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Database Concepts

Exercise 3

1. We want to store information about students' preferences of restaurants in a database. Each restaurant has a name, an owner as well as an address consisting of postal code, city and street. For every student we store the student ID, first and last name, and the course of studies. Create the STUDENT and RESTAURANT tables using SQL!

2. Create a third table STUDENT_RESTAURANT that stores the information which student prefers which restaurant! Moreover, alter the table STUDENT to additionally store a student's age.

3. Given the example database in the appendix, create the tables for the relations WINE and PRODUCER. The default value for COLOR is RED. Moreover, the uniqueness of the growing area shall be granted.

4. Create the tables for the relations RECOMMENDS and MADE_FROM. Assume that the relation GRAPE, DISH, and CRITIC already exist. Guarantee referential integrity through value propagation due to UPDATE operations. For more information about the relationships of relations, see the example database in the appendix.

5. Which possibilities does the DDL provide to guarantee referential integrity in case of deletes or updates?

WINE

name	color	year	vineyard→PRODUCER
La Rose Grand Cru	red	1998	Château La Rose
Creek Shiraz	red	2003	Creek
Zinfandel	red	2004	Helena
Pinot Noir	red	2001	Creek
Merlot	red	1999	Helena
Riesling Reserve	white	1999	Müller
Chardonnay	white	2002	Bighorn

PRODUCER

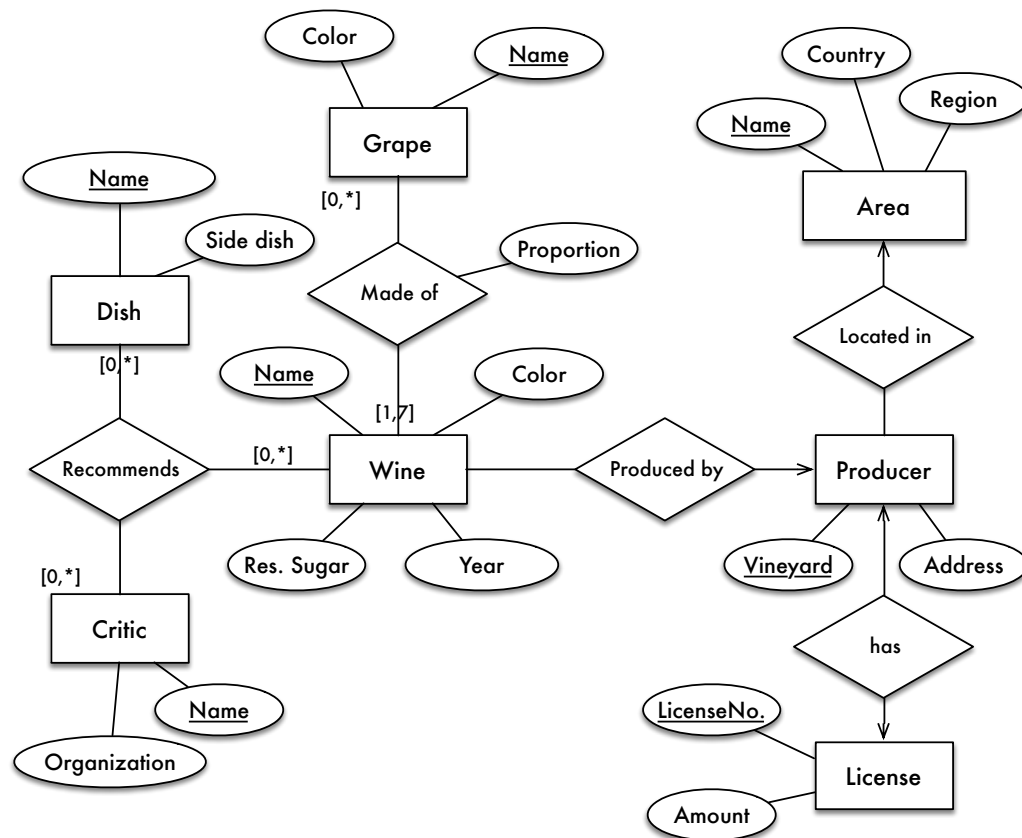| vineyard	area	region
Creek	Barossa Valley	South Australia
Helena	Napa Valley	Kalifornien
Château La Rose	Saint-Emilion	Bordeaux
Château La Pointe	Pomerol	Bordeaux
Müller	Rheingau	Hessen
Bighorn	Santa Barbara	Kalifornien

Figure 1: Example database relations

Good Luck!

Figure 2: Relations for task 4