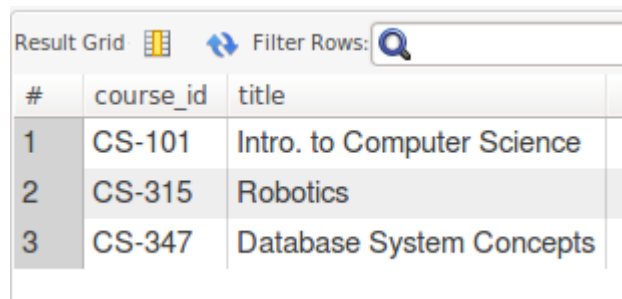# TO RETRIEVE DATA USING SUB-QUERY AND NESTED QUERY

Q1. Find the course id and title of all courses taught by an instructor named 'Srinivasan'

SELECT c.course_id,c.title from instructor i ,course c,teaches t where t.id=i.id and t.course_id=c.course_id and i.name="Srinivasan";
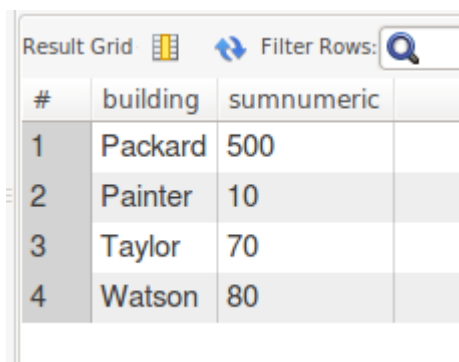
| # | course_id | title |
|---|---|---|
| 1 | CS-101 | Intro. to Computer Science |
| 2 | CS-315 | Robotics |
| 3 | CS-347 | Database System Concepts |

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2)Find the total capacity of every building in the university

select building,sum(capacity) as sumnumeric from classroom group by building;

| # | building | sumnumeric |
|---|---|---|
| 1 | Packard | 500 |
| 2 | Painter | 10 |
| 3 | Taylor | 70 |
| 4 | Watson | 80 |

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3)Find all departments that have at least one instructor, and list the names of the departments along with the number of instructors; order the result in descending order of number of instructors.

select d.dept_name,count(i.name) from instructor i,department d where i.dept_name=d.dept_name group by d.dept_name order by count(i.name) ;

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Q4.
select student.id,student.name,sum(course.credits) from course,takes,student
where course.course_id = takes.course_id and student.id=takes.id and takes.grade!="F" and grade is not null
group by student.id ;



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Q5. Find the number of students who have been taught (at any time) by an instructor named 'Srinivasan'. Make sure you count a student only once even if the student has taken more than one course from Srinivasan.

select sum(c) as count from(
select distinct count(student.ID) as c from student
, takes,teaches,instructor  where student.ID = takes.ID and takes.course_id = teaches.course_id and
 instructor.ID = teaches.ID and
 instructor.name = "Srinivasan"
group by student.ID) as subquery;

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Q6. Find the name of all instructors who get the highest salary in their department

select i.name from instructor i join(
select dept_name, max(salary) as m from instructor group by dept_name)j
on i.dept_name = j.dept_name and i.salary = m;

| | name |
|---|---|
| ▶ | Wu |
| | Mozart |
| | Einstein |
| | Califieri |
| | Crick |
| | Brandt |
| | Kim |

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Q7. Find the total money spent by each department for salaries of instructors of that department.

select instructor.dept_name ,sum(salary) from department,instructor where
department.dept_name=instructor.dept_name group by department.dept_name;

| # | dept_name | sum(salary) |
|---|-----------|-------------|
| 1 | Biology | 72000.00 |
| 2 | Comp. Sci. | 232000.00 |
| 3 | Elec. Eng. | 80000.00 |
| 4 | Finance | 170000.00 |
| 5 | History | 122000.00 |
| 6 | Music | 40000.00 |
| 7 | Physics | 182000.00 |