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-- a) List all courses that have a section offered in the Fall 2009 semester or
the Spring 2010 semester and make sure results are unique.
select course_id, title, dept_name, credits from course natural join section
where semester = 'Fall' and year = 2009 or semester = 'Spring' and year = 2010
group by course_id, title, dept_name, credits;

-- b) Find instructor with highest salary.
select ID, name, dept_name, salary from instructor order by salary desc limit 1;

-- c) Find names and average salaries of all departments whose average salary >
42000.
select dept_name, avg(salary) from instructor group by dept_name having
avg(salary) > 42000;

-- d) For each department, find the maximum salary of instructors in that
department.
select dept_name, max(salary) from instructor group by dept_name;

-- e) Find all students that have taken a course in CS-* from any semester and
any department.
select ID, name, dept_name, tot_cred from student natural join takes where
course_id like 'CS-%' group by ID, name, dept_name, tot_cred;

-- f) For every section that was offered in year 2009 and spring semester, find
the number of students in that section.
select course_id, sec_id, semester, year, count(*) from section natural join
takes where semester = 'Spring' and year = 2009 group by course_id, sec_id,
semester, year;

-- g) Find the section in 2009 spring that had most students.
select course_id, sec_id, semester, year, count(*) from section natural join
takes where semester = 'Spring' and year = 2009 group by course_id, sec_id,
semester, year order by count(*) desc limit 1;

-- h) Delete all courses that do not have ANY section offered.
delete from course where course_id not in (select course_id from section);

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Corresponding results in table format:

	course_id	title	dept_name	credits
▶	CS-101	Intro. to Computer Science	Comp. Sci.	4
	CS-315	Robotics	Comp. Sci.	3
	CS-319	Image Processing	Comp. Sci.	3
	CS-347	Database System Concepts	Comp. Sci.	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

a.

	ID	name	dept_name	salary
▶	22222	Einstein	Physics	95000.00
*	NULL	NULL	NULL	NULL

b.

	dept_name	avg(salary)
▶	Biology	72000.000000
	Comp. Sci.	77333.333333
	Elec. Eng.	80000.000000
	Finance	85000.000000
	History	61000.000000
	Physics	91000.000000

c.

	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

d.



	ID	name	dept_name	tot_cred
▶	00128	Zhang	Comp. Sci.	102
	12345	Shankar	Comp. Sci.	32
	45678	Levy	Physics	46
	54321	Williams	Comp. Sci.	54
	76543	Brown	Comp. Sci.	58
	98765	Bourikas	Elec. Eng.	98

e.

f.

	course_id	sec_id	semester	year	count(*)
▶	CS-190	2	Spring	2009	2
	EE-181	1	Spring	2009	1

g.

<b>Result Grid</b>   Filter Rows: <input type="text"/> <span>Exp</span>					
	course_id	sec_id	semester	year	count(*)
▶	CS-190	2	Spring	2009	2

h. no result table for deletion.