DBMS LAB 4

Consider the following database for a banking enterprise.

- **BRANCH (branch-name: String, branch-city: String, assets: real)**
- **ACCOUNTS (accno: int, branch-name: String, balance: real)**
- **DEPOSITOR (customer-name: String, customer-street: String,**
- **customer-city: String)**
- **LOAN (loan-number: int, branch-name: String, amount: real)**
- **BORROWER (customer-name: String, loan-number: int)**

i) Create the above tables by properly specifying the primary keys and the foreign keys.
ii) Enter at least five tuples for each relation.
iii) Find all the customers who have at least two accounts at the Main branch.
iv) Find all the customers who have an account at all the branches located in a specific city.
v) Demonstrate how you delete all account tuples at every branch located in a specific city.
vi) Generate suitable reports.
vii) Create suitable front end for querying and displaying the results.

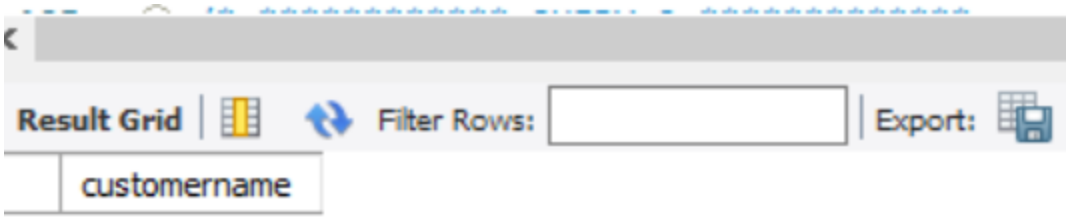
```
CREATE DATABASE banking_enterprise_db;
USE banking_enterprise_db;

CREATE TABLE Branch(
        branchname VARCHAR(30),
   branchcity VARCHAR(30),
   assets REAL,
   PRIMARY KEY(branchname)
   );
DESC Branch;

CREATE TABLE Accounts(
        accno INT,
   branchname VARCHAR(30),
   balance REAL,
   PRIMARY KEY(accno),
   FOREIGN KEY(branchname)
        REFERENCES Branch(branchname) ON DELETE CASCADE
   );
```

```
DESC Accounts;

CREATE TABLE Customer(
        customername VARCHAR(20),
   customerstreet VARCHAR(20),
   customercity VARCHAR(20),
        PRIMARY KEY(customername)
   );
   DESC Customer;

        CREATE TABLE Depositor(
   customername VARCHAR(30),
   accno INT,
   PRIMARY KEY(customername, accno),
        FOREIGN KEY(customername) REFERENCES Customer(customername) ON
UPDATE CASCADE,
   FOREIGN KEY(accno) REFERENCES Cccounts(accno) ON DELETE CASCADE
   );
   DESC Depositor;

CREATE TABLE Loan(
        loanno INT,
        branchname VARCHAR(30),
   amount REAL,
   PRIMARY KEY(loanno),
        FOREIGN KEY(branchname) REFERENCES Branch(branchname) ON DELETE
CASCADE
   );
   DESC Loan;

CREATE TABLE Borrower(
        customername VARCHAR(20),
   loanno INT,
   PRIMARY KEY(customername, loanno),
        FOREIGN KEY(customername) REFERENCES Customer(customername) ON
UPDATE CASCADE,
   FOREIGN KEY(loanno) REFERENCES Loan(loanno) ON DELETE CASCADE);


INSERT INTO Branch VALUES("SBI_PD_NAGAR", "BANGALORE", 200000);
```

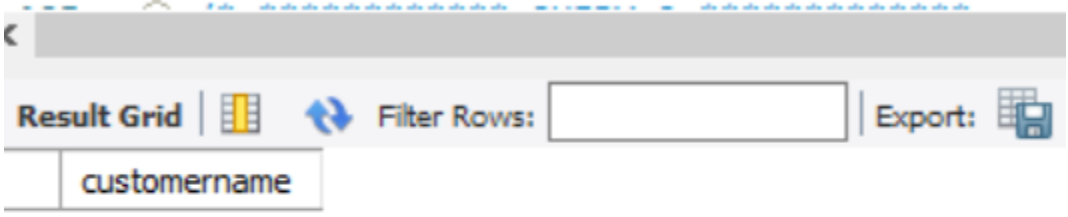
```
INSERT INTO Branch VALUES("SBI_RAJAJI_NAGAR", "BANGALORE", 500000);
INSERT INTO Branch VALUES("SBI_JAYANAGAR", "BANGALORE", 660000);
INSERT INTO Branch VALUES("SBI_VIJAY_NAGAR", "BANGALORE", 870000);
INSERT INTO Branch VALUES("SBI_HOSAKEREHALLI", "BANGALORE", 550000);
SELECT * FROM Branch;

INSERT INTO Accounts VALUES(1234602, "SBI_HOSAKEREHALLI", 5000);
INSERT INTO Accounts VALUES(1234603, "SBI_VIJAY_NAGAR", 5000);
INSERT INTO Accounts VALUES(1234604, "SBI_JAYANAGAR", 5000);
INSERT INTO Accounts VALUES(1234605, "SBI_RAJAJI_NAGAR", 10000);
INSERT INTO Accounts VALUES(1234503, "SBI_VIJAY_NAGAR", 40000);
SELECT * FROM Accounts;

INSERT INTO Customer VALUES("KEZAR", "MG_ROAD", "BANGALORE");
INSERT INTO Customer VALUES("LAL_KRISHNA", "ST_MKS_ROAD",
"BANGALORE");
INSERT INTO Customer VALUES("RAHUL", "AUGSTEN_ROAD", "BANGALORE");
INSERT INTO Customer VALUES("LALLU", "VS_ROAD", "BANGALORE");
INSERT INTO Customer VALUES("FAIZAL", "RESIDENCY_ROAD", "BANGALORE");
INSERT INTO Customer VALUES("RAJEEV", "DICKNSN_ROAD", "BANGALORE");
SELECT * FROM Customer;

INSERT INTO Loan VALUES(10011, "SBI_JAYANAGAR", 10000);
INSERT INTO Loan VALUES(10012, "SBI_VIJAY_NAGAR", 5000);
INSERT INTO Loan VALUES(10013, "SBI_HOSAKEREHALLI", 20000);
INSERT INTO Loan VALUES(10014, "SBI_PD_NAGAR", 15000);
INSERT INTO Loan VALUES(10015, "SBI_RAJAJI_NAGAR", 25000);
SELECT * FROM Loan;

INSERT INTO Borrower VALUES("KEZAR", 10011);
INSERT INTO Borrower VALUES("LAL_KRISHNA", 10012);
INSERT INTO Borrower VALUES("RAHUL", 10013);
INSERT INTO Borrower VALUES("LALLU", 10014);
INSERT INTO Borrower VALUES("LAL_KRISHNA", 10015);
SELECT * FROM Borrower;

INSERT INTO Depositor VALUES("LAL_KRISHNA", 1234603);
INSERT INTO Depositor VALUES("LAL_KRISHNA", 1234503);
INSERT INTO Depositor VALUES("KEZAR", 1234604);
INSERT INTO Depositor VALUES("RAHUL", 1234602);
```

```
SELECT * FROM Depositor;


/* *************QUERY 1**************
Find all the customers who have at least two accounts at the Main branch.*/


SELECT customername FROM Depositor D, Accounts A where  D.accno=A.accno and
A.branchname="SBI_VIJAY_NAGAR" GROUP BY D.customername having
count(D.customername) >= 2;

/* ************ QUERY 2 *************
Find all the customers who have an account at all the branches located in a specific
city.*/

SELECT D.customername FROM Accounts A, Branch B, Depositor  D where
B.branchname=A.branchname and A.accno=D.accno and B.branchcity="BANGALORE"
GROUP BY D.customername HAVING count(distinct B.branchname)=(SELECT
count(branchname) FROM branch WHERE branchcity="BANGALORE");

/* *************QUERY 3 **************
Demonstrate how you delete all account tuples at every branch located in a specific
city.*/

DELETE FROM accounts WHERE branchname IN(SELECT branchname FROM
Branch WHERE branchcity="BANGALORE");
commit;
```

Query 1---


Result Grid
Filter Rows:
Export:
customername

Query 2---


Result Grid
Filter Rows:
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customername