COEN 280: Database Systems
Winter 2019
Homework Assignment 1
Due: Wednesday, 1/23/2019 @11:59pm

Project Description
The goal of this assignment is to design a conceptual schema using the **(E)ER** Data model.

(E)ER data model (50 points)

Design a schema that incorporates the specification described below as efficiently as possible. You should submit a written diagram of your schema design using the notation given in the class. In this diagram, indicate all the classes, subclasses, relationships (weak & strong), relationship cardinalities and degrees, total participations, attributes, and primary keys. In addition, specify whether each attribute is single-valued or multi-valued, stored or derived, and atomic or composite. In your design, you can make and state reasonable assumptions if they are not specified in the specification.

Design Specification
The Internet Movie Database (IMDB) is an online database of information that stores information about shows, movies and TV Shows, casts and about actors and directors who act and direct these shows, biographies, plot summaries and reviews. You are going to design the database system for IMDB (www.imdb.com). It should store and manage the following information but it is not exactly same as real IMDB website. However, if you have ambiguous parts you can assume data type based on real IMDB system:

IMDB User
An IMDB user has a unique ID, first name, last name, gender, birthdate, age, email, list of favorite movies and TV Shows, list of *to be watched* movies and TV Shows, and list of *reviewed* movies and TV Shows.

An IMDB user can rate any movie or TV Show on a scale of 1-10 and provide reviews. Note that the user should be able to review the same movie multiple times.

Movie
A Movie has a title, release year, multiple genres, production cost, country, language, and a serial number assigned by imdb.com. A movie can be rated by multiple users. Also a movie can be rated by multiple critics. A movie can have multiple genres (i.e. comedy, drama, action, etc.). A movie is made up of multiple scenes. Each scene has a number and a location. A scene is belonged to a movie.

A movie could be nominated in different nomination categories in an awards event and wins a nomination category.

Critic
A critic has a unique ID, first name, last name, age, and list of reviewed movies and TV Shows. A critic reviews a movie at most once.

Reviews
Review has an ID, publish date, and textual content. It has one author who is either an IMDB user or a critic. A review belongs to one movie or TV Show. A critic's review has number of stars and number of total votes. Votes can be categorized as cool, funny, and useful with a list of users that voted for each of these movies or TV Shows. A review can be either recommended or not recommended. A critic can recommend a review. Only recommended reviews are visible to IMDB users (all reviews are visible to critics).

Person
A person has a unique ID, first name, last name, gender, birthdate, birthplace. Place of birth includes: Nation, State or Province, and Town. A person can be a producer, a director, an actor, or a critic. A producer, produces movies. A director, directs movies. An actor cast in movies or TV Show with a specific role under a character name. A critic, critics a movie or TV Show.
An actors or director could be nominated in different nomination categories in an awards event and wins a nomination category.

TV Show
A TV Show has a name and a TV network. A TV Show is produced by a producer. Reality Show is a TV Show where its cast are ordinary people and it doesn't have a director.

Season
A season has a season number, start date and end date. A TV Show has a number of seasons. A season belongs to a TV Show.

Episode
An episode has an episode number, title and length. A season of a TV Show has a number of episodes. Episodes belong to a specific season of a TV Show. An actor is a regular in every episode. Also, an actor could be a guest star in one episode.

Submission Guidelines
You are REQUIRED to submit a pdf to Camino. It should also include your reasonable assumptions.