Assignemnt 2: Relational2

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1 Find the names of all instructors in the History department.

```
tombohbot=# SELECT instructor_s.name
tombohbot-# FROM instructor_s
tombohbot-# WHERE dept_name = 'History';
    name
------------
 El Said
 Califieri
(2 rows)
```

Figure 1: Names of History Teachers

2 Find the ID and salary of all instructors whose salary exceed $85,000.

```
tombohbot=# SELECT instructor_s.ID, instructor_s.salary
tombohbot-# FROM instructor_s
tombohbot-# WHERE salary > 85000;
   id  |  salary
-------+----------
 12121 | 90000.00
 22222 | 95000.00
 33456 | 87000.00
 83821 | 92000.00
(4 rows)
```

Figure 2: Salaries > $85,000

3 Create a new course CS-001, titled Weekly Seminar with 1 credits.

```
tombohbot=# INSERT into course_s values('CS-001', 'Weekly Seminar', 'Comp. Sci.', '1');
INSERT 0 1
```

Figure 3: New CS-001 Course Created Acknowledged Through Printing 0 1

4 How many courses are offered by the Computer Science department?

```
tombohbot=# SELECT from course_s
tombohbot-# WHERE dept_name = 'Comp. Sci.';
--
(6 rows)
```

Figure 4: 6 Courses Offered By CS Dept.

5 Create a section with id CS-001, will be given in Fall 2009, with section id of 1.

```
tombohbot=# INSERT into section_s values('CS-001', '1', 'Fall', '2009', null,
null, null);
INSERT 0 1
```

Figure 5: Successfully Added One Section

6 How many 'CS-001' sections exist?

```
tombohbot=# SELECT from section_s
tombohbot-# WHERE course_id = 'CS-001';
--
(1 row)
```

Figure 6: 1 CS-001 Section Exists

7 Delete the course named CS-001

```
tombohbot=# DELETE from course_s
tombohbot-# WHERE course_id = 'CS-001';
DELETE 1
```

Figure 7: Successfully Deleted CS-001 Course

8 How many 'CS-001' sections exist?

```
tombohbot=# SELECT from section_s
tombohbot-# WHERE course_id = 'CS-001';
--
(0 rows)
```

Figure 8: Zero CS-001 Sections Exist

9 If your answer to the previous question differs from the previous time you invoked this query, explain why the answers differ?

Between the two CS-001 section searches I removed the course CS-001 which removed the section from the query due to the foreign key specifying to delete the section if the course no longer exists.

10 Consider the advisor relation in the University database. The ddl specifies that s_id is the primary key of that relation. Suppose a student can have more than one advisor. Should the ddl still specify s_id as the primary key of the relation? If not, what should the primary key of advisor be? (No more than two sentences!)

A primary key should be unique, so if a student can have more than one advisor then the primary key would no longer be unique, and psql would not let you add multiple advisors with identical primary keys. Instead, the primary key of the advisor should be the id of the advisor, just like a student and teacher have their independent unique id's.