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CSCI 330
Programming Assignment 2

```
1   -- (a) Find courses that taught either in Fall 2009 or in Spring 2010
2   select distinct course_id
3   from teaches
4   where (semester='Fall' and year='2009') or (semester='Spring' and year=2010);
5
```

100% 13:3

Result Grid Filter Rows: Search Export:

course_id
CS-101
CS-315
CS-319
CS-347
FIN-201
HIS-351
MU-199
PHY-101

```
6   -- (b) Find all instructors earning the highest salary (there may be more than one with the
7   -- same salary)
8   select dept_name, name, salary
9   from instructor
10  where salary=(select max(salary) from instructor);
11
```

100% 13:3

Result Grid Filter Rows: Search Export:

dept_name	name	salary
Physics	Einstein	95000.00

```
12  -- (c) Find names and average salaries of all departments whose average salary > 42000
13  select dept_name, avg(salary) as avg_salary
14  from instructor
15  group by dept_name
16  having avg(salary)>42000;
17
```

100% 13:3

Result Grid Filter Rows: Search Export:

dept_name	avg_salary
Biology	72000.000000
Comp. Sci.	77333.333333
Elec. Eng.	80000.000000
Finance	85000.000000
History	61000.000000
Physics	91000.000000

```sql
-- (d) For each department, find the maximum salary of instructors in that department.
-- You may assume that every department has at least one instructor.
select dept_name, max(salary) as max_salary
from instructor
group by dept_name;
```

100% 13:3

Result Grid Filter Rows: Search Export:

dept_name	max_salary
Biology	72000.00
Comp. Sci.	92000.00
Elec. Eng.	80000.00
Finance	90000.00
History	62000.00
Music	40000.00
Physics	95000.00

```sql
-- (e) Find the names of all students who have taken any Comp. Sci. course ever (there
-- should be no duplicate names)
select distinct name
from student natural join takes natural join course
where dept_name='Comp. Sci.';
```

100% 13:3

Result Grid Filter Rows: Search Export:

name
Zhang
Shankar
Williams
Brown

```sql
-- (f) Find the enrollment of each section that was offered in Spring 2009
select course_id, count(ID) as enrolled
from takes natural join section
where semester='Spring' And year='2009'
group by course_id, sec_id;
```

100% 13:3

Result Grid Filter Rows: Search Export:

course_id	enrolled
CS-190	2
EE-181	1

```
36    -- (g) Find the maximum enrollment, across all sections, in Spring 2009
37    select max(enrolled)
38    from (select course_id, count(ID) as enrolled
39    from takes natural join section
40    where semester='Spring' And year='2009'
41    group by course_id, sec_id) as enrolled;
```

100% 13:3

Result Grid Filter Rows: Search Export:

max(enrolled)
2

```
43    -- (h) Delete all courses that have never been offered (that is, do not occur in the section
44    -- relation)
45    SET SQL_SAFE_UPDATES = 0;
46    delete from course
47    where course_id
48    not in (select course_id from section);
49    select * from course;
```

1:43

Result Grid Filter Rows: Search Edit: Export/Import:

cours...	title	dept_name	credits
BIO-101	Intro. to Biology	Biology	4
BIO-301	Genetics	Biology	4
CS-101	Intro. to Computer Science	Comp. Sci.	4
CS-190	Game Design	Comp. Sci.	4
CS-315	Robotics	Comp. Sci.	3
CS-319	Image Processing	Comp. Sci.	3
CS-347	Database System Concepts	Comp. Sci.	3
EE-181	Intro. to Digital Systems	Elec. Eng.	3
FIN-201	Investment Banking	Finance	3
HIS-351	World History	History	3
MU-199	Music Video Production	Music	3
PHY-101	Physical Principles	Physics	4
NULL	NULL	NULL	NULL