-------------------- LAB 9 --------------------------------------------------------------

--Sub Queries--

CREATE TABLE Stu\_Detail (

Rno INT,

Name VARCHAR(50),

City VARCHAR(50),

DID INT,

);

INSERT INTO Stu\_Detail (Rno, Name, City, DID) VALUES

(101, 'Raju', 'Rajkot', 10),

(102, 'Amit', 'Ahmedabad', 20),

(103, 'Sanjay', 'Baroda', 40),

(104, 'Neha', 'Rajkot', 20),

(105, 'Meera', 'Ahmedabad', 30),

(106, 'Mahesh', 'Baroda', 10);

CREATE TABLE Academic (

Rno INT,

SPI DECIMAL(3, 1),

Bklog INT

);

INSERT INTO Academic (Rno, SPI, Bklog) VALUES

(101, 8.8, 0),

(102, 9.2, 2),

(103, 7.6, 1),

(104, 8.2, 4),

(105, 7.0, 2),

(106, 8.9, 3);

CREATE TABLE Department (

DID INT,

DName VARCHAR(50)

);

INSERT INTO Department (DID, DName) VALUES

(10, 'Computer'),

(20, 'Electrical'),

(30, 'Mechanical'),

(40, 'Civil');

---------------- SET Operators ---------------

CREATE TABLE Computer (

RollNo INT,

Name VARCHAR(50)

);

INSERT INTO Computer (RollNo, Name) VALUES

(101, 'Ajay'),

(109, 'Haresh'),

(115, 'Manish');

CREATE TABLE Electrical (

RollNo INT PRIMARY KEY,

Name VARCHAR(50)

);

INSERT INTO Electrical (RollNo, Name) VALUES

(105, 'Ajay'),

(107, 'Mahesh'),

(115, 'Manish');

------------------ PART B ----------------------

CREATE TABLE Emp\_DATA (

EID INT,

Name VARCHAR(50)

);

INSERT INTO Emp\_DATA (EID, Name) VALUES

(1, 'Ajay'),

(9, 'Haresh'),

(5, 'Manish');

CREATE TABLE Customer (

CID INT,

Name VARCHAR(50)

);

INSERT INTO Customer (CID, Name) VALUES

(5, 'Ajay'),

(7, 'Mahesh'),

(5, 'Manish');

--------------------- LAB 10 ------------------------------------------------------------------------------------------------------------------------------

--View--

CREATE TABLE Student\_INFO (

RNo INT,

Name VARCHAR(50),

Branch VARCHAR(50),

SPI DECIMAL(5, 2),

Bklog INT

);

INSERT INTO Student\_INFO (RNo, Name, Branch, SPI, Bklog) VALUES

(101, 'Raju', 'CE', 8.80, 0),

(102, 'Amit', 'CE', 2.20, 3),

(103, 'Sanjay', 'ME', 1.50, 6),

(104, 'Neha', 'EC', 7.65, 1),

(105, 'Meera', 'EE', 5.52, 2),

(106, 'Mahesh', 'EC', 4.50, 3);

--------------------- LAB 11 ------------------------------------------------------------

--Joins --

CREATE TABLE Stu\_Info (

Rno INT ,

Name VARCHAR(50),

Branch VARCHAR(50)

);

INSERT INTO Stu\_Info (Rno, Name, Branch)

VALUES

(101, 'Raju', 'CE'),

(102, 'Amit', 'CE'),

(103, 'Sanjay', 'ME'),

(104, 'Neha', 'EC'),

(105, 'Meera', 'EE'),

(106, 'Mahesh', 'ME');

CREATE TABLE Result (

RNO INT,

SPI DECIMAL(4, 2),

);

INSERT INTO Result (Rno, SPI)

VALUES

(101, 8.8),

(102, 9.2),

(103, 7.6),

(104, 8.2),

(105, 7.0),

(107, 8.9);

CREATE TABLE EMPLOYEE\_MASTER (

EmployeeNo VARCHAR(50) ,

Name VARCHAR(50),

ManagerNo VARCHAR(50)

);

INSERT INTO EMPLOYEE\_MASTER(EmployeeNo, Name, ManagerNo)

VALUES

('E01', 'Tarun', NULL),

('E02', 'Rohan', 'E02'),

('E03', 'Priya', 'E01'),

('E04', 'Milan', 'E03'),

('E05', 'Jay', 'E01'),

('E06', 'Anjana', 'E04');

-------------------------- LAB 12 -------------------------------------------------------

--Complex Joins --

CREATE TABLE Dept (

DepartmentID INT PRIMARY KEY,

DepartmentName VARCHAR(100) NOT NULL UNIQUE,

DepartmentCode VARCHAR(50) NOT NULL UNIQUE,

Location VARCHAR(50) NOT NULL

);

CREATE TABLE Person (

PersonID INT PRIMARY KEY,

PersonName VARCHAR(100) NOT NULL,

DepartmentID INT NULL,

Salary DECIMAL(8, 2) NOT NULL,

JoiningDate DATETIME NOT NULL,

City VARCHAR(100) NOT NULL,

FOREIGN KEY (DepartmentID) REFERENCES Dept(DepartmentID)

);

INSERT INTO Dept (DepartmentID, DepartmentName, DepartmentCode, Location) VALUES

(1, 'Admin', 'Adm', 'A-Block'),

(2, 'Computer', 'CE', 'C-Block'),

(3, 'Civil', 'CI', 'G-Block'),

(4, 'Electrical', 'EE', 'E-Block'),

(5, 'Mechanical', 'ME', 'B-Block');

INSERT INTO Person (PersonID, PersonName, DepartmentID, Salary, JoiningDate, City) VALUES

(101, 'Rahul Tripathi', 2, 56000, '2000-01-01', 'Rajkot'),

(102, 'Hardik Pandya', 3, 18000, '2001-09-25', 'Ahmedabad'),

(103, 'Bhavin Kanani', 4, 25000, '2000-05-14', 'Baroda'),

(104, 'Bhoomi Vaishnav', 1, 39000, '2005-02-08', 'Rajkot'),

(105, 'Rohit Topiya', 2, 17000, '2001-07-23', 'Jamnagar'),

(106, 'Priya Menpara', NULL, 9000, '2000-10-18', 'Ahmedabad'),

(107, 'Neha Sharma', 2, 34000, '2002-12-25', 'Rajkot'),

(108, 'Nayan Goswami', 3, 25000, '2001-07-01', 'Rajkot'),

(109, 'Mehul Bhundiya', 4, 13500, '2005-01-09', 'Baroda'),

(110, 'Mohit Maru', 5, 14000, '2000-05-25', 'Jamnagar');

---------------------------- LAB 13 -----------------------------------------------------

--Advanced level Joins --

CREATE TABLE City (

CityID INT PRIMARY KEY,

Name VARCHAR(100) UNIQUE,

Pincode INT NOT NULL,

Remarks VARCHAR(255)

);

CREATE TABLE Village (

VID INT PRIMARY KEY,

Name VARCHAR(100) NOT NULL,

CityID INT,

FOREIGN KEY (CityID) REFERENCES City(CityID)

);

INSERT INTO City (CityID, Name, Pincode, Remarks) VALUES

(1, 'Rajkot', 360005, 'Good'),

(2, 'Surat', 335009, 'Very Good'),

(3, 'Baroda', 390001, 'Awesome'),

(4, 'Jamnagar', 361003, 'Smart'),

(5, 'Junagadh', 362229, 'Historic'),

(6, 'Morvi', 363641, 'Ceramic');

INSERT INTO Village (VID, Name, CityID) VALUES

(101, 'Raiya', 1),

(102, 'Madhapar', 1),

(103, 'Dodka', 3),

(104, 'Falla', 4),

(105, 'Bhesan', 5),

(106, 'Dhoraji', 5);

---------------------- PART B -------------------------

--Create table as per following schema with proper validation and try to insert data which violate your validation.

--Emp(Eid, Ename, Did, Cid, Salary, Experience)

--Dept(Did, Dname)

--City(Cid, Cname)

CREATE TABLE Dept\_DETAILS (

Did INT PRIMARY KEY,

Dname VARCHAR(100) NOT NULL

);

CREATE TABLE City\_DETAILS(

Cid INT PRIMARY KEY,

Cname VARCHAR(100) NOT NULL

);

CREATE TABLE Emp\_DETAILS (

Eid INT PRIMARY KEY,

Ename VARCHAR(100) NOT NULL,

Did INT,

Cid INT,

Salary DECIMAL(10, 2) CHECK (Salary > 0),

Experience INT CHECK (Experience >= 0),

FOREIGN KEY (Did) REFERENCES Dept\_DETAILS(Did),

FOREIGN KEY (Cid) REFERENCES City\_DETAILS(Cid)

);

INSERT INTO Dept\_DETAILS(Did, Dname) VALUES

(1, 'HR'),

(2, 'Engineering'),

(3, 'Marketing');

INSERT INTO City\_DETAILS(Cid, Cname) VALUES

(1, 'New York'),

(2, 'Los Angeles'),

(3, 'Chicago');

INSERT INTO Emp\_DETAILS(Eid, Ename, Did, Cid, Salary, Experience) VALUES

(1, 'John Doe', 1, 1, 50000.00, 5),

(2, 'Jane Smith', 2, 2, 75000.00, 8),

(3, 'Mike Johnson', 3, 3, 60000.00, 3);

----------------------- PART C -----------------------

--Create table as per following schema with proper validation and try to insert data which violate your validation.

--1. Emp(Eid, Ename, Did, Cid, Salary, Experience)

-- Dept(Did, Dname)

-- City(Cid, Cname, Did))

-- District(Did, Dname, Sid)

-- State(Sid, Sname, Cid)

-- Country(Cid, Cname)

CREATE TABLE Country\_INFO (

Cid INT PRIMARY KEY,

Cname VARCHAR(100) NOT NULL

);

CREATE TABLE State\_INFO (

Sid INT PRIMARY KEY,

Sname VARCHAR(100) NOT NULL,

Cid INT,

FOREIGN KEY (Cid) REFERENCES Country\_INFO(Cid)

);

CREATE TABLE District\_INFO (

Did INT PRIMARY KEY,

Dname VARCHAR(100) NOT NULL,

Sid INT,

FOREIGN KEY (Sid) REFERENCES State\_INFO(Sid)

);

CREATE TABLE Dept\_INFO (

Did INT PRIMARY KEY,

Dname VARCHAR(100) NOT NULL

);

CREATE TABLE City\_INFO (

Cid INT PRIMARY KEY,

Cname VARCHAR(100) NOT NULL,

Did INT,

FOREIGN KEY (Did) REFERENCES District\_INFO(Did)

);

CREATE TABLE Emp\_INFO (

Eid INT PRIMARY KEY,

Ename VARCHAR(100) NOT NULL,

Did INT,

Cid INT,

Salary DECIMAL(10, 2) CHECK (Salary > 0), -- Salary must be positive

Experience INT CHECK (Experience >= 0), -- Experience cannot be negative

FOREIGN KEY (Did) REFERENCES Dept\_INFO(Did),

FOREIGN KEY (Cid) REFERENCES City\_INFO(Cid)

);

INSERT INTO Country\_INFO (Cid, Cname) VALUES

(1, 'USA'),

(2, 'Canada'),

(3, 'UK'),

(4, 'Australia'),

(5, 'India');

INSERT INTO State\_INFO (Sid, Sname, Cid) VALUES

(1, 'California', 1),

(2, 'Ontario', 2),

(3, 'London', 3),

(4, 'New South Wales', 4),

(5, 'Gujarat', 5);

INSERT INTO District\_INFO (Did, Dname, Sid) VALUES

(1, 'Los Angeles', 1),

(2, 'Toronto', 2),

(3, 'Westminster', 3),

(4, 'Sydney', 4),

(5, 'Ahmedabad', 5);

INSERT INTO Dept\_INFO (Did, Dname) VALUES

(1, 'HR'),

(2, 'Engineering'),

(3, 'Marketing'),

(4, 'Sales'),

(5, 'Finance');

INSERT INTO City\_INFO (Cid, Cname, Did) VALUES

(1, 'Los Angeles City', 1),

(2, 'Toronto City', 2),

(3, 'London City', 3),

(4, 'Sydney City', 4),

(5, 'Ahmedabad City', 5);

INSERT INTO Emp\_INFO (Eid, Ename, Did, Cid, Salary, Experience) VALUES

(1, 'John Doe', 1, 1, 50000.00, 5),

(2, 'Jane Smith', 2, 2, 75000.00, 8),

(3, 'Mike Johnson', 3, 3, 60000.00, 3),

(4, 'Alice Brown', 4, 4, 45000.00, 2),

(5, 'Bob Green', 5, 5, 40000.00, 4);