-- TYB10

-- Find the average salary of instructors in the Computer Science department.--

SELECT AVG(salary) AS average\_salary

FROM instructor

WHERE department\_name = 'Computer Science';

-- Find the total number of instructors who teach a course in the Spring 2010 semester.

SELECT COUNT(DISTINCT instructor\_id) AS total\_instructors

FROM teaches

WHERE (sem = 2 AND year = 2010);

-- Find the number of tuples in the course relation.--

SELECT COUNT(\*) AS number\_of\_tuples

FROM course;

-- Find the average salary in each department.--

SELECT department\_name, AVG(salary) AS average\_salary

FROM instructor

GROUP BY department\_name;

-- Find the average salary of those departments where the average salary is more than $42,000.--

SELECT department\_name, AVG(salary) AS average\_salary

FROM instructor

GROUP BY department\_name

HAVING AVG(salary) > 42000;

-- Find total all salary amounts.--

SELECT SUM(salary) AS total\_salary

FROM instructor;

-- Find the departments that have the highest average salary--

SELECT department\_name, AVG(salary) AS average\_salary

FROM instructor

GROUP BY department\_name

HAVING AVG(salary) = (

SELECT MAX(avg\_salary)

FROM (

SELECT AVG(salary) AS avg\_salary

FROM instructor

GROUP BY department\_name

) AS department\_salaries

);

-- Create a view that lists all course sections offered by the Physics department in the Fall 2009 semester with the building and room number of each section.

CREATE VIEW physics\_course\_sections\_fall\_2009 AS

SELECT C.title AS course\_title, S.sec\_id, S.sem, S.year, S.building, S.room\_no

FROM course C

JOIN section S ON C.course\_id = S.course\_id

WHERE C.department\_name = 'Physics' AND S.sem = 1 AND S.year = 2009;

-- Create an index on instructor with i\_id as search key.--

CREATE INDEX instructor\_id\_index ON instructor (instructor\_id);