

**WEEK-3**  
**(1BM21CS045)**  
**BANK DATABASE**

**TO DO**

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

```
create database 1bm21cs045_bank;  
use 1bm21cs045_bank;
```

```
create table branch(  
branchname varchar(20),  
branchcity varchar(20),  
assets int,  
primary key(branchname)  
);
```

```
create table bankcustomer(  
customername varchar(20),  
customerstreet varchar(20),  
customercity varchar(20),  
primary key(customername)  
);
```

```
create table bankacc(  
accno int,  
branchname varchar(20),  
balance int,  
primary key(accno),  
foreign key(branchname) references branch(branchname)  
);
```

```
create table depositer(  
customername varchar(20),  
accno int,  
primary key(customername, accno),  
foreign key(customername) references bankcustomer(customername),  
foreign key(accno) references bankacc(accno)  
);
```

```
create table loan(  
loannumber int,  
branchname varchar(20),
```

amount int,  
primary key(loannumber),  
foreign key(branchname) references branch(branchname)  
);

**2)Enter at least five tuples for each relation.**

insert into branch values('SBI\_Chamarajpet','bangalore',50000);  
insert into branch values('SBI\_Residencyroad','bangalore',10000);  
insert into branch values('SBI\_Shivajinagar','bombay',20000);  
insert into branch values('SBI\_Parlimentroad','delhi',10000);  
insert into branch values('SBI\_Jantarmentar','delhi',20000);

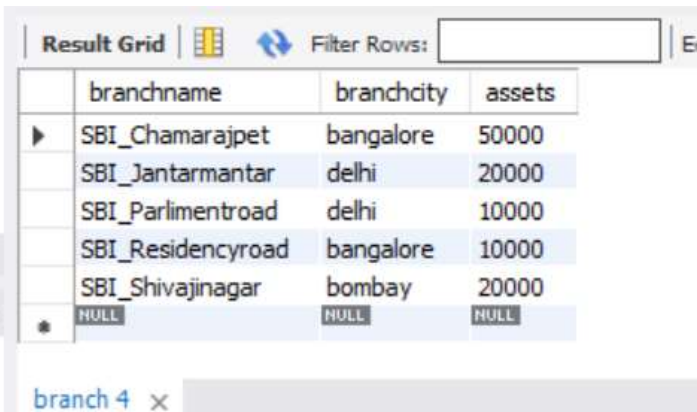
insert into bankcustomer values('Avinash','BullTempleRoad','bangalore');  
insert into bankcustomer values('Dinesh','BannerghattaRoad','bangalore');  
insert into bankcustomer values('Mohan','NationalCollegeRoad','bangalore');  
insert into bankcustomer values('Nikhil','AkbarRoad','delhi');  
insert into bankcustomer values('Ravi','PrithvirajRoad','delhi');

insert into bankacc values(1,'SBI\_Chamarajpet',2000);  
insert into bankacc values(2,'SBI\_Residencyroad',5000);  
insert into bankacc values(3,'SBI\_Shivajinagar',6000);  
insert into bankacc values(4,'SBI\_Parlimentroad',9000);  
insert into bankacc values(5,'SBI\_Jantarmentar',8000);  
insert into bankacc values(6,'SBI\_Shivajinagar',4000);  
insert into bankacc values(8,'SBI\_Residencyroad',4000);  
insert into bankacc values(9,'SBI\_Parlimentroad',3000);  
insert into bankacc values(10,'SBI\_Residencyroad',5000);  
insert into bankacc values(11,'SBI\_Jantarmentar',2000);

insert into depositer values('Avinash',1);  
insert into depositer values('Dinesh',2);  
insert into depositer values('Nikhil',4);  
insert into depositer values('Ravi',5);  
insert into depositer values('Avinash',8);  
insert into depositer values('Nikhil',9);  
insert into depositer values('Dinesh',10);  
insert into depositer values('Nikhil',11);

insert into loan values(1,'SBI\_Chamarajpet',1000);  
insert into loan values(2,'SBI\_Residencyroad',2000);  
insert into loan values(3,'SBI\_Shivajinagar',3000);  
insert into loan values(4,'SBI\_Parlimentroad',4000);  
insert into loan values(5,'SBI\_Jantarmentar',5000);

```
select * from branch;
```



The screenshot shows a 'Result Grid' window with a 'Filter Rows' input field. The table has four columns: 'branchname', 'branchcity', and 'assets'. The data rows are as follows:

	branchname	branchcity	assets
▶	SBI_Chamarajpet	bangalore	50000
	SBI_Jantarmanatar	delhi	20000
	SBI_Parliamentroad	delhi	10000
	SBI_Residencyroad	bangalore	10000
	SBI_Shivajinagar	bombay	20000
*	NULL	NULL	NULL

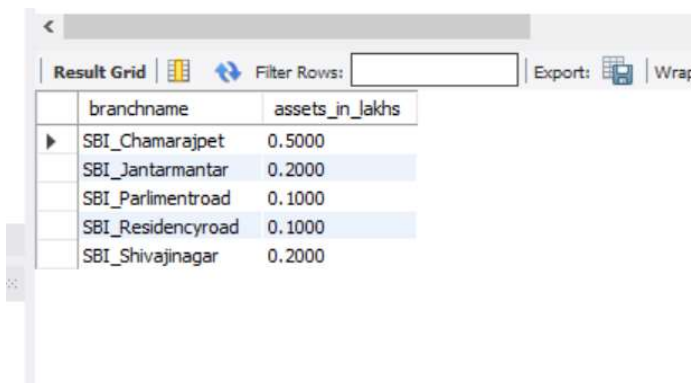
At the bottom, there is a tab labeled 'branch 4' with a close button 'x'.

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

```
alter table branch
```

```
rename column assets to assets_in_lakhs;
```

```
select branchname,(assets_in_lakhs/100000)  
from branch;
```



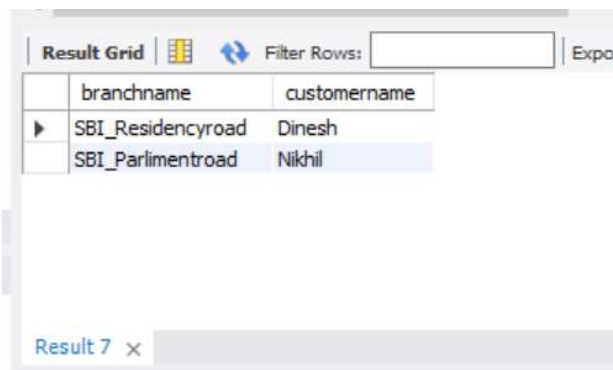
The screenshot shows a 'Result Grid' window with a 'Filter Rows' input field and 'Export' and 'Wrap' buttons. The table has two columns: 'branchname' and 'assets\_in\_lakhs'. The data rows are as follows:

	branchname	assets_in_lakhs
▶	SBI_Chamarajpet	0.5000
	SBI_Jantarmanatar	0.2000
	SBI_Parliamentroad	0.1000
	SBI_Residencyroad	0.1000
	SBI_Shivajinagar	0.2000

**4) Find all the customers who have at least two accounts at the same branch (ex. SBI\_ResidencyRoad).**

```
select b.branchname,d.customername  
from bankacc b,depositer d  
where d.accno=b.accno  
group by b.branchname, d.customername
```

having count(d.customername)>1;



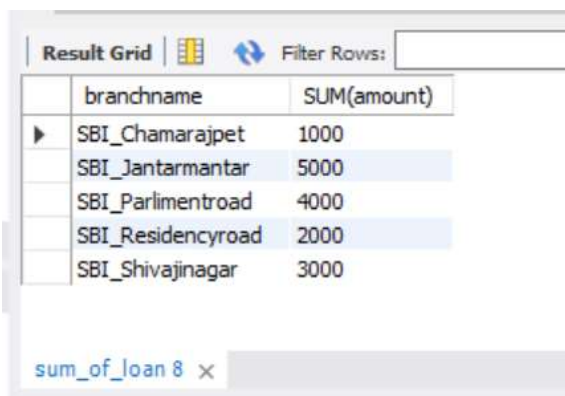
The screenshot shows a 'Result Grid' window with a 'Filter Rows' input field and an 'Export' button. The grid contains two columns: 'branchname' and 'customername'. There are two rows of data: one for 'SBI\_Residencyroad' with customer 'Dinesh', and another for 'SBI\_Parliamentroad' with customer 'Nikhil'.

branchname	customername
SBI_Residencyroad	Dinesh
SBI_Parliamentroad	Nikhil

Result 7 x

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

```
create view sum_of_loan
as select branchname, SUM(amount)
from loan
group by branchname;
select * from sum_of_loan;
```



The screenshot shows a 'Result Grid' window with a 'Filter Rows' input field. The grid contains two columns: 'branchname' and 'SUM(amount)'. There are five rows of data: 'SBI\_Chamarajpet' (1000), 'SBI\_Jantarmanatar' (5000), 'SBI\_Parliamentroad' (4000), 'SBI\_Residencyroad' (2000), and 'SBI\_Shivajinagar' (3000).

branchname	SUM(amount)
SBI_Chamarajpet	1000
SBI_Jantarmanatar	5000
SBI_Parliamentroad	4000
SBI_Residencyroad	2000
SBI_Shivajinagar	3000

sum\_of\_loan 8 x

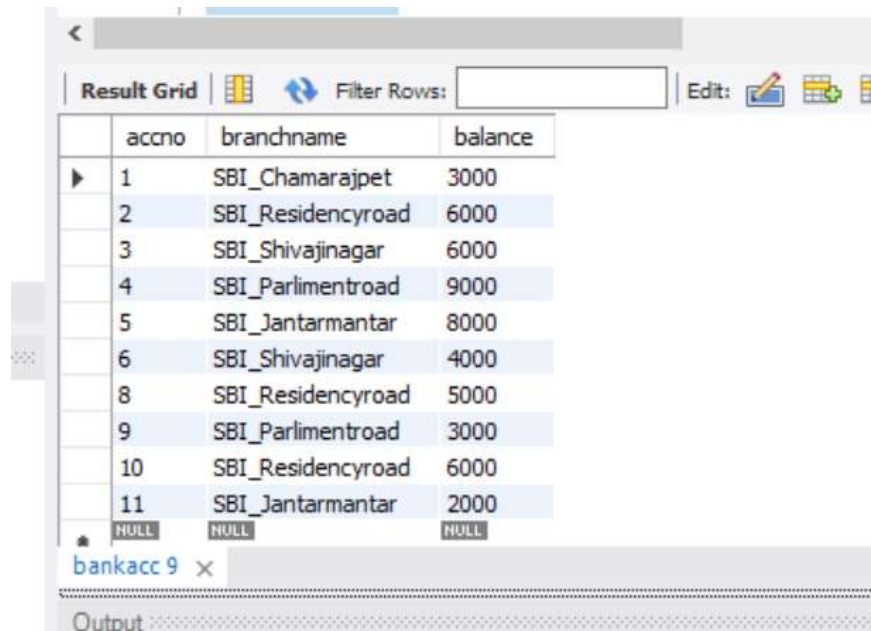
### Spot query

**Update or add rupees 1000 to all balance for the customers who are residing in bangalore.**

```
update bankacc
set balance=(balance+1000)
where accno in(
select accno
```

```
from depositer
where customername in (
select customername
from bankcustomer
where customercity='bangalore'));
```

```
select *from bankacc;
```



The screenshot shows a database query result grid with the following data:

	accno	branchname	balance
▶	1	SBI_Chamarajpet	3000
	2	SBI_Residencyroad	6000
	3	SBI_Shivajinagar	6000
	4	SBI_Parlimentroad	9000
	5	SBI_Jantarmanatar	8000
	6	SBI_Shivajinagar	4000
	8	SBI_Residencyroad	5000
	9	SBI_Parlimentroad	3000
	10	SBI_Residencyroad	6000
	11	SBI_Jantarmanatar	2000
	NULL	NULL	NULL

Below the table, there is a tab labeled "bankacc 9" and an "Output" section.