Exercise 1

Consider the following ER-diagram:

Refine and transform this diagram into a database schema (SQL DDL). You can assume that each attribute is an integer. Use not null, primary key, references, unique and cascade when possible/necessary.

Exercise 2

In the following ER-diagram, we model people (person). The married relation models the German law (i.e., each person can have at most one spouse). The parent_of is to be interpreted in the traditional biological way (i.e., each person has exactly one mother and one father).

First, refine the diagram by adding the min/max notation. Then, create SQL-statements that would create the corresponding tables in a database system. Use not null, primary key, references, unique and cascade when possible/necessary.
Exercise 3

Write your first SQL query!

You can setup your own database system and import the university schema (on our website: [https://db.in.tum.de/teaching/ws2021/DBSandere/uni_schema.sql](https://db.in.tum.de/teaching/ws2021/DBSandere/uni_schema.sql)) or use the Hyper WebInterface ([https://hyper-db.de/interface.html](https://hyper-db.de/interface.html)).

Try finding the name and the semester of all students (this is mainly to validate that you have access to a working database).