BANK-DATABASE

```
create database 1BM21CS060_bankDb;
use 1BM21CS060_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
```

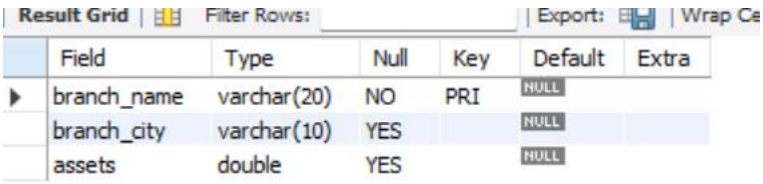
WEEK 3 – QUERIES

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**

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	

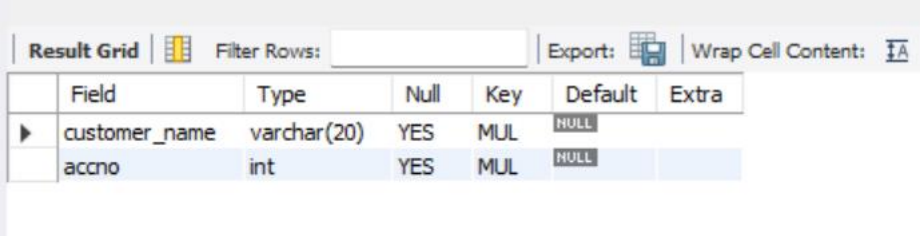
```
create table bankAccount(
accno int,
branch_name varchar(20),
balance real,
PRIMARY KEY(accno),
FOREIGN KEY(branch_name) REFERENCES
branch(branch_name)
ON UPDATE CASCADE ON DELETE CASCADE
);
```

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**

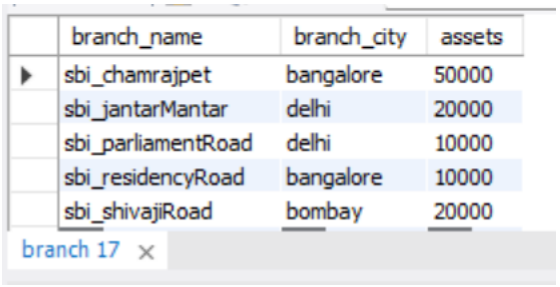


Field	Type	Null	Key	Default	Extra
customer_name	varchar(20)	YES	MUL	NULL	
accno	int	YES	MUL	NULL	

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

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 ×