Database Systems

CMPT 308

Lab 8: Normalization Two - 20 points

Goals

To continue developing your facility with the art and science of normalization.

Scenario

You have been hired as a database consultant by EON productions to work in the casting department for the next James Bond film. They need a new Bond because he-who-must-not-be-named is clearly not working out. They want a database of actors, the movies in which they have appeared, and the director of those movies. They have collected the following data for your use:

Actor Data
name, address, birth date, hair color, eye color, height in inches, weight, spouse name, favorite color, screen actors guild anniversary date

Movie Data
name, year released, MPAA number, domestic box office sales, foreign box office sales, DVD/Blu-ray sales

Director Data
name, address, spouse name, film school attended, directors guild anniversary date, favorite lens maker

Deliverables

Build this database. You may add or rename any fields you like. You must create a relational database in Boyce-Codd normal form (BCNF). Document your database with . . .

1. a fully decorated and aesthetically beautiful E/R diagram.
2. SQL create statements for each table.
3. Functional dependencies for each table.

Then…

4. Write a query to show all the directors with whom actor "Sean Connery" has worked.

Hints

This is not as easy as it sounds. There are more than three tables. Impress me by using entity subtypes to better represent the model.
Remember:
- Several actors can appear in the same movie under one or more directors.
- Actors can also be directors, and therefore directors can also be actors.
- Sometimes there is more than one director for a movie.

Resources

- Chapter 3 in our text
- Stack Overflow - http://stackoverflow.com/questions/tagged/normalization
- Microsoft on Normalization - http://support.microsoft.com/kb/283878

Submitting

Submit your work as a PDF and a text *.sql* file. Push them to your GitHub repository **before** the due date (see syllabus). Remember to include your name and date. Neatness counts.