Problem Statement: Design following SQL DML statements: Create a university/college database containing following tablesStudent (stud\_id, deptnm, sem, name, yr, credits) Teaches (teacher\_id, teacher\_name, salary, deptnm) 1. Insert records into all tables. 2. Update record on student tables as department name comp to IT. 3. Find the department that has highest or average salary 4. Delete the records of all teacher with salary below 2000. 5. Find the sum of salary of each department.

-- Step 1: Create the tables

CREATE TABLE Student (

stud\_id INT PRIMARY KEY,

deptnm VARCHAR(50),

sem INT,

name VARCHAR(100),

yr INT,

credits INT

);

CREATE TABLE Teaches (

teacher\_id INT PRIMARY KEY,

teacher\_name VARCHAR(100),

salary DECIMAL(10, 2),

deptnm VARCHAR(50)

);

-- Step 2: Insert records into Student table

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES

(1, 'Comp', 3, 'Alice Smith', 2022, 30),

(2, 'IT', 2, 'Bob Johnson', 2023, 25),

(3, 'Comp', 1, 'Charlie Brown', 2024, 15),

(4, 'IT', 4, 'Daisy Adams', 2022, 40),

(5, 'ECE', 2, 'Edward Williams', 2023, 20);

-- Step 2: Insert records into Teaches table

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES

(101, 'Dr. Green', 3500, 'Comp'),

(102, 'Prof. White', 1800, 'ECE'),

(103, 'Dr. Black', 5000, 'IT'),

(104, 'Prof. Brown', 2500, 'IT'),

(105, 'Dr. Blue', 3000, 'Comp');

-- Step 3: Update department name from 'Comp' to 'IT' in Student table

UPDATE Student

SET deptnm = 'IT'

WHERE deptnm = 'Comp';

-- Step 4: Find the department with the highest average salary

SELECT deptnm, AVG(salary) AS avg\_salary

FROM Teaches

GROUP BY deptnm

ORDER BY avg\_salary DESC;

-- Step 5: Delete records of teachers with salary below 2000

DELETE FROM Teaches

WHERE salary < 2000;

-- Step 6: Find the sum of salary for each department

SELECT deptnm, SUM(salary) AS total\_salary

FROM Teaches

GROUP BY deptnm;

Alternate code

-- Creating the Student table

CREATE TABLE Student (

stud\_id INT PRIMARY KEY,

deptnm VARCHAR2(50),

sem INT,

name VARCHAR2(100),

yr INT,

credits INT

);

SELECT \* FROM STUDENT;

-- Creating the Teaches table

CREATE TABLE Teaches (

teacher\_id INT PRIMARY KEY,

teacher\_name VARCHAR2(100),

salary INT,

deptnm VARCHAR2(50)

);

-- Inserting records into the Student table

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES (1, 'COMP', 1, 'Alice', 2024, 15);

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES (2, 'MATH', 2, 'Bob', 2024, 18);

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES (3, 'IT', 1, 'Charlie', 2024, 12);

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES (4, 'COMP', 3, 'David', 2024, 20);

INSERT INTO Student (stud\_id, deptnm, sem, name, yr, credits) VALUES (5, 'IT', 4, 'Eva', 2024, 17);

-- Inserting records into the Teaches table

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES (101, 'Dr. Smith', 2500, 'COMP');

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES (102, 'Dr. Jones', 1800, 'MATH');

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES (103, 'Dr. Lee', 3200, 'IT');

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES (104, 'Dr. Brown', 2200, 'COMP');

INSERT INTO Teaches (teacher\_id, teacher\_name, salary, deptnm) VALUES (105, 'Dr. Green', 1800, 'MATH');

-- Update department from 'COMP' to 'IT' in the Student table

UPDATE Student

SET deptnm = 'IT'

WHERE deptnm = 'COMP';

-- Find the department with the highest salary in Teaches

SELECT deptnm, MAX(salary) AS max\_salary

FROM Teaches

GROUP BY deptnm

ORDER BY max\_salary DESC

FETCH FIRST 1 ROWS ONLY;

-- Find the department with the average salary in Teaches

SELECT deptnm, AVG(salary) AS avg\_salary

FROM Teaches

GROUP BY deptnm;

-- Delete records from Teaches for teachers with salary below 2000

DELETE FROM Teaches

WHERE salary < 2000;

-- Find the sum of salary for each department

SELECT deptnm, SUM(salary) AS total\_salary

FROM Teaches

GROUP BY deptnm;