

### **WEEK 3(bank db):**

#### **TO DO:**

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

#### **CREATED A DATABASE NAMED 1bm21cs057\_bankDb:**

```
create database 1bm21cs057_bankDb;
```

```
use 1bm21cs057_bankDb;
```

#### **CREATED TABLE NAMED branch:**

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

#### **CREATED TABLE NAMED bankCustomer:**

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

#### **CREATED TABLE NAMED loan:**

```
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  
);
```

#### **CREATED TABLE NAMED bankAccount:**

```
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
);

```

**CREATED TABLE NAMED depositer:**

```

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
);

```

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

**INSERTED FIVE RECORDS INTO THE TABLE branch:**

```

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
*	NULL	NULL	NULL

**INSERTED TEN RECORDS INTO THE TABLE bankAccount:**

```

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
	6	sbi_shivajiRoad	4000
	8	sbi_residencyRoad	4000
	9	sbi_parliamentRoad	3000
	10	sbi_residencyRoad	5000
	11	sbi_jantarMantar	2000
*	NULL	NULL	NULL

#### INSERTED FIVE RECORDS INTO THE TABLE bankCustomer:

```

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
*	NULL	NULL	NULL

#### INSERTED FIVE RECORDS INTO THE TABLE depositer:

```

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;

```

	customer_name	accno
▶	avinash	1
	dinesh	2
	nikil	4
	ravi	5
	avinash	8
	nikil	9
	dinesh	10
	nikil	11

#### INSERTED FIVE RECORDS INTO THE TABLE loan:

```

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
	5	sbi_jantarMantar	5000
•	NULL	NULL	NULL

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

#### Query:

```

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

```

**Output:**

	branch_name	assets_in_lakhs
▶	sbi_chamrajpet	0.5lakhs
	sbi_jantarMantar	0.2lakhs
	sbi_parliamentRoad	0.1lakhs
	sbi_residencyRoad	0.1lakhs
	sbi_shivajiRoad	0.2lakhs

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

SBI\_ResidencyRoad).

**Query:**

```
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;
```

**Output:**

	CUSTOMER_NAME
▶	dinesh

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

**Query:**

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

**Output:**

	branch_name	sum(balance)
▶	sbi_chamrajpet	2000
	sbi_jantarMantar	10000
	sbi_parliamentRoad	12000
	sbi_residencyRoad	14000
	sbi_shivajiRoad	10000

**Extra question:**

Add 1000 to the balance for customers staying in Bangalore:

**Query:**

```
select bc.customer_name, bc.customer_city, concat(ba.balance+1000) as balance_amount  
from bankCustomer bc, depositor d, bankAccount ba  
where bc.customer_city='bangalore' and d.customer_name=bc.customer_name and  
d.accno=ba.accno;
```

**Output:**

	customer_name	customer_city	balance_amount
►	avinash	bangalore	3000
	avinash	bangalore	5000
	dinesh	bangalore	6000
	dinesh	bangalore	6000