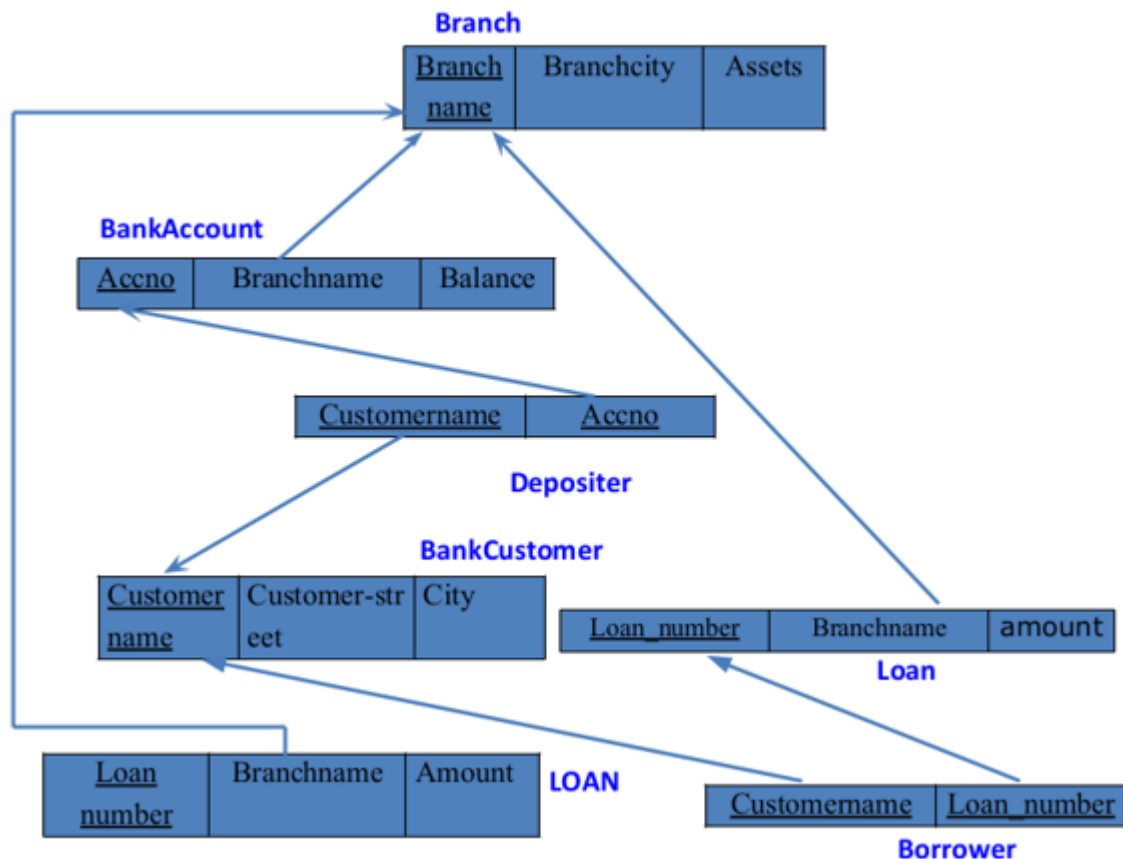


## WEEK 4 – MORE QUERIES ON BANK DATABASE



**Create Borrower table by properly specifying the primary keys and foreign keys.**

### **(CREATION)**

```
create table Borrower(  
  Customername varchar(20),  
  Loan_number int,  
  foreign key(Customername) references BankCustomer(Customername),  
  foreign key(Loan_number) references Loan(Loan_number)  
);
```

### **Insert values into the Borrower table. (INSERTION)**

```
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);

### **Extra insert queries.**

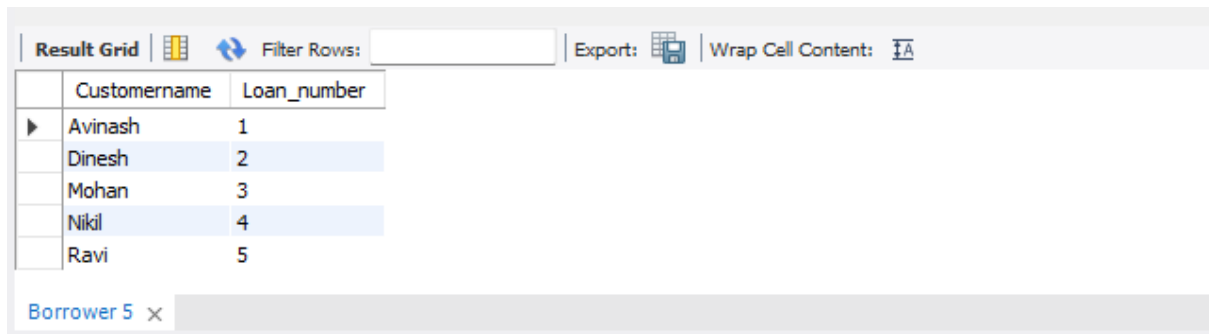
insert into branch values("SBI\_MantriMarg","Delhi",200000);

insert into BankAccount values(12,"SBI\_MantriMarg",2000);

insert into Depositer values("Nikil",12);

### **Select new table. (SELECTION)**

select \* from Borrower;



The screenshot shows a database query result grid. At the top, there are tabs for 'Result Grid' and 'Filter Rows:'. To the right of 'Filter Rows:' is an 'Export:' button with a grid icon and a 'Wrap Cell Content:' button with a text icon. Below these is a table with two columns: 'Customername' and 'Loan\_number'. The table contains five rows of data. The first row is highlighted with a blue background. At the bottom of the grid, there is a tab labeled 'Borrower 5' with a close button (X).

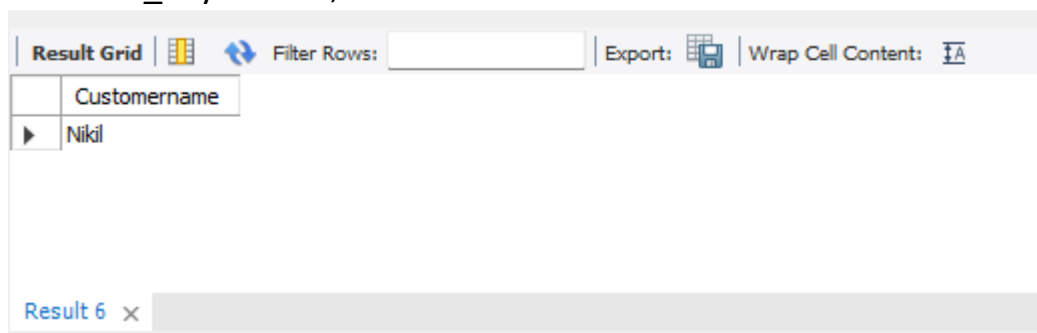
	Customername	Loan_number
▶	Avinash	1
	Dinesh	2
	Mohan	3
	Nikil	4
	Ravi	5

Borrower 5 X

### QUERIES- TO DO:

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

```
select d.Customername from branch b, Depositer d, BankAccount ba
where
b.Branch_city='Delhi' and d.Accno=ba.Accno and
b.Branch_name=ba.Branch_name
group by d.Customername having count(distinct b.Branch_name)=
(select count(distinct b.Branch_name) from branch b where
b.Branch_city='Delhi');
```

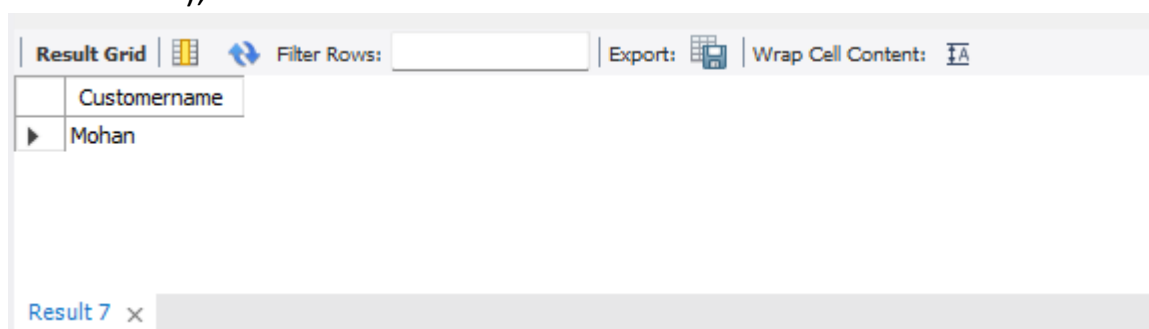


The screenshot shows a database query result grid. The header row is labeled 'Customername'. The first data row contains the name 'Nikil'. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' option. The result is labeled 'Result 6'.

Customername
Nikil

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

```
select distinct b.Customername from Borrower b, Depositer d
where b.Customername NOT IN(
    select d.Customername from Loan l, Depositer d, Borrower b
    where l.Loan_number=b.Loan_number and
    d.Customername=b.Customername
);
```

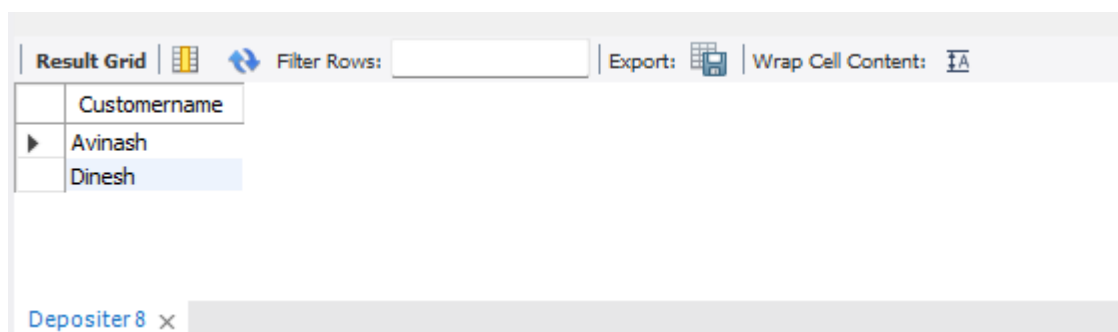


The screenshot shows a database query result grid. The header row is labeled 'Customername'. The first data row contains the name 'Mohan'. The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' option. The result is labeled 'Result 7'.

Customername
Mohan

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

```
select distinct d.Custormername from Depositer d
where d.Custormername IN(
    select d.Custormername from branch br,Depositer d,
    BankAccount ba
    where br.Branch_city='Bangalore' and
    br.Branch_name=ba.Branch_name
    and ba.accno=d.accno and Custormername IN(
        select Custormername from Borrower)
);
```

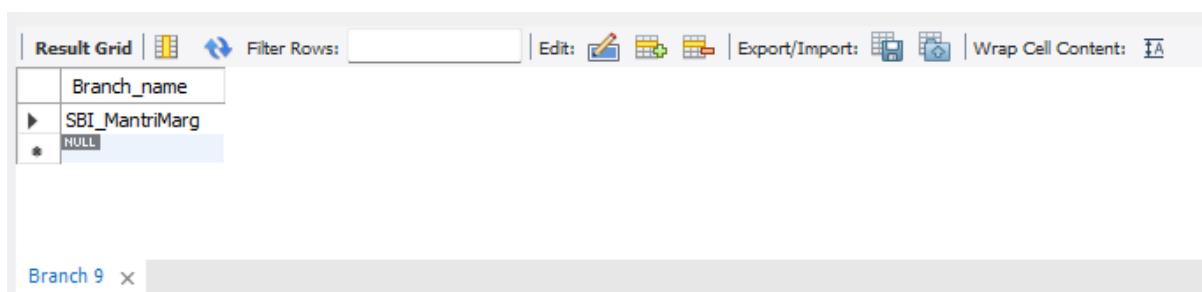


The screenshot shows a database query result grid. The toolbar includes 'Result Grid', 'Filter Rows', 'Export', and 'Wrap Cell Content'. The table has one column, 'Custormername', with two rows: 'Avinash' and 'Dinesh'. Below the table, a tab labeled 'Depositer 8' is visible.

Custormername
Avinash
Dinesh

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

```
select b.Branch_name from Branch b
where b.assets> ALL (
    select SUM(b.assets) from Branch b
    where b.Branch_City='Bangalore' );
```



The screenshot shows a database query result grid. The toolbar includes 'Result Grid', 'Filter Rows', 'Edit', 'Export/Import', and 'Wrap Cell Content'. The table has one column, 'Branch\_name', with two rows: 'SBI\_MantriMarg' and 'NULL'. Below the table, a tab labeled 'Branch 9' is visible.

Branch_name
SBI_MantriMarg
NULL

## 5. Update the Balance of all accounts by 5%

UPDATE BankAccount set Balance=(Balance + (Balance\*0.05));

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
Accno	Branch_name	Balance		
1	SBI_Chamrajpet	2100		
2	SBI_ResidencyRoad	5250		
3	SBI_ShivajiRoad	6300		
4	SBI_ParlimentRoad	9450		
5	SBI_Jantarmantar	8400		
6	SBI_ShivajiRoad	4200		
8	SBI_ResidencyRoad	4200		
9	SBI_ParlimentRoad	3150		
10	SBI_ResidencyRoad	5250		
11	SBI_Jantarmantar	2100		
12	SBI_MantriMarg	2100		
13	SBI_Jantarmantar	2100		
* NULL	NULL	NULL		

BankAccount 20

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

delete ba.\* from BankAccount ba, branch b where  
branch\_city='Bombay' and ba.Branch\_name=b.Branch\_name;

select \* from BankAccount;

Result Grid	Filter Rows:	Edit:	Export/Import:	Wrap Cell Content:
Accno	Branch_name	Balance		
1	SBI_Chamrajpet	2100		
2	SBI_ResidencyRoad	5250		
4	SBI_ParlimentRoad	9450		
5	SBI_Jantarmantar	8400		
8	SBI_ResidencyRoad	4200		
9	SBI_ParlimentRoad	3150		
10	SBI_ResidencyRoad	5250		
11	SBI_Jantarmantar	2100		
12	SBI_MantriMarg	2100		
13	SBI_Jantarmantar	2100		
* NULL	NULL	NULL		

BankAccount 21

**SPOT QUERY: Demonstrate how to delete all the branches located in Bangalore**

delete b.\* from branch b where Branch\_city='Bangalore';

select \* from branch;

	branch_name	branch_city	assets
▶	sbi_jantarMantar	delhi	20000
	sbi_mantriMarg	delhi	200000
	sbi_parliamentRoad	delhi	10000
	sbi_shivajiRoad	bombay	20000
*	NULL	NULL	NULL

select \* from BankAccount;

	accno	branch_name	balance
▶	4	sbi_parliamentRoad	9450
	5	sbi_jantarMantar	8400
	9	sbi_parliamentRoad	3150
	11	sbi_jantarMantar	2100
	12	sbi_mantriMarg	2100
*	NULL	NULL	NULL

select \* from Loan;

	loan_no	branch_name	amount
▶	3	sbi_shivajiRoad	3000
	4	sbi_parliamentRoad	4000
	5	sbi_jantarMantar	5000
*	NULL	NULL	NULL