BANK-DATABASE

```
create database 1bm21cs062_bankDb;
use 1bm21cs062_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 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
);
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 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;
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,'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
```

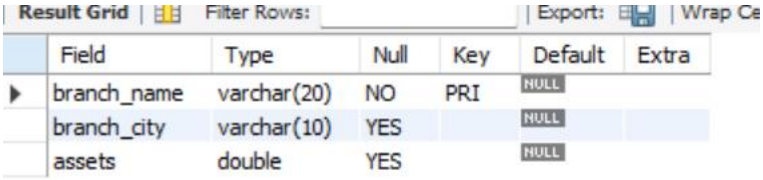
WEEK 3 – QUERIES

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**

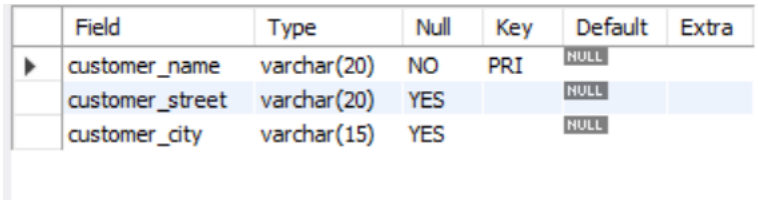


Result Grid | Filter Rows: | Export: | Wrap Ce

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)
);
```

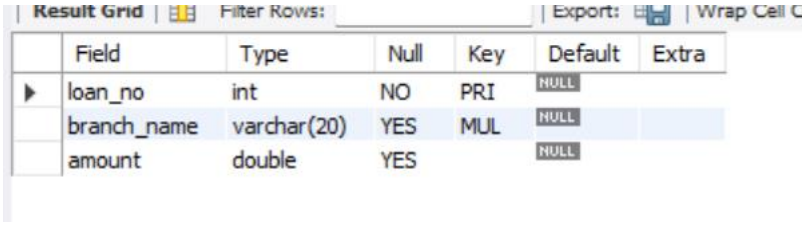
Table **bankCustomer**



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
);
```

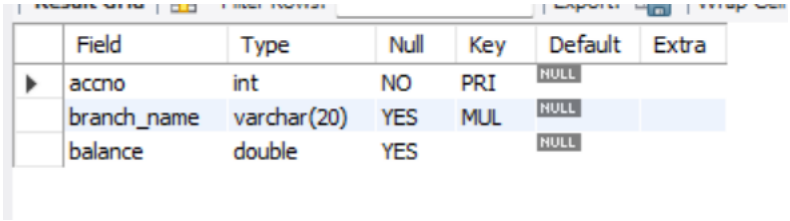
Table **loan**



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

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

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

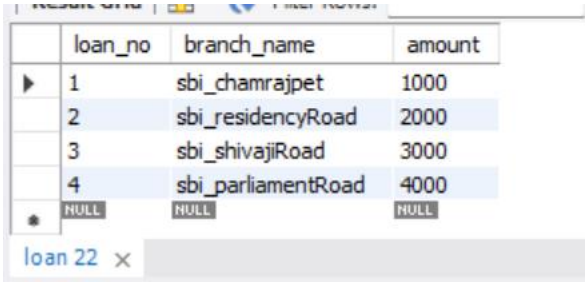
```
insert into depositor values('avinash',1);
insert into depositor values('dinesh',2);
insert into depositor values('nikil',4);
insert into depositor values('ravi',5);
insert into depositor values('avinash',8);
insert into depositor values('nikil',9);
insert into depositor values('dinesh',10);
insert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



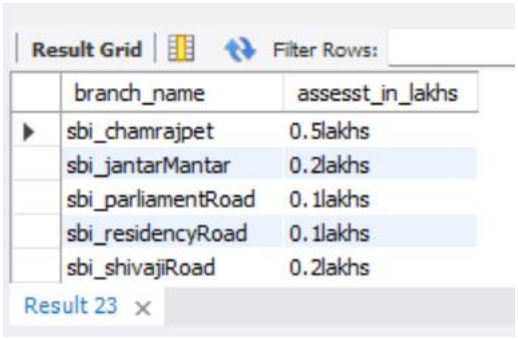
loan_no	branch_name	amount
1	sbi_chamrajpet	1000
2	sbi_residencyRoad	2000
3	sbi_shivajiRoad	3000
4	sbi_parliamentRoad	4000
NULL	NULL	NULL

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

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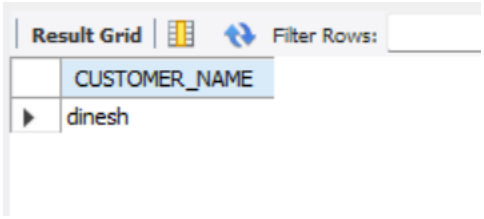
4. Find all the customers who have at least two accounts at the same branch (ex.
SBI_ResidencyRoad).

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;
```



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;
```