TU München, Fakultät für Informatik
Lehrstuhl III: Datenbanksysteme
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Database System Concepts for Non-Computer Scientist - WiSe 24/25

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Sheet 04

Exercise 1

Write the following queries in **SQL** on the known university schema:

(a) How many students are there?

(b) Find all students that are in the third semester.

(c) Figure out if there is a lecture with more than five *weeklyhours*.

(d) Print out a list with all professor names and avoid duplicates.

(e) Find students whose name start and end with the letter 'a'.

Exercise 2

Answer the following questions on our university database using SQL:

(a) List the name and person number of the *Assistants* of *Professor Sokrates*.

(b) Which *Professors* does Fichte know from attending their *Lectures*.

(c) Which *Lectures* are attended by *Students* in the 1.-4. semester? Print only the title of the lectures.

(d) Find all *Students* that attend at least one *Lecture* together with Fichte.

Optional 3

Answer the following questions on our university database using SQL:

a) Figure out the average semester of all students.

b) What is the average semester of students that are not attending any lecture?

c) Determine the average semester of students that attend at least one lecture of *Sokrates*.

d) Calculate how many lectures students are attending on average. Students who do not attend any lecture should be reflected in the result as well. If you get stuck, see hints: [1] [2]

e) Calculate how many lectures each student is attending. Students who do not attend any lecture should be included in the result as well ($attend\_count = 0$).

[1] Remember that the from clause is optional ('select 1.0 / 2.0;' is a valid query).
[2] Remember that you can use sub-queries in the select clause.