

Database System Concepts for Non-Computer Scientist - WiSe 23/24

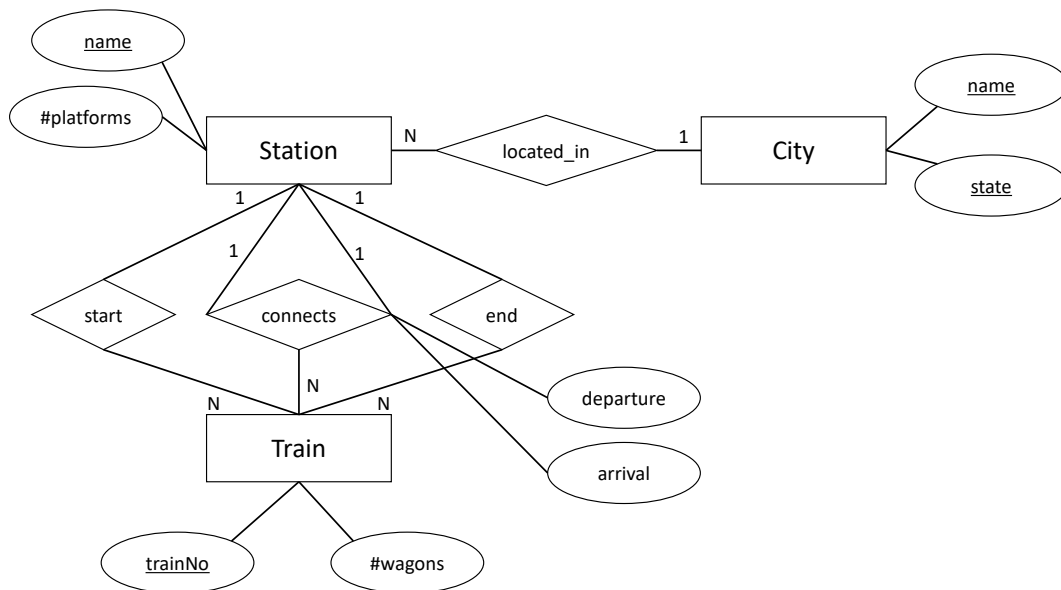
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<http://db.in.tum.de/teaching/ws2324/DBSandere/?lang=en>

Sheet 04

Exercise 1

Consider the entity relationship diagram from exercise sheet 2:



Create a relational schema out of the ER-Diagram. Underline keys and find appropriate data types.

Solution:

The un-refined translation yields the following relations for the entities in the model:

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)