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
);
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);
insert into branch values('sbi_mantrimarg','delhi',200000);
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);
insert into bankAccount values(12,'sbi_mantrimarg',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);
insert into depositor values('nikil',12);
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;

insert into borrower values('avinash',1);

insert into borrower values('dinesh',2);

insert into borrower values('mohan',3);

insert into borrower values('nikil',4);

insert into borrower values('ravi',5);

select * from borrower;

SELECT d.customer_name

FROM depositor d

INNER JOIN bankAccount a ON d.accno = a.accno

INNER JOIN branch b ON a.branch_name = b.branch_name

WHERE b.branch_city = 'Delhi'

GROUP BY d.customer_name

HAVING COUNT(DISTINCT B.branch_name) = (

 SELECT COUNT(branch_name)

 FROM branch

 WHERE branch_city = 'Delhi');

select customer_name from borrower

where customer_name not in(select customer_name from depositor);

select distinct d.customer_name from depositor d

where d.customer_name IN(select d.customer_name from branch b,depositor
d,bankAccount ba

where b.branch_city='bangalore'and b.branch_name=ba.branch_name

and ba.accno=d.accno and customer_name IN(select customer_name from
borrower));

select b.branch_name from branch b

where b.assets>ALL(select sum(b.assets) from branch b where
b.branch_city='bangalore');
```

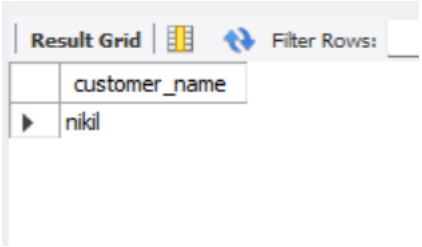
```
delete ba.*from bankAccount ba,branch b
where branch_city='bombay'and ba.branch_name=b.branch_name;
select *from bankAccount;
UPDATE bankAccount set balance=(0.05*balance)+balance;
select * from bankAccount;
delete from branch where branch_city='bangalore';
select * from branch;
```

WEEK 4 – QUERIES

1. Find all the customers who have an account at all the branches located in a specific city (Ex. Delhi).

SQL>

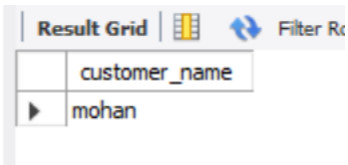
```
SELECT d.customer_name
FROM depositor d
INNER JOIN bankAccount a ON d.accno = a.accno
INNER JOIN branch b ON a.branch_name = b.branch_name
WHERE b.branch_city = 'Delhi'
GROUP BY d.customer_name
HAVING COUNT(DISTINCT B.branch_name) = (
SELECT COUNT(branch_name)
FROM branch
WHERE branch_city = 'Delhi');
```



2.Find all customers who have a loan at the bank but do not have an account.

SQL>

```
select customer_name from borrower
where customer_name not in(select customer_name from depositor);
```



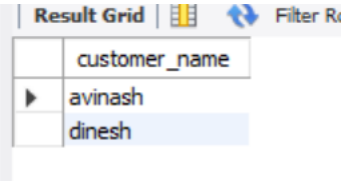
3. Find all customers who have both an account and a loan at the Bangalore branch

SQL>

```
select distinct d.customer_name from depositor d

where d.customer_name IN(select d.customer_name from branch b,depositor
d,bankAccount ba where b.branch_city='bangalore'

and b.branch_name=ba.branch_name and ba.accno=d.accno and customer_name
IN(select customer_name from borrower));
```



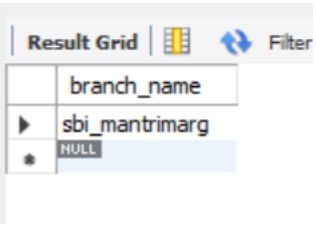
customer_name
avinash
dinesh

4. Find the names of all branches that have greater assets than all branches located in Bangalore.

SQL>

select b.branch_name from branch b

where b.assets>ALL(select sum(b.assets) from branch b where b.branch_city='bangalore');



branch_name
sbi_mantrimarg
NULL

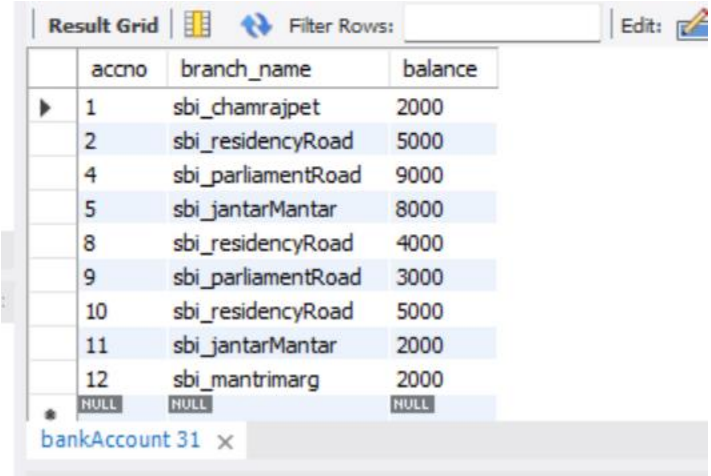
5. Demonstrate how you delete all account tuples at every branch located in a specific city (Ex. Bombay).

SQL>

delete ba.*from bankAccount ba,branch b

where branch_city='bombay'and ba.branch_name=b.branch_name;

select *from bankAccount;

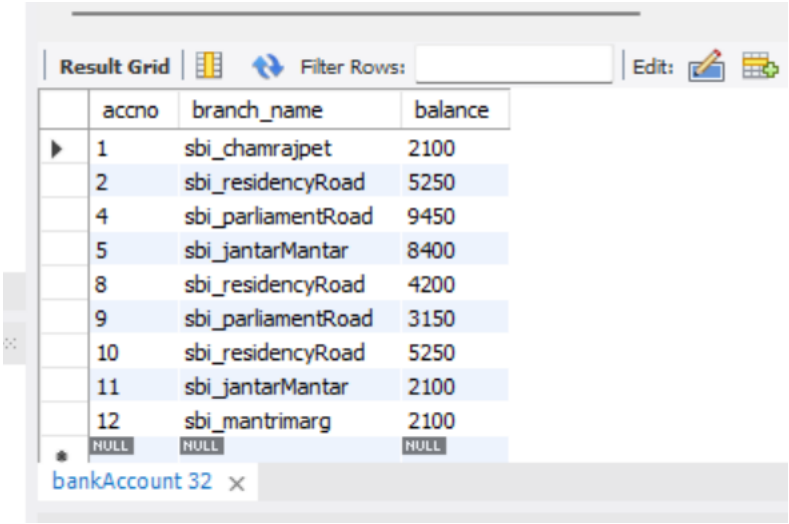


accno	branch_name	balance
1	sbi_chamrajpet	2000
2	sbi_residencyRoad	5000
4	sbi_parliamentRoad	9000
5	sbi_jantarMantar	8000
8	sbi_residencyRoad	4000
9	sbi_parliamentRoad	3000
10	sbi_residencyRoad	5000
11	sbi_jantarMantar	2000
12	sbi_mantrimarg	2000
NULL	NULL	NULL

6. Update the Balance of all accounts by 5%

SQL> UPDATE bankAccount set balance=(0.05*balance)+balance;

select * from bankAccount;



Result Grid | Filter Rows: | Edit:

accno	branch_name	balance
1	sbi_chamrajpet	2100
2	sbi_residencyRoad	5250
4	sbi_parliamentRoad	9450
5	sbi_jantarMantar	8400
8	sbi_residencyRoad	4200
9	sbi_parliamentRoad	3150
10	sbi_residencyRoad	5250
11	sbi_jantarMantar	2100
12	sbi_mantrimarg	2100
NULL	NULL	NULL

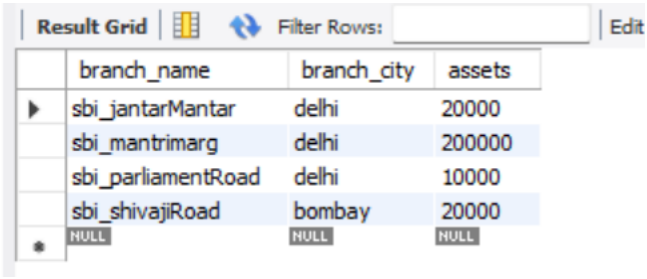
bankAccount 32

7.(ON SPOT)How can you delete all branches in specific city located in bangalore?

SQL>

```
delete from branch where branch_city='bangalore';

select * from branch;
```



Result Grid | Filter Rows: | Edit

branch_name	branch_city	assets
sbi_jantarMantar	delhi	20000
sbi_mantrimarg	delhi	200000
sbi_parliamentRoad	delhi	10000
sbi_shivajiRoad	bombay	20000
NULL	NULL	NULL