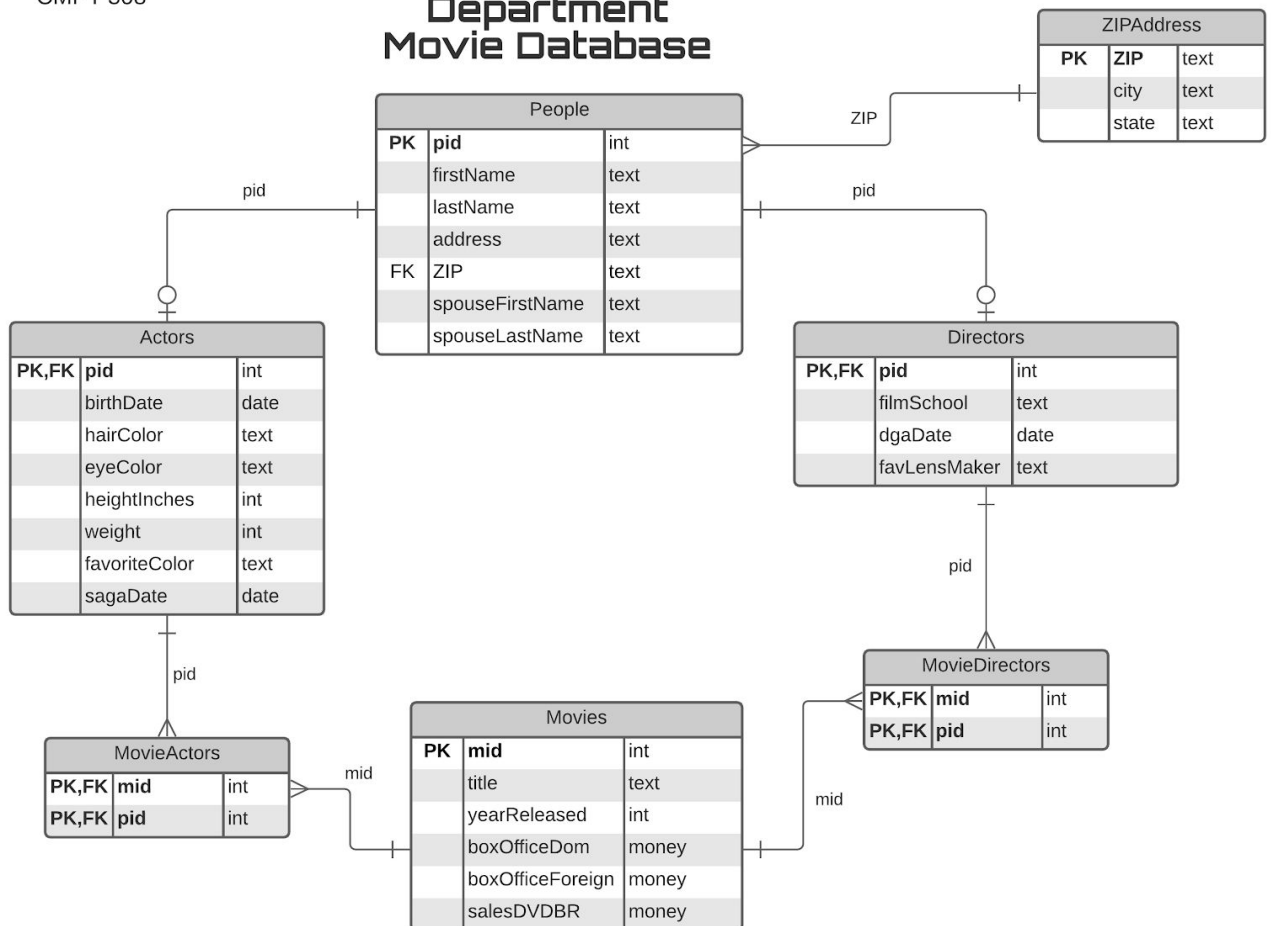Michael Wise
Dr. Alan Labouseur
CMPT 308 Database Management
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Lab #8 - Normalization Two

1. A fully decorated and aesthetically beautiful E/R for the Movies database:

2. SQL create statements can be found in the lab8.sql file. (note: insert statements are not included)

3. **Functional Dependencies:**

People Table
- pid → firstName, lastName, address, ZIP, spouseFirstName, spouseLastName

ZIPAddress Table
- ZIP → city, state

Actors Table
- pid → birthDate, hairColor, eyeColor, heightInches, weight, favoriteColor, sagaDate
  - Note: while some of these attributes could probably go in the People table, I've decided characteristics like height and weight are important only to actors. I don't think many production companies are using eye color as a factor when choosing a director for a movie.

Directors Table
- pid → filmSchool, dgaDate, favLensMaker

Movies Table
- mid → title, yearReleased, boxOfficeDom, boxOfficeForeign, salesDVDBR
  - It looks like MPAA numbers are all unique, making it a good candidate for a primary key. Yet, some movies (like independent & TV films) don't have MPAA numbers. There could be an actor from one of those really bad Hallmark Christmas movies that just happens to have all the qualities of the perfect James Bond. Ok, fine, we'll make an artificial key called mid (movieID) so we don't leave any movies out, ok? Wait, but then you could argue MPAA number (now a non-key attribute) determines a bunch of other attributes. This violates 3NF so this is why I'm just getting rid of the MPAA number. It's settled.

MovieActors (associative entity, no functional dependencies)
- Primary Key = (mid, pid)

MovieDirectors (associative entity, no functional dependencies)
- Primary Key = (mid, pid)

4. Query for Roger Moore is found in the lab8.sql file.