-- Create Employee Table

CREATE TABLE Employee (

Emp\_id INT PRIMARY KEY,

Dept\_id INT,

Emp\_fname VARCHAR(50),

Emp\_lname VARCHAR(50),

Emp\_Position VARCHAR(50),

Emp\_salary DECIMAL(10, 2),

Emp\_JoinDate DATE

);

-- Create Dept Table

CREATE TABLE Dept (

Dept\_id INT PRIMARY KEY,

Dept\_name VARCHAR(50),

Dept\_location VARCHAR(50)

);

-- Create Project Table

CREATE TABLE Project (

Proj\_id INT PRIMARY KEY,

Dept\_id INT,

Proj\_Name VARCHAR(50),

Proj\_Location VARCHAR(50),

Proj\_cost DECIMAL(10, 2),

Proj\_year INT

);

-- Create a simple view to display Employee names and Department names

CREATE VIEW EmployeeDeptView AS

SELECT Emp\_id, Emp\_fname, Emp\_lname, Dept\_name

FROM Employee

JOIN Dept ON Employee.Dept\_id = Dept.Dept\_id;

-- Create index on Dept\_location for faster searching

CREATE INDEX idx\_dept\_location ON Dept (Dept\_location);

INSERT INTO Employee (Emp\_id, Dept\_id, Emp\_fname, Emp\_lname, Emp\_Position, Emp\_salary, Emp\_JoinDate)

VALUES

(1, 1, 'Paul', 'Smith', 'Manager', 80000, '1980-04-15'),

(2, 1, 'Helen', 'Jones', 'Developer', 60000, '1986-03-20'),

(3, 2, 'Henry', 'Brown', 'Analyst', 70000, '1990-07-10'),

(4, 2, 'Patricia', 'Garcia', 'Manager', 85000, '1982-01-17'),

(5, 3, 'Philip', 'Johnson', 'Developer', 62000, '1983-05-05'),

(6, 3, 'Hannah', 'Wilson', 'Tester', 55000, '1995-11-30'),

(7, 1, 'Harry', 'Taylor', 'Analyst', 71000, '1992-09-25'),

(8, 2, 'Peter', 'Miller', 'Developer', 63000, '1988-12-18'),

(9, 3, 'Holly', 'Davis', 'Tester', 59000, '1991-08-22'),

(10, 1, 'Pat', 'Moore', 'Designer', 58000, '1984-06-03');

INSERT INTO Dept (Dept\_id, Dept\_name, Dept\_location)

VALUES

(1, 'Computer', 'Pune'),

(2, 'IT', 'Mumbai'),

(3, 'HR', 'Delhi');

INSERT INTO Project (Proj\_id, Dept\_id, Proj\_Name, Proj\_Location, Proj\_cost, Proj\_year)

VALUES

(1, 1, 'AI Project', 'Pune', 200000, 2004),

(2, 2, 'Web Dev', 'Mumbai', 300000, 2005),

(3, 3, 'HR Analytics', 'Pune', 150000, 2007),

(4, 1, 'Data Mining', 'Delhi', 500000, 2004),

(5, 2, 'Network Security', 'Pune', 120000, 2007);

SELECT \*

FROM Employee

JOIN Dept ON Employee.Dept\_id = Dept.Dept\_id

WHERE Dept.Dept\_name IN ('Computer', 'IT')

AND (Emp\_fname LIKE 'P%' OR Emp\_fname LIKE 'H%');

SELECT COUNT(DISTINCT Emp\_Position) AS Num\_Positions

FROM Employee;

UPDATE Employee

SET Emp\_salary = Emp\_salary \* 1.1

WHERE Emp\_JoinDate < '1985-01-01';

DELETE FROM Dept

WHERE Dept\_location = 'Mumbai';

SELECT Proj\_Name

FROM Project

WHERE Proj\_Location = 'Pune';

SELECT Proj\_Name

FROM Project

WHERE Proj\_cost BETWEEN 100000 AND 500000;

SELECT Proj\_Name, Proj\_cost

FROM Project

WHERE Proj\_cost = (SELECT MAX(Proj\_cost) FROM Project);

SELECT AVG(Proj\_cost) AS Avg\_Project\_Cost

FROM Project;

SELECT Emp\_id, CONCAT(Emp\_fname, ' ', Emp\_lname) AS Emp\_name

FROM Employee

ORDER BY Emp\_lname DESC;

SELECT Proj\_Name, Proj\_Location, Proj\_cost

FROM Project

WHERE Proj\_year IN (2004, 2005, 2007);