Exercise for *Database System Concepts for Non-Computer Scientist* im WiSe 18/19

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http://db.in.tum.de/teaching/ws1819/DBSandere/?lang=en

Sheet 04

**Exercise 1**

Consider the entity relationship model of a train connection system (below). Note: `connects` models a the direct connection between two stations. For example, the train starting in Munich and ending in Hamburg passes through several stations. Each of these route-sections (e.g., Munich → Nürnberg or Nürnberg → Würzburg) has an entry in the `connects` relation.

a) Add functionalities to the ER diagram.
b) Transform the ER diagram into a relational schema.
c) Refine the relational schema as far as possible by eliminating relations.

**Exercise 2**

Now, if you want more practice, consider the hospital example, again. This time take the entity relationship diagram and transform it into a relational schema. Then, optimize it by eliminating relations.