Lab 7 Entity Relationship Data Model

Submit your work in a pdf and rename the file name as xxxxxx_lab7.pdf (xxxxxx is your student id)

Reference:

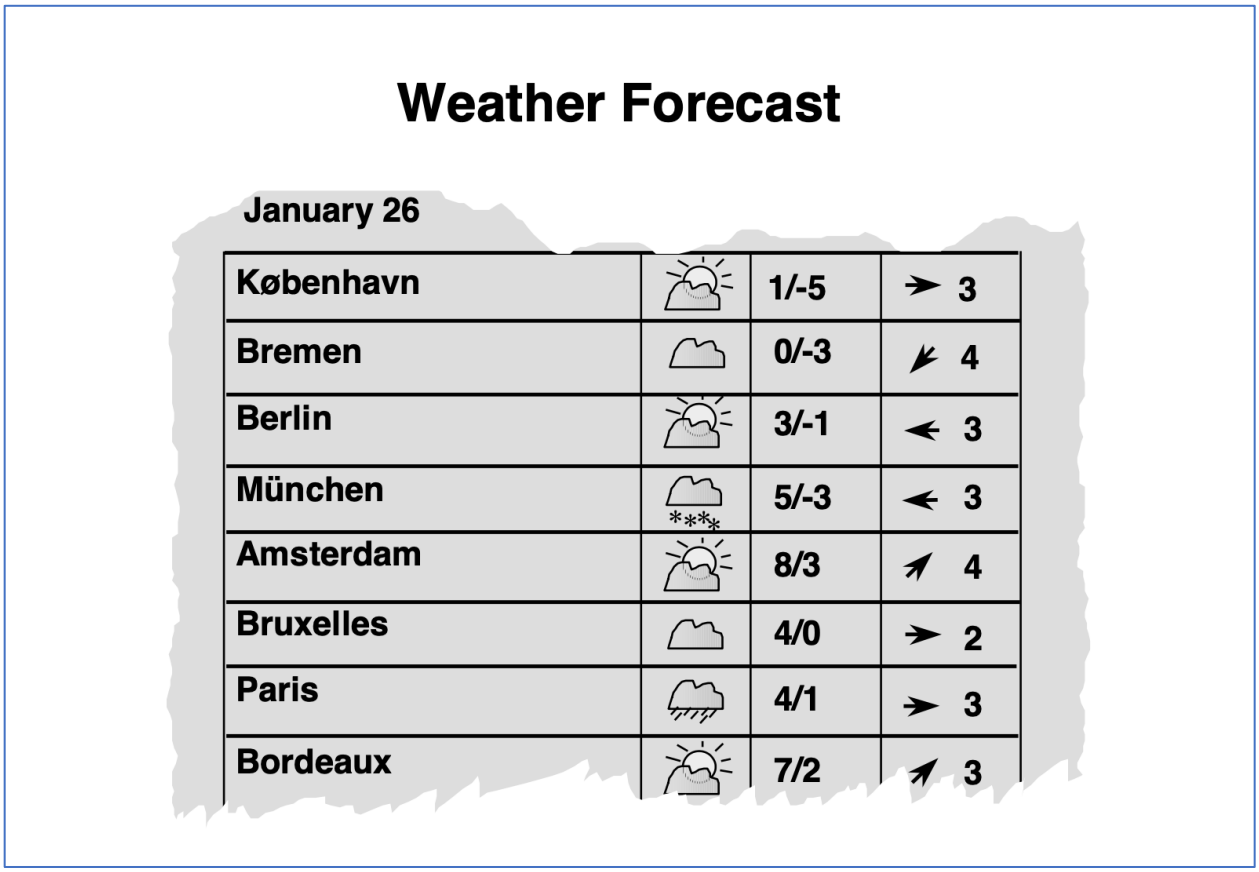
- https://www.ibm.com/cloud/learn/data-modeling#toc-types-of-d-Fne2rmPT
- http://www.agiledata.org/essays/dataModeling101.html
- https://www.credera.com/insights/data-modeling-explained-in-10-minutes-or-less
- https://medium.com/sagar-explains-azure-and-analytics-data-engineerin/introduction-to-data-modelling-c0c44432ec0b

Task 1: Consider the following attributes and write each attribute that should belong to one or more of three entities that play a role in a hotel environment: GUEST, HOTEL, and ROOM.

Address	Arrival Date	Family Name
Room Number	Floor Number	Number of Beds
Number of Parking Lots	Price	TV set available?

GUEST	HOTEL	ROOM
Address Arrival Date Family Name Room Number	Address Number of Parking Lots	Room Number Floor Number Number of Beds Price TV set available?

Task 2: What information is available in the weather forecast below?



Weather Forecast

January 26

København		1/-5	3
Bremen		0/-3	4
Berlin		3/-1	3
München	***	5/-3	3
Amsterdam		8/3	4
Bruxelles		4/0	2
Paris		4/1	3
Bordeaux		7/2	3

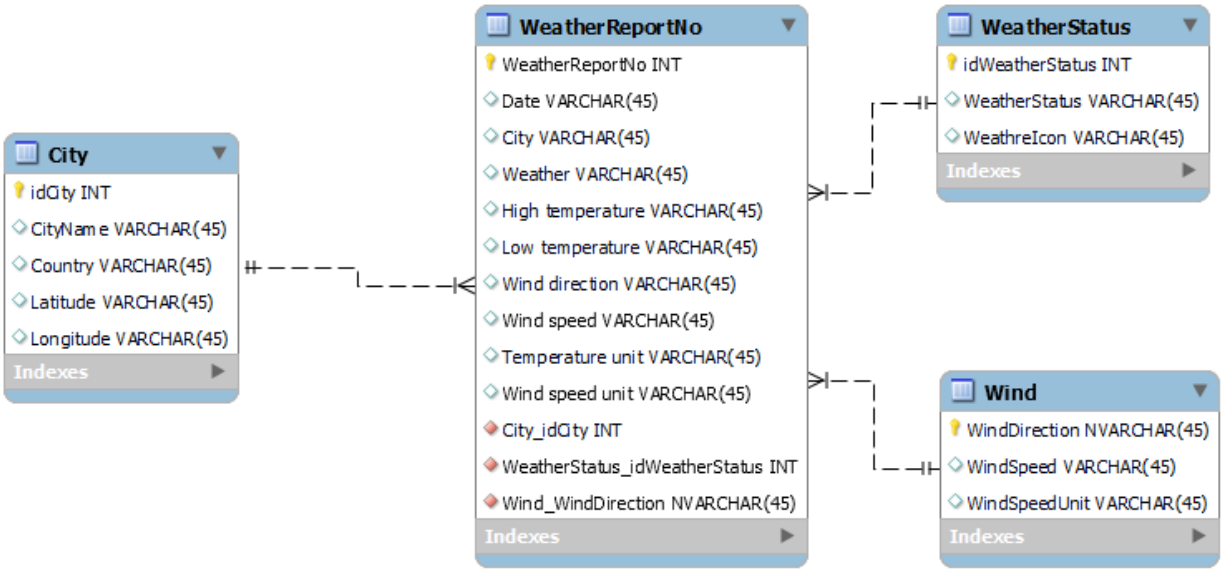
Your assignment

1) List as many different types of information that you can find from the weather forecast
    a. Date
    b. City name
    c. Weather
    d. High temperature
    e. Low temperature
    f. Wind direction
    g. Wind speed
    h. Temperature unit
    i. Wind speed unit

2) Group the various types of information into entities and attributes.

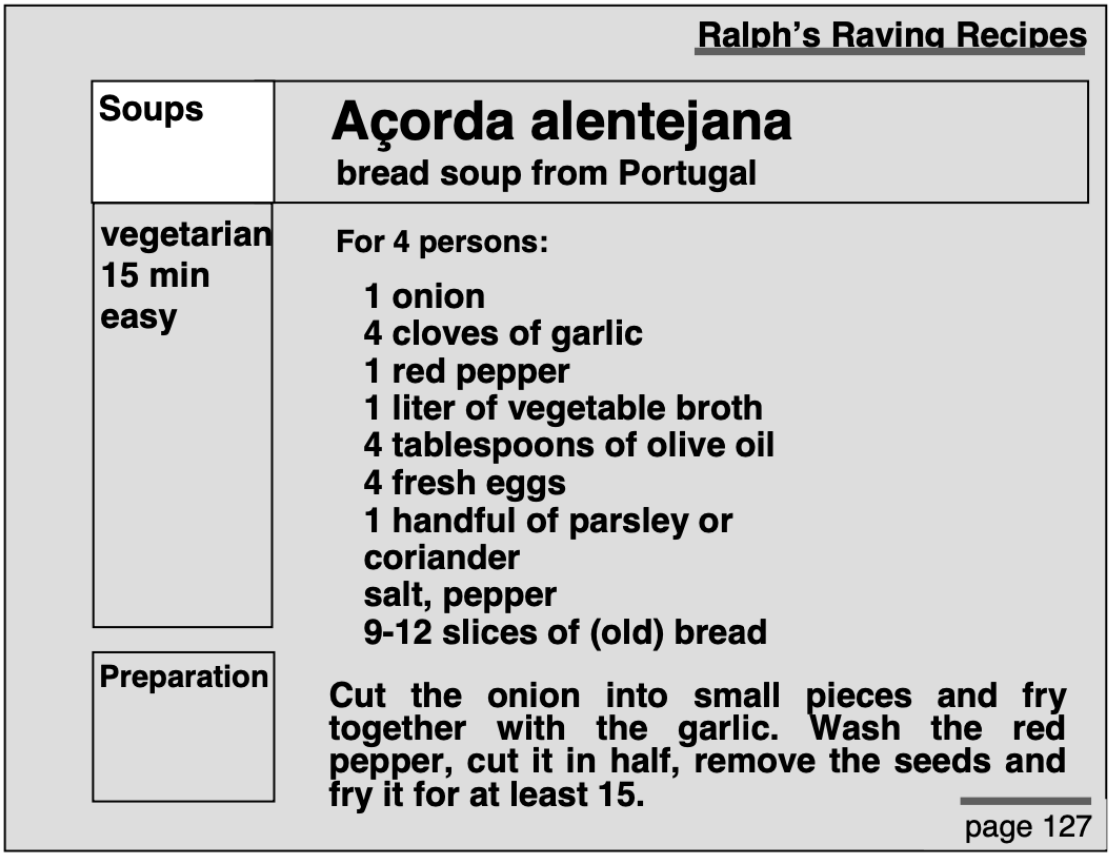
Entity	Attributes
Report	Date / Month / Year City name Weather High temperature Low temperature Wind direction Wind speed Temperature unit Wind speed unit
City	Name, Country, Latitude, Longitude
Wind	Wind direction, Wind speed, Wind speed unit
Weather status	Weather status, Weather icon

3) Name the relationships you discover and draw a conceptual data model diagram (entities/attributes/keys/relationship) by using MySQL Workbench and paste the data model picture below.



Task 3: Analyze the example page from Ralph's famous Raving Recipes book.

Scenario
You work as an analyst for a publishing company that wants to make recipes available on the Web. It wants the public to be able to search for recipes in a very easy way.



Ralph's Raving Recipes

Soups

Açorda alentejana
bread soup from Portugal

vegetarian
15 min
easy

For 4 persons:

1 onion
4 cloves of garlic
1 red pepper
1 liter of vegetable broth
4 tablespoons of olive oil
4 fresh eggs
1 handful of parsley or coriander
salt, pepper
9-12 slices of (old) bread

Preparation

Cut the onion into small pieces and fry together with the garlic. Wash the red pepper, cut it in half, remove the seeds and fry it for at least 15.

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Your assignment
1. List as many different types of information that you can find from the weather forecast
    a. Recipe owner
    b. Food category
    c. Recipe name
    d. Menu description
    e. Serving group
    f. Cooking time
    g. Difficulty level
    h. For how many people
    i. Ingredients
    j. Portions
    k. Preparation
    l. Page

2. Group the various types of information into entities and attributes.

Entity	Attributes
Recipe	RecipeID Recipe owner Food category Recipe name Menu description Serving group Cooking time Difficulty level For how many people Ingredients Portions Preparation Page
ServingGroup	ServingGroupNo ServingGroup
Recipe Owner	OwnerID OwnerName OwnerContact
Difficulty level	DifficultyLevelNo DifficultyLevel
Food category	FoodCategoryNo FoodCategory

3. Name the relationships you discover and draw a conceptual data model diagram (entities/attributes/keys/relationship) by using MySQL Workbench and paste the data model picture below.