**Task 3:**

**Write SQL statements to create the database schema based on your ERD**

CREATE DATABASE occupational\_health; USE occupational\_health; -- Create the table for employees CREATE TABLE employees ( employee\_id INT AUTO\_INCREMENT PRIMARY KEY, name VARCHAR(255), sex ENUM('Male', 'Female', 'Other'), date\_of\_birth DATE, job\_title VARCHAR(255) ); -- Create the table for health and safety metrics CREATE TABLE health\_safety\_metrics ( metric\_id INT AUTO\_INCREMENT PRIMARY KEY, employee\_id INT, health\_screening\_done BOOLEAN, safety\_training\_done BOOLEAN, ergonomic\_assessment\_done BOOLEAN, annual\_health\_checkup\_score DECIMAL(5,2), workplace\_injury\_count INT, stress\_level INT, FOREIGN KEY (employee\_id) REFERENCES employees(employee\_id) ); -- Create the table for performance metrics CREATE TABLE performance\_metrics ( performance\_id INT AUTO\_INCREMENT PRIMARY KEY, employee\_id INT, days\_absent INT, productivity\_score DECIMAL(5,2), job\_satisfaction\_score DECIMAL(5,2), FOREIGN KEY (employee\_id) REFERENCES employees(employee\_id)

### **Insert Sample Data**

INSERT INTO employees (name, sex, date\_of\_birth, job\_title)

VALUES

('Sheryl Lowery', 'Male', '1985-06-15', 'Software Engineer'),

('Sherry Caldwell', 'Female', '1990-09-22', 'Data Analyst'),

('Emily Davis', 'Female', '1987-11-05', 'Project Manager'),

('Micheal Brown', 'Male', '1979-03-13', 'HR Manager'),

('Anna Wilson', 'Female', '1993-01-30', 'Sales Executive');

#### **Insert Health and Safety Metrics**

INSERT INTO health\_safety\_metrics (employee\_id, health\_screening\_done, safety\_training\_done, ergonomic\_assessment\_done, annual\_health\_checkup\_score, workplace\_injury\_count, stress\_level)

VALUES

(1, TRUE, TRUE, TRUE, 88.5, 0, 3),

(2, TRUE, TRUE, FALSE, 92.0, 1, 5),

(3, FALSE, TRUE, TRUE, 85.0, 2, 7),

(4, TRUE, FALSE, FALSE, 90.0, 3, 6),

(5, TRUE, TRUE, TRUE, 95.0, 0, 2);

#### **Insert Performance Metrics**

INSERT INTO performance\_metrics (employee\_id, days\_absent, productivity\_score, job\_satisfaction\_score)

VALUES

(1, 2, 89.7, 8.5),

(2, 0, 92.3, 9.0),

(3, 5, 85.6, 7.2),

(4, 3, 88.1, 7.8),

(5, 1, 93.5, 9.1);

### **3. Generate the Data with Queries**

#### **Example: Retrieve All Data with Relationships**

SELECT

e.employee\_id,

e.name,

e.sex,

e.date\_of\_birth,

e.job\_title,

h.health\_screening\_done,

h.safety\_training\_done,

h.ergonomic\_assessment\_done,

h.annual\_health\_checkup\_score,

h.workplace\_injury\_count,

h.stress\_level,

p.days\_absent,

p.productivity\_score,

p.job\_satisfaction\_score

FROM

employees e

JOIN

health\_safety\_metrics h ON e.employee\_id = h.employee\_id

JOIN

performance\_metrics p ON e.employee\_id = p.employee\_id;

### **4. Analyzing the Data**

**To generate the summary statistics and insights:**

#### **Average Productivity and Satisfaction by Job Title**

SELECT

e.job\_title,

AVG(p.productivity\_score) AS avg\_productivity\_score,

AVG(p.job\_satisfaction\_score) AS avg\_job\_satisfaction\_score

FROM

employees e

JOIN

performance\_metrics p ON e.employee\_id = p.employee\_id

GROUP BY

e.job\_title;

#### **Correlation Between Stress Level and Productivity**

SELECT

h.stress\_level,

AVG(p.productivity\_score) AS avg\_productivity\_score

FROM

health\_safety\_metrics h

JOIN

performance\_metrics p ON h.employee\_id = p.employee\_id

GROUP BY

H.stress\_level;