

CSCI-4380 Database Systems

Homework 1 Addendum

Relational Model and SQL DDL

Use the solutions provided for the main part of Homework 1 to aide in your responses to the extended Homework 1 problems below.

This addendum is also due on Friday January 24 at 11:59PM and should be submitted electronically on the class Submittity site along with your Homework 1 solutions. You should upload two additional files: one for the first question (a scan, or electronic copy of your completed solution), and a `homework-1a.sql` file for the second question.

1. After defining the conferences, people, registration, and sponsors relations, the tech company you're working with requests that your database support a few additional things.

Now they also want to keep track of:

- Hotels in the cities where the conferences are hosted, including the hotel name, address and zipcode, discount offered to attendees (as a percentage), check-in time, check-out time, and the number of rooms they'll make available at the discount rate (assume that once the tech company establishes a relationship with a hotel, the details remain the same for that hotel for any conference held in that city).
 - Which sponsors will be offering which type of swag (t-shirts, stickers, socks, etc.) and how many of each they'll have.
 - What meals will be offered at each conference, including type (breakfast, lunch, cocktail hour, etc.), the date on which the meal is scheduled, the cost of the meal to the attendees, and information on whether the meal meets a fixed number of binary (yes/no) dietary concerns (kosher, halal, gluten-free, vegetarian, vegan, organic, non-gmo, etc.) with room to expand to several more if needed. Assume that no two meals of the same type can be offered at the same conference on any given day.
- (a) (12 points) Create the schemas for two relations to store data about the hotels (*hotel*) and meals (*meal*), and an updated version of the *sponsors* relation, to reflect the new requirements. Again, make sure to define keys for each relation (if appropriate), but do *not* create any artificial keys.

(b) (2 points) Give two example tuples for the *hotel* relation:

(c) (6 points) Give three example tuples for the *meal* relation, including a lunch that meets none of the dietary concerns, and a breakfast from the same conference that meets all of them, and a different type of meal from a second conference that's free to attendees.

2. (15 points) For the first two relations you created in part (a) above (*hotel* and *meal*), write a **CREATE TABLE** statement in SQL to create the table, including appropriate keys. Write an appropriate SQL statement to change the *sponsor* table you created in the previous part of Homework 1 to reflect the changed schema above. Upload your solutions in a separate **homework-1a.sql** file.