```
create database 1bm21cs058_bankDb;

 use 1bm21cs058_bankDb;

 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, concate(assets/100000,'lakhs')as
assesst_in_lakhs
from branch;
```

```
select d.customer_name as CUSTOMER_NAME
from bankAccount depositor 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
```

Week3: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)
   );

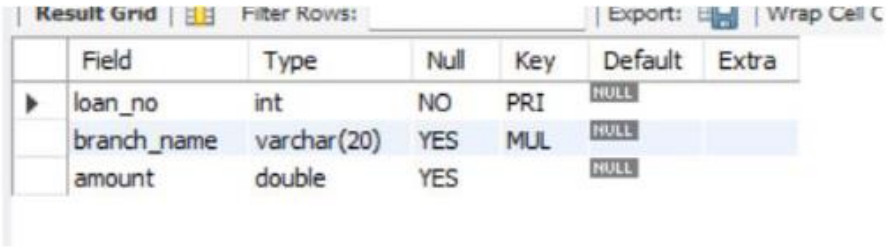
Result Grid | Filter Rows: | Export: | Wrap Ce

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	

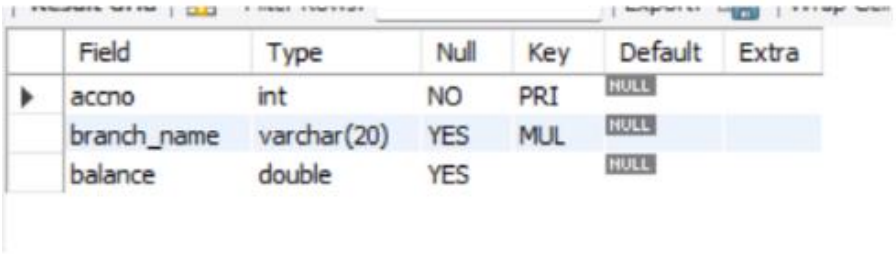
```
create table loan(
loan_no int,
branch_name varchar(20),
amount real,
PRIMARY KEY(loan_no),
FOREIGN KEY(branch_name) REFERENCES
branch(branch_name)
ON UPDATE CASCADE ON DELETE CASCADE
);
```



Result Grid | Filter Rows: | Export: | Wrap Cell C

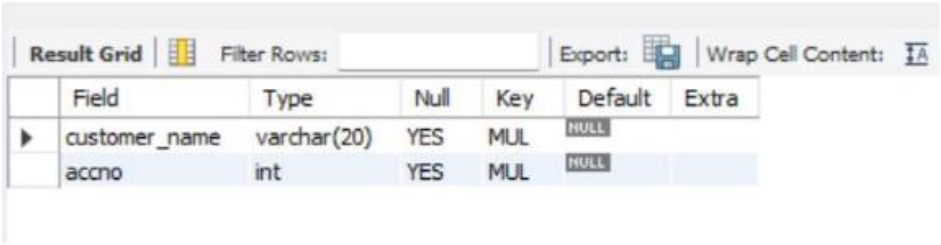
Field	Type	Null	Key	Default	Extra
loan_no	int	NO	PRI	NULL	
branch_name	varchar(20)	YES	MUL	NULL	
amount	double	YES		NULL	

```
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
);
```



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
);
```

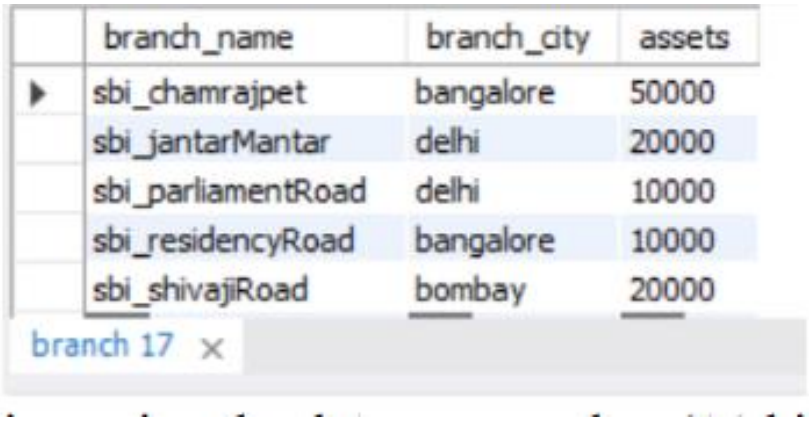


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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;
```

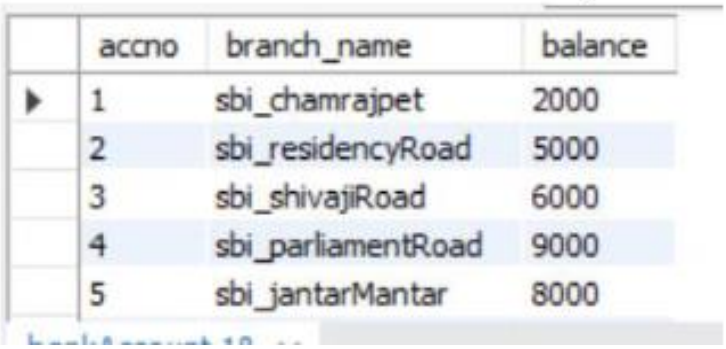


branch_name	branch_city	assets
sbi_chamrajpet	bangalore	50000
sbi_jantarMantar	delhi	20000
sbi_parliamentRoad	delhi	10000
sbi_residencyRoad	bangalore	10000
sbi_shivajiRoad	bombay	20000

branch 17 ×

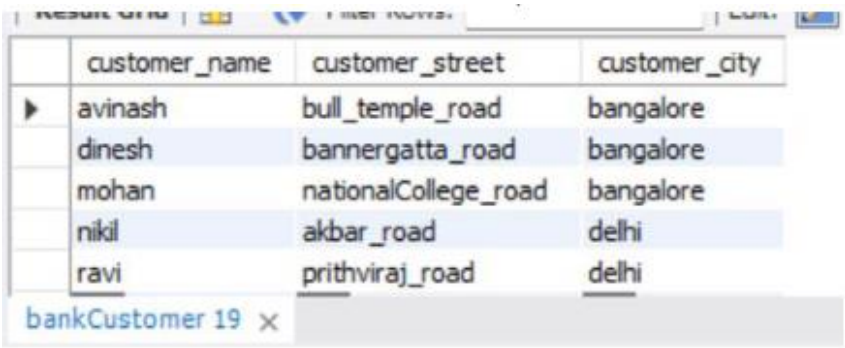
```
insert into bankAccount values(1,'sbi_chamrajpet',2000);
insert into bankAccount
values(2,'sbi_residencyRoad',5000);
insert into bankAccount values(3,'sbi_shivajiRoad',6000);
        insert into bankAccount
        values(4,'sbi_parliamentRoad',9000);
        insert into bankAccount
        values(5,'sbi_jantarMantar',8000);
        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

```
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;
```

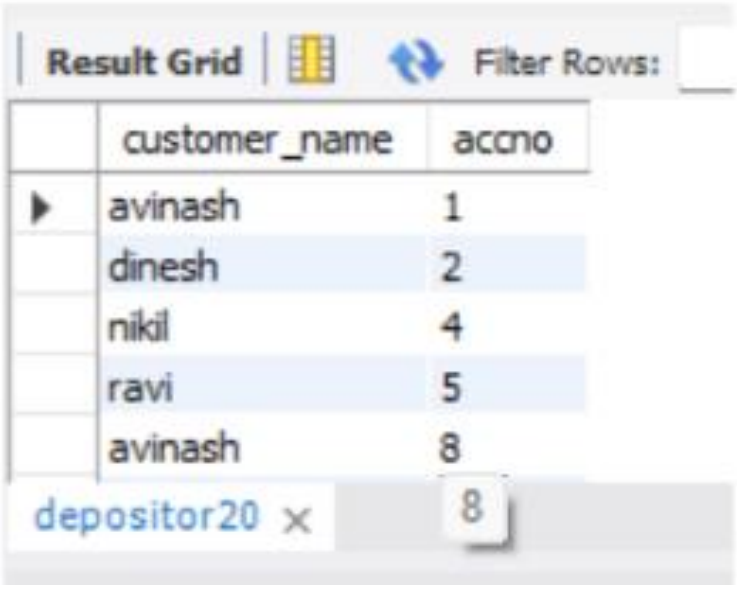


	customer_name	customer_street	customer_city
▶	avinash	bull_temple_road	bangalore
	dinesh	bannergatta_road	bangalore
	mohan	nationalCollege_road	bangalore
	nikil	akbar_road	delhi
	ravi	prithviraj_road	delhi

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;



customer_name	accno
avinash	1
dinesh	2
nikil	4
ravi	5
avinash	8

depositor20 ×

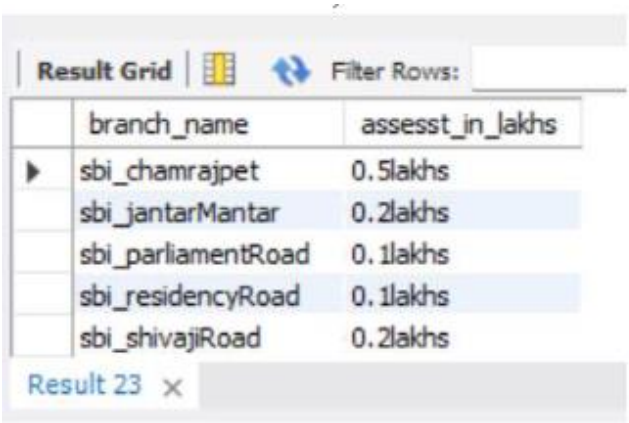
insert into loan values(1,'sbi_chamrajpet',1000);
insert into loan values(2,'sbi_residencyRoad',2000);
insert into loan values(3,'sbi_shivajiRoad',3000);
insert into loan values(4,'sbi_parliamentRoad',4000);
insert into loan values(5,'sbi_jantarMantar',5000);
select * from loan;

loan_no	branch_name	amount
1	sbi_chamrajpet	1000
2	sbi_residencyRoad	2000
3	sbi_shivajiRoad	3000
4	sbi_parliamentRoad	4000
NULL	NULL	NULL

loan 22 ×

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;

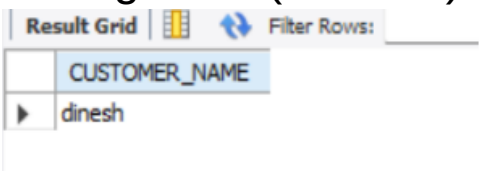


Result Grid | Filter Rows:

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

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;

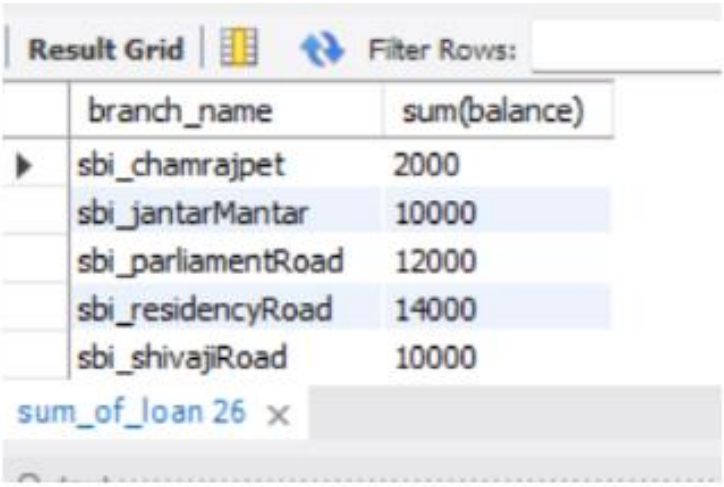


Result Grid | Filter Rows:

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 ×