**Write the following queries in SQL, using the university schema.**

**a. Find the titles of courses in the Comp. Sci. department that have 3**

**credits.**

**b. Find the IDs of all students who were taught by an instructor named**

**Einstein; make sure there are no duplicates in the result.**

**c. Find the highest salary of any instructor.**

**d. Find all instructors earning the highest salary (there may be more**

**than one with the same salary).**

**e. Find the enrollment of each section thatwas offered inAutumn 2009.**

**f. Find the maximum enrollment, across all sections, in Autumn 2009.**

**g. Find the sections that had themaximumenrollment inAutumn 2009.**

* create database university;
* use university;
* CREATE TABLE students (
* student\_id INT,
* student\_name VARCHAR(50)
* );
* CREATE TABLE instructors (
* instructor\_id INT PRIMARY KEY,
* instructor\_name VARCHAR(50),
* salary DECIMAL(10, 2)
* );
* CREATE TABLE departments (
* department\_id INT PRIMARY KEY,
* department\_name VARCHAR(50)
* );
* CREATE TABLE courses (
* course\_id INT PRIMARY KEY,
* course\_title VARCHAR(100),
* department\_id INT,
* credits INT
* );
* CREATE TABLE enrollments (
* enrollment\_id INT PRIMARY KEY,
* student\_id INT,
* section\_id INT
* );
* CREATE TABLE sections (
* section\_id INT PRIMARY KEY,
* course\_id INT,
* instructor\_id INT,
* term VARCHAR(20),
* year INT,
* enrollment INT
* );
* INSERT INTO students (student\_id, student\_name) VALUES
* (1, 'Alice'),
* (1,'Roy'),
* (2, 'Bob'),
* (1,'Clark'),
* (1,'Justin'),
* (3, 'Charlie'),
* (4, 'David');
* INSERT INTO instructors (instructor\_id, instructor\_name, salary) VALUES
* (1, 'Einstein', 75000.00),
* (2, 'Curie', 68000.00),
* (3, 'Newton', 80000.00),
* (4, 'Hawking', 90000.00);
* INSERT INTO departments (department\_id, department\_name) VALUES
* (1, 'Comp. Sci.'),
* (2, 'Physics'),
* (3, 'Chemistry');
* INSERT INTO courses (course\_id, course\_title, department\_id, credits) VALUES
* (1, 'Database Systems', 1, 3),
* (2, 'Quantum Mechanics', 2, 4),
* (3, 'Programming in Java', 1, 3),
* (4, 'General Chemistry', 3, 4);
* INSERT INTO enrollments (enrollment\_id, student\_id, section\_id) VALUES
* (1, 1, 101),
* (2, 2, 101),
* (3, 1, 102),
* (4, 3, 102);
* INSERT INTO sections (section\_id, course\_id, instructor\_id, term, year, enrollment) VALUES
* (101, 1, 1, 'Autumn', 2009, 30),
* (102, 1, 2, 'Autumn', 2009, 25),
* (103, 2, 3, 'Autumn', 2009, 20),
* (104, 4, 4, 'Autumn', 2009, 22);
* select \* from students;
* select \* from instructors;
* select \* from departments;
* select \* from courses;
* select \* from enrollments;
* select \* from sections;
* -- (a)
* select A.course\_title, B.department\_name, A.credits
* from courses as A inner join departments as B
* on A.department\_id = B.department\_id
* where B.department\_name = "Comp. Sci." and credits = 3;
* -- (b)
* select distinct A.student\_id, B.instructor\_name
* from students as A inner join instructors as B
* on A.student\_id = B.instructor\_id
* where instructor\_name = "Einstein";
* -- (c)
* select max(salary) from instructors;
* -- (d)
* insert into instructors values
* (5,"Hoffman",90000);
* select instructor\_id, instructor\_name, salary from instructors
* where salary = (select max(salary) from instructors);
* -- (e)
* select section\_id, enrollment from sections
* where term = "Autum" or year = 2009;
* -- (f)
* select max(enrollment) from sections
* where term = "Autum" or year = 2009;
* -- (g)
* select \* from sections
* where enrollment = (select max(enrollment) from sections);