

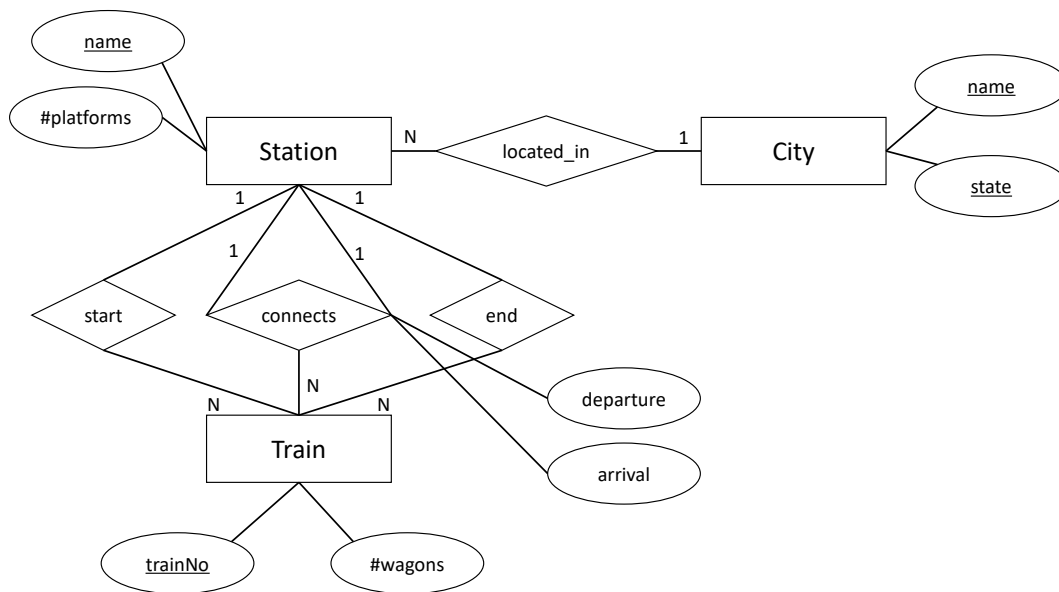
Database System Concepts for Non-Computer Scientist - WiSe 25/26

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

Sheet 03

Exercise 1

Look at the following (familiar) ER-diagram and create SQL DDL statements to create the respective tables.



Exercise 2

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 3

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.

Exercise 4

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).

¹Remember that the from clause is optional ('select 1.0 / 2.0;' is a valid query).

²Remember that you can use sub-queries in the select clause.