



Database System Concepts for Non-Computer Scientist - WiSe 24/25

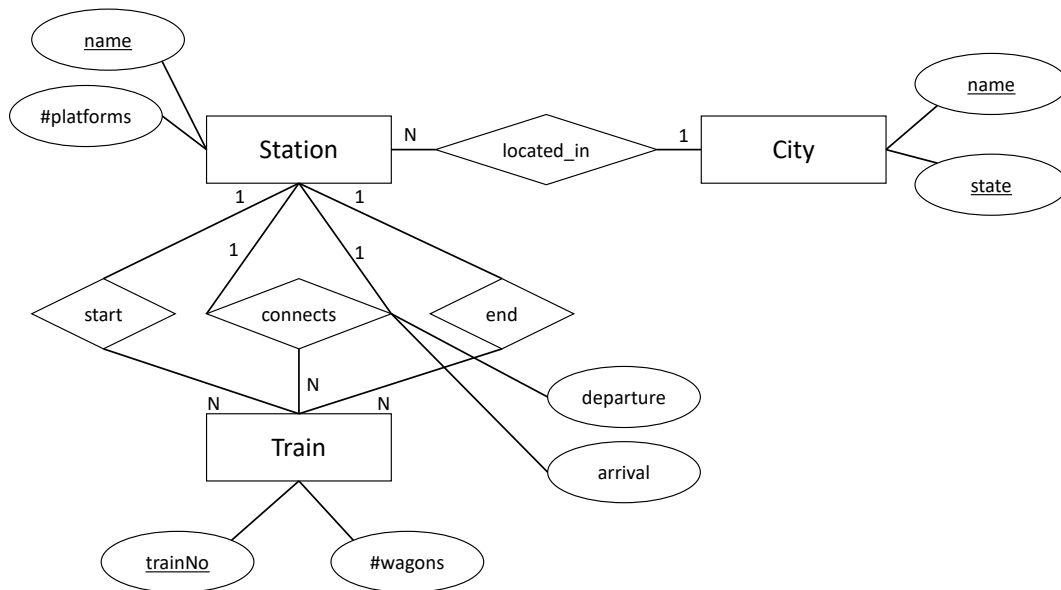
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<http://db.in.tum.de/teaching/ws2425/DBSandere/?lang=en>

Sheet 03

Exercise 1

Consider the entity relationship diagram from exercise sheet 2:



Refine the relational schema that you created in sheet 2 from the ER-Diagram. Underline keys and find appropriate data types. As a reminder, here is the un-refined schema:

City : {[name : string, state : string]} (1)

Station : {[name : string, #platforms : integer]} (2)

Train : {[trainNo : integer, #wagons : integer]} (3)

For the relationships in the model, we create the following relations:

located_in : {[stationName : string, cityName : string, cityState : string]} (4)

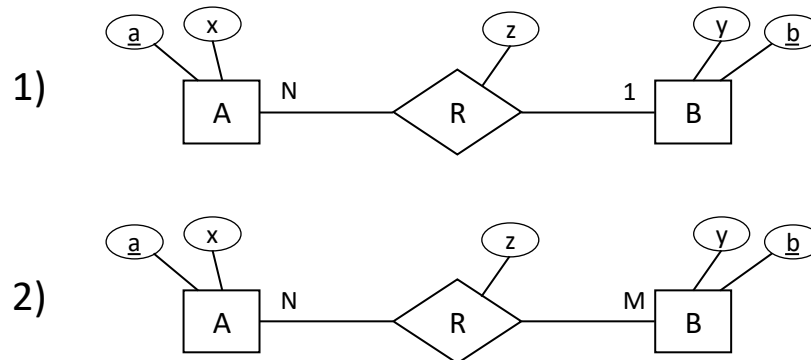
start : {[trainNo : integer, stationName : string]} (5)

end : {[trainNo : integer, stationName : string]} (6)

connects : {[fromStationName : string, toStationName : string, trainNo : integer, departure : date, arrival : date]} (7)

Exercise 2

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.

Homework 3

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

