



Database System Concepts for Non-Computer Scientist - WiSe 25/26

<http://db.in.tum.de/teaching/ws2526/DBSandere/?lang=en>

Sheet 05

Exercise 1

Write a query that determines the kind of degree a student is pursuing. In our database, we assume that this can be deduced from the student's semester in the following way: A student who has not reached her 7th semester yet is still considered a "bachelor student". Once in the 7th semester, she should be categorized as a "master student". Starting in the 11th semester, we label her as a "phd student".

Exercise 2

Answer the following questions on our university database using SQL:

- Calculate how many lectures each student is attending. Students who do not attend any lecture should be included in the result as well (*attend_count* = 0) (use outer joins).
- Figure out how many students each professor knows: A professor knows students from one of their lectures or via a test they have supervised. Include professors not knowing any students and use outer joins. Hint: ¹

Exercise 3

How many *Assistants* does each *Professor* have? Print out a list with the name of the professor and the number of her assistants. Think about why professors that don't have any assistants don't show up. How could you include them in the list. Hint: ²

¹Remember that SQL has set operations.

²Using union, we can combine the result of two queries with the same schema: `select a.name from (select 'Kant' as name union select 'Sokrates' as name) a;`