WEEK 4- BANK DATABASE ADDITIONAL QUERIES

1. Find all the customers who have an account at all the branches located in a specific city (Ex. Delhi).
2. Find all customers who have a loan at the bank but do not have an account.
3. Find all customers who have both an account and a loan at the Bangalore branch.
4. update the annual interest payments are made and all
branches are to be increased by 5%.
5. Find the names of all branches that have greater assets than all branches located in Bangalore.
6. Demonstrate how you delete all account tuples at every branch located in a specific city (Ex. Bombay).

ANSWER

```
1 •    create database dhiksha_bank;
2 •    use dhiksha_bank;
3 • ⊝  create table dhiksha_bank.branch(
4      Branch_name varchar(30),
5      Branch_city varchar(25),
6      assets int,
7      PRIMARY KEY (Branch_name)
8      );
9 • ⊝  create table dhiksha_bank.BankAccount(
10     Accno int,
11     Branch_name varchar(30),
12     Balance int,
13     PRIMARY KEY(Accno),
14     foreign key (Branch_name) references branch(Branch_name)
15     );
```

```
16 •⊖  create table dhiksha_bank.BankCustomer(
17         Customername varchar(20),
18         Customer_street varchar(30),
19         CustomerCity varchar (35),
20         PRIMARY KEY(Customername)
21      );
22 •⊖  create table dhiksha_bank.Depositer(
23         Customername varchar(20),
24         Accno int,
25         PRIMARY KEY(Customername,Accno),
26
27         foreign key (Accno) references BankAccount(Accno),
28         foreign key (Customername) references BankCustomer(Customername)
29      );
30 •⊖  create table dhiksha_bank.Loan(
31         Loan_number int,
32         Branch_name varchar(30),
33         Amount int,
34         PRIMARY KEY(Loan_number),
35         foreign key (Branch_name) references branch(Branch_name)
36      );
37
```

```
37
38 •      INSERT INTO Branch VALUES ('SBI_Chamrajpet', 'Bangalore', 50000);
39 •      INSERT INTO Branch VALUES ('SBI_ResidencyRoad', 'Bangalore', 10000);
40 •      INSERT INTO Branch VALUES ('SBI_ShivajiRoad', 'Bombay', 20000);
41 •      INSERT INTO Branch VALUES ('SBI_ParlimentRoad', 'Delhi', 10000);
42 •      INSERT INTO Branch VALUES ('SBI_Jantarmantar', 'Delhi', 20000);
43 •      select * from branch;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | W

Branch_name	Branch_city	assets
SBI_Chamrajpet	Bangalore	50000
SBI_Jantarmantar	Delhi	20000
SBI_ParlimentRoad	Delhi	10000
SBI_ResidencyRoad	Bangalore	10000
SBI_ShivajiRoad	Bombay	20000
NULL	NULL	NULL

```sql
44
45 ●     INSERT INTO BankAccount VALUES (1, 'SBI_Chamrajpet', 2000);
46 ●     INSERT INTO BankAccount VALUES (2, 'SBI_ResidencyRoad', 5000);
47 ●     INSERT INTO BankAccount VALUES (3, 'SBI_ShivajiRoad', 6000);
48 ●     INSERT INTO BankAccount VALUES (4, 'SBI_ParlimentRoad', 9000);
49 ●     INSERT INTO BankAccount VALUES (5, 'SBI_Jantarmantar', 8000);
50 ●     INSERT INTO BankAccount VALUES (6, 'SBI_ShivajiRoad', 4000);
51 ●     INSERT INTO BankAccount VALUES (8, 'SBI_ResidencyRoad', 4000);
52 ●     INSERT INTO BankAccount VALUES (9, 'SBI_ParlimentRoad', 3000);
53 ●     INSERT INTO BankAccount VALUES (10, 'SBI_ResidencyRoad', 5000);
54 ●     INSERT INTO BankAccount VALUES (11, 'SBI_Jantarmantar', 2000);
55 ●     select * from BankAccount;
56
57 ●     INSERT INTO BankCustomer VALUES ('Avinash', 'Bull_Temple_Road', 'Bangalore');
58 ●     INSERT INTO BankCustomer VALUES ('Dinesh', 'Bannergatta Road', 'Bangalore');
```

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Accno	Branch_name	Balance
1	SBI_Chamrajpet	2000
2	SBI_ResidencyRoad	5000
3	SBI_ShivajiRoad	6000
4	SBI_ParlimentRoad	9000
5	SBI_Jantarmantar	8000
6	SBI_ShivajiRoad	4000
8	SBI_ResidencyRoad	4000
9	SBI_ParlimentRoad	3000
10	SBI_ResidencyRoad	5000
11	SBI_Jantarmantar	2000
NULL	NULL	NULL

```
56
57 •    INSERT INTO BankCustomer VALUES ('Avinash', 'Bull_Temple_Road', 'Bangalore');
58 •    INSERT INTO BankCustomer VALUES ('Dinesh', 'Bannergatta_Road', 'Bangalore');
59 •    INSERT INTO BankCustomer VALUES ('Mohan', 'NationalCollege_Road', 'Bangalore');
60 •    INSERT INTO BankCustomer VALUES ('Nikil', 'Akbar_Road', 'Delhi');
61 •    INSERT INTO BankCustomer VALUES ('Ravi', 'Prithviraj_Road', 'Delhi');
62 •    select * from BankCustomer;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content

Customername	Customer_street	CustomerCity
Avinash	Bull_Temple_Road	Bangalore
Dinesh	Bannergatta_Road	Bangalore
Mohan	NationalCollege_Road	Bangalore
Nikil	Akbar_Road	Delhi
Ravi	Prithviraj_Road	Delhi
NULL	NULL	NULL

```
63
64 •    INSERT INTO Depositer VALUES ('Avinash', 1);
65 •    INSERT INTO Depositer VALUES ('Dinesh', 2);
66 •    INSERT INTO Depositer VALUES ('Nikil', 4);
67 •    INSERT INTO Depositer VALUES ('Ravi', 5);
68 •    INSERT INTO Depositer VALUES ('Avinash', 8);
69 •    INSERT INTO Depositer VALUES ('Nikil', 9);
70 •    INSERT INTO Depositer VALUES ('Dinesh', 10);
71 •    INSERT INTO Depositer VALUES ('Nikil', 11);
72 •    select * from Depositer;
73
```

Result Grid | Filter Rows: | Edit:

Customername	Accno
Avinash	1
Dinesh	2
Nikil	4
Ravi	5
Avinash	8
Nikil	9
Dinesh	10
Nikil	11
NULL	NULL

```sql
73
74 •    INSERT INTO Loan VALUES (1, 'SBI_Chamrajpet', 1000);
75 •    INSERT INTO Loan VALUES (2, 'SBI_ResidencyRoad', 2000);
76 •    INSERT INTO Loan VALUES (3, 'SBI_ShivajiRoad', 3000);
77 •    INSERT INTO Loan VALUES (4, 'SBI_ParlimentRoad', 4000);
78 •    INSERT INTO Loan VALUES (5, 'SBI_Jantarmantar', 5000);
79 •    select * from Loan;
```

Result Grid | Filter Rows: | Edit: | Export/Imp

Loan_number	Branch_name	Amount
1	SBI_Chamrajpet	1000
2	SBI_ResidencyRoad	2000
3	SBI_ShivajiRoad	3000
4	SBI_ParlimentRoad	4000
5	SBI_Jantarmantar	5000
NULL	NULL	NULL

```sql
80
81 •    SELECT DISTINCT S.Customername
82      FROM Depositer AS S
83      WHERE NOT EXISTS (
84          (SELECT Branch_name
85           FROM Branch
86           WHERE Branch_city = 'Delhi')
87          EXCEPT
88          (SELECT R.Branch_name
89           FROM Depositer AS T, BankAccount AS R
90           WHERE T.Accno = R.Accno
91             AND S.Customername = T.Customername)
92      );
93
94
```

Result Grid | Filter Rows: | Export: | W

Customername
Nikil

```sql
93
94  ●  SELECT DISTINCT bc.Customername
95      FROM BankCustomer AS bc
96      JOIN Loan AS l
97      ON bc.Customername IS NOT NULL
98    ⊝ WHERE bc.Customername NOT IN (
99          SELECT Customername FROM Depositer
100     );
101
```

Result Grid | Filter Rows: | Export:

Customername
▶ Mohan

```sql
101
102 ●  SELECT DISTINCT S.Customername
103     FROM Depositer AS S
104   ⊝ WHERE NOT EXISTS (
105         SELECT *
106         FROM Branch AS B
107         WHERE B.Branch_city = 'Delhi'
108   ⊝     AND B.Branch_name NOT IN (
109             SELECT R.Branch_name
110             FROM Depositer AS T
111             JOIN BankAccount AS R ON T.Accno = R.Accno
112             WHERE T.Customername = S.Customername
113         )
114     );
115
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conte

Customername
▶ Nikil

```sql
115
116 •    UPDATE branch
117      SET assets = assets * 1.05;
118
119 •    SELECT Branch_name
120      FROM Branch
121  ⊖  WHERE assets > ALL (
122          SELECT assets
123          FROM Branch
124          WHERE Branch_city = 'Bangalore'
125      );
126      |
```

Result Grid | ▦ ↻ Filter Rows: [   ] | Edit: ▣

Branch_name
NULL

```sql
126
127 •    DELETE FROM BankAccount
128  ⊖  WHERE Branch_name IN (
129          SELECT Branch_name
130          FROM Branch
131          WHERE Branch_city = 'Bombay'
132      );
```