**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(

-- 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),

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**















