

Laboratory Work #6

Please write SQL queries for the following tasks and save them as a lab6.sql file. Use only joins.

1. Create a database called lab_courses.
2. Create the following tables:

```
CREATE TABLE courses (  
    course_id SERIAL PRIMARY KEY,  
    course_name VARCHAR(50),  
    course_code VARCHAR(10),  
    credits INTEGER  
);
```

```
CREATE TABLE professors (  
    professor_id SERIAL PRIMARY KEY,  
    first_name VARCHAR(50),  
    last_name VARCHAR(50),  
    department VARCHAR(50)  
);
```

```
CREATE TABLE students (  
    student_id SERIAL PRIMARY KEY,  
    first_name VARCHAR(50),  
    last_name VARCHAR(50),  
    major VARCHAR(50),  
    year_enrolled INTEGER  
);
```

```
CREATE TABLE enrollments (  
    enrollment_id SERIAL PRIMARY KEY,  
    student_id INTEGER REFERENCES students,  
    course_id INTEGER REFERENCES courses,  
    professor_id INTEGER REFERENCES professors,  
    enrollment_date DATE  
);
```

3. Select the first name, last name of each student, the course they are enrolled in, and the last name of the professor for that course.
4. Select the first and last names of students enrolled in courses with more than 3 credits.
5. Select the course name and the number of students enrolled in each course.
6. Select the first and last names of professors who teach at least one course.
7. Select the first and last names of students enrolled in courses taught by professors from the 'Computer Science' department.
8. Select the course name, professor's last name, and the total number of credits for courses taught by professors whose last name starts with 'S'.
9. Select all students who enrolled in courses before the year 2022.
10. Select the names of all courses that have no students enrolled.