) REFERENCES branch(branch_name)  
ON UPDATE CASCADE ON DELETE CASCADE  
);
```

```
create table bankAccount(  
accno int,  
branch_name varchar(20),
```

```
balance real,  
PRIMARY KEY(accno),  
FOREIGN KEY(branch_name) REFERENCES branch(branch_name)  
ON UPDATE CASCADE ON DELETE CASCADE  
);
```

```
create table depositer(  
customer_name varchar(20),  
accno int,  
FOREIGN KEY(customer_name) REFERENCES bankCustomer(customer_name)  
ON UPDATE CASCADE ON DELETE CASCADE,  
FOREIGN KEY(accno) REFERENCES bankAccount(accno)  
ON UPDATE CASCADE ON DELETE CASCADE  
);
```

```
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_parliamentRoad','delhi',10000);  
insert into branch values('sbi_jantarMantar','delhi',20000);
```

```
select * from branch;
```

```
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_parliamentRoad',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_parliamentRoad',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','nationalCollege_road','bangalore');  
insert into bankCustomer values('nikil','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('nikil',4);  
insert into depositer values('ravi',5);  
insert into depositer values('avinash',8);  
insert into depositer values('nikil',9);  
insert into depositer values('dinesh',10);  
insert into depositer values('nikil',11);
```

```
select * from depositer;
```

```
insert into loan values(1,'sbi_chamrajpet',1000);  
insert into loan values(2,'sbi_residencyRoad',2000);
```

```
insert into loan values(3,'sbi_shivajiRoad',3000);  
insert into loan values(4,'sbi_parliamentRoad',4000);  
insert into loan values(5,'sbi_jantarMantar',5000);
```

```
select * from loan;
```

```
select branch_name, concat(assets/100000)as assets_in_lakhs  
from branch;
```

```
select d.customer_name as CUSTOMER_NAME  
from bankAccount b, depositer d  
where b.branch_name='sbi_residencyRoad' and b.accno=d.accno  
group by d.customer_name  
having count(d.accno)>=2;
```

```
create view sum_of_loan  
as select branch_name, sum(balance)  
from bankAccount  
group by branch_name;
```

```
select * from sum_of_loan;
```

WEEK 3 – QUERIES

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

SQL>

```
create table branch(  
  branch_name varchar(20),  
  branch_city varchar(10),  
  assets real,  
  PRIMARY KEY(branch_name)  
);
```

Table **branch**

Result Grid		Filter Rows:		Export:		Wrap Ce	
	Field	Type	Null	Key	Default	Extra	
▶	branch_name	varchar(20)	NO	PRI	NULL		
	branch_city	varchar(10)	YES		NULL		
	assets	double	YES		NULL		

```
create table bankCustomer(  
  customer_name varchar(20),  
  customer_street varchar(20),  
  customer_city varchar(15),  
  PRIMARY KEY(customer_name)  
);
```

Table **bankCustomer**

	Field	Type	Null	Key	Default	Extra
▶	customer_name	varchar(20)	NO	PRI	NULL	
	customer_street	varchar(20)	YES		NULL	
	customer_city	varchar(15)	YES		NULL	

```

create table loan(
loan_no int,
branch_name varchar(20),
amount real,
PRIMARY KEY(loan_no),
FOREIGN KEY(branch_name) REFERENCES
branch(branch_name)
ON UPDATE CASCADE ON DELETE CASCADE
);

```

Table **loan**

	Field	Type	Null	Key	Default	Extra
▶	loan_no	int	NO	PRI	NULL	
	branch_name	varchar(20)	YES	MUL	NULL	
	amount	double	YES		NULL	

```

create table bankAccount(
accno int,
branch_name varchar(20),
balance real,
PRIMARY KEY(accno),
FOREIGN KEY(branch_name) REFERENCES
branch(branch_name)
ON UPDATE CASCADE ON DELETE CASCADE
);

```

Table **bankAccount**

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

```

create table depositor(
customer_name varchar(20),
accno int,
FOREIGN KEY(customer_name) REFERENCES
bankCustomer(customer_name)
ON UPDATE CASCADE ON DELETE CASCADE,
FOREIGN KEY(accno) REFERENCES bankAccount(accno)
ON UPDATE CASCADE ON DELETE CASCADE
);
Table depositor

```

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

	Field	Type	Null	Key	Default	Extra
▶	customer_name	varchar(20)	YES	MUL	NULL	
	accno	int	YES	MUL	NULL	

2. Enter at least five tuples for each relation.

SQL>

```

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_parliamentRoad','delhi',10000);
insert into branch values('sbi_jantarMantar','delhi',20000);
select * from branch;

```

	branch_name	branch_city	assets
▶	sbi_chamrajpet	bangalore	50000
	sbi_jantarMantar	delhi	20000
	sbi_parliamentRoad	delhi	10000
	sbi_residencyRoad	bangalore	10000
	sbi_shivajiRoad	bombay	20000

```

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_parliamentRoad',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_parliamentRoad',3000);
insert into bankAccount values(10,'sbi_residencyRoad',5000);
insert into bankAccount values(11,'sbi_jantarMantar',2000);
select * from bankAccount;

```

	accno	branch_name	balance
▶	1	sbi_chamrajpet	2000
	2	sbi_residencyRoad	5000
	3	sbi_shivajiRoad	6000
	4	sbi_parliamentRoad	9000
	5	sbi_jantarMantar	8000

bankAccount 18 ×

```

insert into bankCustomer values('avinash','bull_temple_road','bangalore');
insert into bankCustomer values('dinesh','bannergatta_road','bangalore');
insert into bankCustomer values('mohan','nationalCollege_road','bangalore');
insert into bankCustomer values('nikil','akbar_road','delhi');
insert into bankCustomer values('ravi','prithviraj_road','delhi');
select * from bankCustomer;

```

	customer_name	customer_street	customer_city
▶	avinash	bull_temple_road	bangalore
	dinesh	bannergatta_road	bangalore
	mohan	nationalCollege_road	bangalore
	nikil	akbar_road	delhi
	ravi	prithviraj_road	delhi

bankCustomer 19 ×

```

insert into depositor values('avinash',1);
insert into depositor values('dinesh',2);
insert into depositor values('nikil',4);
insert into depositor values('ravi',5);
insert into depositor values('avinash',8);
insert into depositor values('nikil',9);
insert into depositor values('dinesh',10);
insert into depositor values('nikil',11);
select * from depositor;

```


Result Grid		
Filter Rows:		
	customer_name	accno
▶	avinash	1
	dinesh	2
	nikil	4
	ravi	5
	avinash	8
depositor20 x		8

```

insert into loan values(1,'sbi_chamrajpet',1000);
insert into loan values(2,'sbi_residencyRoad',2000);
insert into loan values(3,'sbi_shivajiRoad',3000);
insert into loan values(4,'sbi_parliamentRoad',4000);
insert into loan values(5,'sbi_jantarMantar',5000);
select * from loan;

```

Result Grid		
Filter Rows:		
	loan_no	branch_name
▶	1	sbi_chamrajpet
	2	sbi_residencyRoad
	3	sbi_shivajiRoad
	4	sbi_parliamentRoad
	5	sbi_jantarMantar
loan 22 x		

3. Display the branch name and assets from all branches in lakhs of rupees and rename the assets column to 'assets in lakhs'.

SQL>

```

select branch_name,
       concat(assets/100000,'lakhs')
as assesst_in_lakhs
from branch;

```

Result Grid		
Filter Rows:		
	branch_name	assesst_in_lakhs
▶	sbi_chamrajpet	0.5lakhs
	sbi_jantarMantar	0.2lakhs
	sbi_parliamentRoad	0.1lakhs
	sbi_residencyRoad	0.1lakhs
	sbi_shivajiRoad	0.2lakhs
Result 23 x		

4. Find all the customers who have at least two accounts at the same branch (ex. SBI_ResidencyRoad).

SQL>

```
select d.customer_name as CUSTOMER_NAME
from bankAccount b, depositor d
where b.branch_name='sbi_residencyRoad' and b.accno=d.accno
group by d.customer_name
having count(d.accno)>=2;
```

Result Grid		Filter Rows:
	CUSTOMER_NAME	
▶	dinesh	

5. Create a view which gives each branch the sum of the amount of all the loans at the branch.

SQL>

```
create view sum_of_loan
as select branch_name,sum(balance)
from bankAccount
group by branch_name;
select * from sum_of_loan;
```

Result Grid			Filter Rows:
	branch_name	sum(balance)	
▶	sbi_chamrajpet	2000	
	sbi_jantarMantar	10000	
	sbi_parliamentRoad	12000	
	sbi_residencyRoad	14000	
	sbi_shivajiRoad	10000	
sum_of_loan 26			×