

# Database Systems

CMPT 308

## - Lab 8: Normalization Two - 20 points

---

Goals	To continue developing your facility with the art and science of normalization.
Scenario	<p>You have been hired as a database consultant by EON productions to work in the casting department for the next James Bond film. They <b>finally</b> need a new Bond (thank Codd!) and 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:</p> <p><b>Actor Data</b> name, address, birth date, hair color, eye color, height in inches, weight, spouse name, favorite color, screen actors guild anniversary date</p> <p><b>Movie Data</b> name, year released, MPAA number, domestic box office sales, foreign box office sales, DVD/Blu-ray sales</p> <p><b>Director Data</b> name, address, spouse name, film school attended, directors guild anniversary date, favorite lens maker</p>
Deliverables	<p>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 ...</p> <ol style="list-style-type: none"><li>1. a fully decorated and aesthetically beautiful E/R diagram using LucidChart (<a href="http://www.LucidChart.com">www.LucidChart.com</a>).</li><li>2. SQL create statements for each table.</li><li>3. Functional dependencies for each table.</li></ol> <p>Then...</p> <ol style="list-style-type: none"><li>4. Write a query to show all the directors with whom actor "Roger Moore" has worked.</li></ol>
Hints	<p>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.</p> <p>Remember:</p> <ul style="list-style-type: none"><li>- Several actors can appear in the same movie under one or more directors.</li><li>- Actors can also be directors, and therefore directors can also be actors.</li><li>- Sometimes there is more than one director for a movie.</li></ul>
Resources	<ul style="list-style-type: none"><li>• Chapter 3 in our text</li><li>• Stack Overflow - <a href="http://stackoverflow.com/questions/tagged/normalization">http://stackoverflow.com/questions/tagged/normalization</a></li><li>• Microsoft on Normalization - <a href="http://support.microsoft.com/kb/283878">http://support.microsoft.com/kb/283878</a></li></ul>
Submitting	Submit your work as a PDF and a text <code>.sql</code> file. Push them to your GitHub repository <b>before</b> the due date (see syllabus). Remember to include your name and date. Neatness counts.

