DATABASE MANAGEMENT SYSTEMS

Labsheet 6

-- Create the the given bank database, insert tuples(3-4rows) and formulate the given

-- queries in SQL:

-- Customer (Ccode, Cname, cadd)

-- Account (Acno, Ccode, Branch, Balance, actype)

-- Ac-actype(Acttype, Interest)

-- Transaction (Acno, tno, type, tdate, Issuedby, amt)

-- Loan (Lno, Ccode, branch, debit)

-- Loanpayment (Lno, paymentno, Pdate, issuedby, amt)

-- create table Customer_lab6(

-- ccode int primary key,

-- cname varchar(20),

-- cadd varchar(30)

--);

-- create table Account_lab6(

-- acno int primary key,

-- ccode int references Customer_lab6(ccode),

-- branch varchar(10),

-- balance numeric,

-- actype varchar(10));

-- create table ac_actype_lab6(

```sql
-- acttype varchar(10) primary key,

-- interest numeric

-- );


-- Transaction table with composite primary key (Acno, tno)
CREATE TABLE Transaction_lab6 (

    Acno INT,

    tno INT,

    type VARCHAR(10),

    tdate DATE,

    Issuedby VARCHAR(50),

    amt DECIMAL(10, 2),

    PRIMARY KEY (Acno, tno),

    FOREIGN KEY (Acno) REFERENCES Account_lab6(Acno)

);
-- CREATE TABLE Loan_lab6 (

--     Lno INT PRIMARY KEY,

--     Ccode INT,

--     branch VARCHAR(50),

--     debit DECIMAL(10, 2),

--     FOREIGN KEY (Ccode) REFERENCES Customer_lab6(Ccode)

-- );


-- Loanpayment table with composite primary key (Lno, paymentno)
CREATE TABLE Loanpayment_lab6 (

    Lno INT,

    paymentno INT,

    Pdate DATE,

    issuedby VARCHAR(50),

    amt DECIMAL(10, 2),
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```
    PRIMARY KEY (Lno, paymentno),

    FOREIGN KEY (Lno) REFERENCES Loan_lab6(Lno)

);

-- INSERT INTO Customer_lab6 (ccode, cname, cadd)

-- VALUES (1, 'John Doe', '123 Maple St'),

--      (2, 'Jane Smith', '456 Oak Ave'),

--      (3, 'Alice Johnson', '789 Pine Rd'),

--      (4, 'Bob Brown', '321 Elm St');


-- -- Account data

-- INSERT INTO Account_lab6 (acno, ccode, branch, balance, actype)

-- VALUES (1001, 1, 'Downtown', 5000, 'Savings'),

--      (1002, 2, 'Uptown', 3000, 'Checking'),

--      (1003, 3, 'Kollam', 7000, 'Savings'),

--      (1004, 4, 'Downtown', 2000, 'Fixed');


-- -- Account type data

-- INSERT INTO ac_actype_lab6 (acttype, interest)

-- VALUES ('Savings', 1.5),

--      ('Checking', 0),

--      ('Fixed', 2.5);


-- -- Transaction data

-- INSERT INTO Transaction_lab6 (acno, tno, type, tdate, Issuedby, amt)

-- VALUES (1001, 1, 'Deposit', '1995-09-10', 'Teller 1', 500),

--      (1002, 2, 'Withdrawal', '1995-09-10', 'Teller 2', 200),

--      (1003, 3, 'Deposit', '1995-09-11', 'Teller 3', 1000);


-- -- Loan data

-- INSERT INTO Loan_lab6 (lno, ccode, branch, debit)
```

```
-- VALUES (201, 1, 'Downtown', 20000),

--      (202, 2, 'Uptown', 15000),

--      (203, 3, 'Kollam', 10000);


-- -- Loan payment data

-- INSERT INTO Loanpayment_lab6 (lno, paymentno, pdate, issuedby, amt)

-- VALUES (201, 1, '1995-09-12', 'Teller 1', 1000),

--      (202, 2, '1995-09-13', 'Teller 2', 1500),

--      (203, 3, '1995-09-14', 'Teller 3', 1200);

--1)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode IN (SELECT ccode FROM Loan_lab6);


--2)

-- SELECT ccode, balance

-- FROM Account_lab6

-- WHERE balance > (SELECT AVG(balance) FROM Account_lab6);


--3)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode = 1;


--4)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode IN (

--    SELECT ccode

--    FROM Account_lab6
```

```
--     WHERE actype IN (SELECT acttype FROM ac_actype_lab6 WHERE interest = 0)

-- );




--5)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode IN (

--     SELECT ccode

--     FROM Account_lab6

--     WHERE acno IN (SELECT acno FROM Transaction_lab6 WHERE tdate = '1995-09-10')

-- );

--6)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode IN (

--     SELECT ccode

--     FROM Account_lab6

--     WHERE balance > (SELECT AVG(balance) FROM Account_lab6)

-- );

--7)

-- SELECT cname

-- FROM Customer_lab6

-- WHERE ccode IN (SELECT ccode FROM Loan_lab6 WHERE branch = 'Kollam');

--8)

-- SELECT cname

-- FROM Customer_lab6 AS C

-- JOIN Account_lab6 AS A ON C.ccode = A.ccode

-- WHERE A.balance > ALL (

--     SELECT balance
```

--   FROM Account_lab6

--   WHERE actype = A.actype AND ccode != A.ccode

--);

OUTPUT

	cname character varying (20) 🔒
1	John Doe
2	Jane Smith
3	Alice Johnson

	ccode integer 🔒	balance numeric 🔒
1	1	5000
2	3	7000

	cname character varying (20) 🔒
1	John Doe

Data Output Messages Notifications

	cname character varying (20) 🔒
1	Jane Smith

Data Output Messages Notifications

	cname character varying (20) 🔒
1	John Doe
2	Jane Smith

Data Output Messages Notifications

	cname character varying (20) 🔒
1	John Doe
2	Alice Johnson

Data Output Messages Notifications

	cname character varying (20) 🔒
1	Alice Johnson

Data Output   Messages   Notifications

	cname character varying (20) 🔒
1	Jane Smith
2	Alice Johnson
3	Bob Brown