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CREATE TABLE teaches (  
    T\_ID INT,  
    course\_id INT,  
    sec\_id INT,  
    semester VARCHAR(10),  
    year INT  
);  
  
-- Create the student table  
CREATE TABLE student (  
    S\_ID INT PRIMARY KEY,  
    name VARCHAR(50),  
    dept\_name VARCHAR(50),  
    tot\_cred INT  
);  
  
-- Create the instructor table  
CREATE TABLE instructor (  
    T\_ID INT PRIMARY KEY,  
    name VARCHAR(50),  
    dept\_name VARCHAR(50),  
    salary DECIMAL(10, 2)  
);  
  
-- Create the course table  
CREATE TABLE course (  
    course\_id INT PRIMARY KEY,  
    title VARCHAR(100),  
    dept\_name VARCHAR(50),  
    credits INT  
);  
  
-- Insert sample data into the teaches table  
INSERT INTO teaches (T\_ID, course\_id, sec\_id, semester, year) VALUES  
(1, 101, 1, 'Spring', 2023),  
(2, 102, 2, 'Fall', 2022),  
(3, 103, 1, 'Summer', 2023),  
(4, 104, 3, 'Fall', 2022),  
(5, 105, 2, 'Spring', 2023);  
  
-- Insert sample data into the student table  
INSERT INTO student (S\_ID, name, dept\_name, tot\_cred) VALUES  
(1, 'Alice', 'Computer Science', 120),  
(2, 'Bob', 'Mathematics', 90),  
(3, 'Charlie', 'Computer Science', 110),  
(4, 'David', 'Physics', 80),  
(5, 'Eve', 'Computer Science', 100);  
  
-- Insert sample data into the instructor table  
INSERT INTO instructor (T\_ID, name, dept\_name, salary) VALUES  
(1, 'John', 'Computer Science', 55000.00),  
(2, 'Alice', 'Mathematics', 60000.00),  
(3, 'Bob', 'Computer Science', 62000.00),  
(4, 'Carol', 'Physics', 58000.00),  
(5, 'David', 'Mathematics', 61000.00);  
  
-- Insert sample data into the course table  
INSERT INTO course (course\_id, title, dept\_name, credits) VALUES  
(101, 'Database Systems', 'Computer Science', 4),  
(102, 'Calculus', 'Mathematics', 3),  
(103, 'Physics 101', 'Physics', 3),  
(104, 'Programming 101', 'Computer Science', 4),  
(105, 'Algebra', 'Mathematics', 3);  
  
--Q1  
SELECT DISTINCT [instructor.name](http://instructor.name/)  
FROM instructor  
INNER JOIN teaches ON instructor.T\_ID = teaches.T\_ID  
WHERE teaches.semester = 'Spring';  
  
--Q2  
CREATE VIEW student\_details AS  
SELECT S\_ID, name, dept\_name, tot\_cred  
FROM student;  
  
--Q3  
ALTER TABLE student  
CHANGE COLUMN dept\_name department\_name VARCHAR(50);  
  
--Q4  
DELETE FROM student  
WHERE department\_name IS NULL;