1. CREATE TABLE Dept (Dept\_id INT PRIMARY KEY,Dept\_name VARCHAR(50) NOT NULL,Dept\_location VARCHAR(50));

[Execution complete with exit code 0]

1. 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, CONSTRAINT fk\_dept\_emp FOREIGN KEY (Dept\_id) REFERENCES Dept(Dept\_id) ON DELETE CASCADE);

[Execution complete with exit code 0]

1. CREATE TABLE Project (Proj\_id INT PRIMARY KEY, Dept\_id INT, Proj\_Name VARCHAR(50), Proj\_Location VARCHAR(50), Proj\_cost DECIMAL(12,2), Proj\_year INT, CONSTRAINT fk\_dept\_proj FOREIGN KEY (Dept\_id) REFERENCES Dept(Dept\_id) ON DELETE CASCADE);

[Execution complete with exit code 0]

1. INSERT INTO Dept VALUES(1, 'Computer', 'Delhi'),(2, 'IT', 'Pune'), (3, 'HR', 'Mumbai'),(4, 'Finance', 'Chennai');

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1. INSERT INTO Employee VALUES

(101, 1, 'Pankaj', 'Sharma', 'Manager', 50000, '1980-06-12'),

(102, 2, 'Harsh', 'Mehta', 'Developer', 45000, '1984-03-20'),

(103, 3, 'Ravi', 'Kumar', 'Analyst', 35000, '1990-04-12'),

(104, 4, 'Neha', 'Joshi', 'Clerk', 25000, '1995-12-01'),

(105, 1, 'Priya', 'Singh', 'Tester', 30000, '2001-09-09'),

(106, 2, 'Hitesh', 'Patel', 'Developer', 47000, '1998-08-25'),

(107, 2, 'Komal', 'Verma', 'Manager', 55000, '1992-05-10'),

(108, 3, 'Amit', 'Jain', 'HR', 40000, '1987-11-23'),

(109, 4, 'Sneha', 'Bose', 'Clerk', 27000, '1994-02-15'),

(110, 1, 'Prateek', 'Kapoor', 'Support', 32000, '2000-07-19');

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1. INSERT INTO Project VALUES

(201, 1, 'ERP Upgrade', 'Pune', 300000, 2004),

(202, 2, 'CyberSecure', 'Delhi', 150000, 2005),

(203, 1, 'CloudShift', 'Mumbai', 500000, 2007),

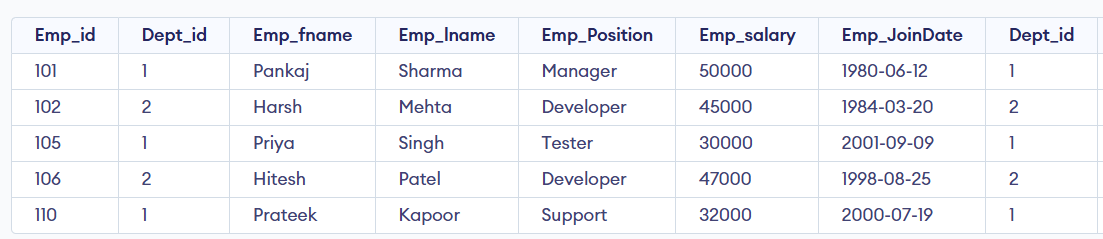
(204, 3, 'RecruitSys', 'Chennai', 80000, 2002),

(205, 4, 'FinTrack', 'Pune', 420000, 2004);

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1. SELECT \* FROM Employee JOIN Dept ON Employee.Dept\_id = Dept.Dept\_id WHERE Dept.Dept\_name IN ('Computer', 'IT') AND (LOWER(Employee.Emp\_fname) LIKE 'p%' OR LOWER(Employee.Emp\_fname) LIKE 'h%');



1. Increase salary by 10% for employees who joined before 1985

UPDATE Employee SET Emp\_salary = Emp\_salary \* 1.10

WHERE EXTRACT(YEAR FROM Emp\_JoinDate) < 1985;

1. Delete department located in Mumbai

DELETE FROM Dept WHERE Dept\_location = 'Mumbai';

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1. Projects located in Pune

SELECT Proj\_Name FROM Project WHERE LOWER(Proj\_Location) = 'pune';

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1. Projects with cost between 100000 and 500000

SELECT \* FROM Project

WHERE Proj\_cost BETWEEN 100000 AND 500000;

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1. Project with maximum cost and average project cost

SELECT Proj\_Name, Proj\_cost

FROM Project

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

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SELECT AVG(Proj\_cost) AS Avg\_Cost FROM Project;

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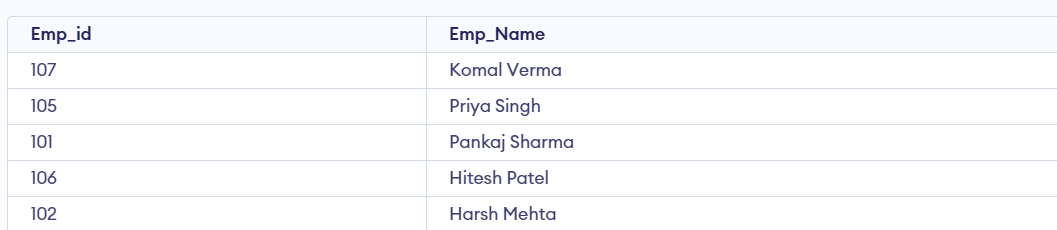
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1. Display all employees ordered by last name descending

SELECT Emp\_id, Emp\_fname || ' ' || Emp\_lname AS Emp\_Name

FROM Employee

ORDER BY Emp\_lname DESC;



1. Projects started in 2004, 2005, or 2007

SELECT Proj\_name, Proj\_location, Proj\_cost

FROM Project

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

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Create Index, View, Sequence, and Synonym

Index on Emp\_lname

1. CREATE INDEX idx\_emp\_lname ON Employee(Emp\_lname);
2. CREATE VIEW Emp\_Dept\_View AS SELECT E.Emp\_id, E.Emp\_fname, E.Emp\_lname, D.Dept\_name, E.Emp\_Position FROM Employee E JOIN Dept D ON E.Dept\_id = D.Dept\_id;
3. CREATE SEQUENCE emp\_seq START WITH 111 INCREMENT BY 1;
4. INSERT INTO Employee (Emp\_id, Dept\_id, Emp\_fname, Emp\_lname, Emp\_Position, Emp\_salary, Emp\_JoinDate) VALUES (emp\_seq.NEXTVAL, 1, 'Rohan', 'Das', 'Tester', 29000, '2003-01-01');