SQL7

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How many tuples in the cross product of courses and sections?

```
public | instructor  | table | postgres
public | prereq      | table | postgres
public | section     | table | postgres
public | student     | table | postgres
public | takes       | table | postgres
public | teaches     | table | postgres
public | time_slot   | table | postgres
(11 rows)


large_university=# SELECT COUNT(*) FROM courses CROSS JOIN sections;
ERROR:  relation "courses" does not exist
LINE 1: SELECT COUNT(*) FROM courses CROSS JOIN sections;
                             ^
large_university=# SELECT COUNT(*) FROM courses CROSS JOIN sections;
ERROR:  relation "courses" does not exist
LINE 1: SELECT COUNT(*) FROM courses CROSS JOIN sections;
                             ^
large_university=# SELECT COUNT(*) FROM course CROSS JOIN sections;
ERROR:  relation "sections" does not exist
LINE 1: SELECT COUNT(*) FROM course CROSS JOIN sections;
                                               ^
large_university=# SELECT COUNT(*) FROM course CROSS JOIN section;
 count
------
 20000
(1 row)


large_university=#
```
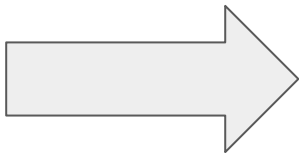
Create a new course CS-001, titled Weekly Seminar, with 1 credits

```
large_university=# INSERT INTO course (course_id, title, dept_name, credits) VALUES (001, 'Weekly Seminar', 'Comp. Sci.', 1);
INSERT 0 1
large_university=#
```

"Create a section of this course in Fall 2010, with section id of 1, and with the location and time of this section not yet specified."

```
large_university=# INSERT INTO section (course_id, sec_id, semester, year, building, room_number, time_slot_id) VALUES(001,1,'Fall',2010, NULL,N
ULL, NULL);
INSERT 0 1
```

"Enroll every student in the Comp. Sci. department in the section that you just created

```
large_university=# INSERT INTO takes (id, course_id, sec_id, semester, year, grade)
large_university-# SELECT s.id, 'CS-001', 1, 'FALL', 2023, NULL
large_university-# FROM student s
large_university-# JOIN department d ON s.dept_name = d.dept_name
large_university-# JOIN section sec ON sec.course_id = 'CS-001' AND sec.semester = 'FALL' AND sec.year = 2023
large_university-# WHERE d.dept_name = 'Comp. Sci.';
INSERT 0 0
large_university=#
```

"Delete all enrollments associated with student with id 51723."

```
large_university=# DELETE FROM takes
large_university-# WHERE id = '51723';
DELETE 11
large_university=#
```

"Delete all takes tuples corresponding to any section of any course with the word and as a part of the title". "Ignore case" when trying to match the title.

```
large_university=*# DELETE FROM takes
large_university-*# WHERE EXISTS (
large_university(*# SELECT 1
large_university(*# FROM course
large_university(*# WHERE LOWER(course.title) LIKE '%and%'
large_university(*# AND course.course_id = takes.course_id
large_university(*# );
DELETE 1204
```

How many tuples in the cross product of courses and sections?

```
large_university=# SELECT COUNT(*)
large_university-# FROM course
large_university-# CROSS JOIN section;
 count
-------
 20301
(1 row)
```

How many tuples in the takes table?

```
large_university=# SELECT COUNT(*)
large_university-# FROM takes;
 count
-------
 29977
(1 row)
```