Movie Database

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Synopsis (250 words):

Our database is going to center around movies. The database will be a one-page web based GUI with a search bar and possibly multiple independent boxes for getting information. The primary goal of the web GUI is not to be responsive, just to be accurate. It will contain attributes about movies such as their budget, length, summary, title, release date, language, rating, and ticket sales. It will also contain data that is related to movies such as actor, director, genre, award, and production studio. Movie is an entity type. Other entity types are Actor, Director, Award, Production Studio, and Genre. The actor and director's entity types contain attributes such as first name, last name, and date of birth. Actors also have an attribute of nationality and age. Genre has an attribute for genre name and production studio has attribute for studio name. The award entity will have attributes award title, award type, and year given. All entities have an attribute that is an ID attribute (I.e MovieId, GenreId, etc). The movie table has the most attributes associated with it, but the many relationships comprise most of its information. The relationships are as follows: movies will be directed by directors, acted in by actors, described by a genre, nominated for awards, wins an award, and produced by a production company. The relationship between movie wins award is a one to one and a production company produces a movie is one to many. The rest of the relationships are many to many.

ER Diagram: At end of document

ER Diagram Descriptions:

- Movie- Single entry production. Usually longer than 40 minutes.
    - Budget- a integer representing the number of US Dollars spent on a movie or show.
    - Seconds- An integer that is the runtime of the movie in seconds.
    - Summary- A long string containing a summary of the movie.
    - Title- The title of the movie as it would be displayed in theaters.
    - Release Date- a date time format with the day the movie was first released either to movie theaters or to a streaming service.
    - Language- a text value containing the name of the language the movie is predominantly spoken in.
    - Rating- a number out of 10 ranking the movie.
    - TicketsSold- the number of tickets sold while in movie theaters. This will be null if it was never in movie theaters.
    - MovieId- the unique key for each movie that is generated by the database.
- Actor- a person whose profession is acting on the stage, in movies, or on television.
    - FirstName- The first name of the actor.
    - LastName- The last name of the actor.
    - DOB- Date of birth of the actor in a date object without a hour or minute.
    - Age- A calculated attribute based on Date of birth.
    - Nationality- The actors self-identified national affiliation.
    - ActorId- A unique key for each actor.
- Genre- a category of artistic composition, as in music or literature, characterized by similarities in form, style, or subject matter.
    - GenreName- A word or short phrase describing the genre.
    - GenreId- a unique key for each genre.
- Director- a person who supervises the actors, camera crew, and other staff for a movie, play, television program, or similar production.
    - DirFirstName- The first name of the director.
    - DirLastName- the last name of the director.
    - DOB- a date time object with the date of birth of the director.
    - DirId- A unique key for each distinct director.
- Award- Film Awards or festival awards.

    - AwardTitle- The title of the award.
    - YearGiven- The calendar year that the award was officially presented.
    - AwardType- A text field containing: Emmys, Academy, ECT.
    - AwardId- a unique key to differentiate the same award in different years.
- ProductionStudio- premises used for producing live broadcasts, motion pictures, or audio or video recordings or transmissions.
    - StudioName- A text field containing the name of the production studio.
    - StudioId- a unique key identifying the studio.

Functionality:

Our database will function by having a search bar that allows a user to look for different movie information. Data will be added and already present when users load up the site. They could potentially delete data or update it (?). By searching a movie or an actor, attributes and other relationship data will appear based upon what the user wants to see:

Group 1 Potential Queries:

- Count all movies in the input genre

- List the highest grossing movie from an input director

Group 2 Potential Queries:

- List the 3 highest rated movies from an input actor or an actor that satisfies a complex query based on more input.

- List the actors and directors that both have a movie that has won an award

Group 3 Potential Queries:

- List all movies with a budget greater than the director with the highest rated movie

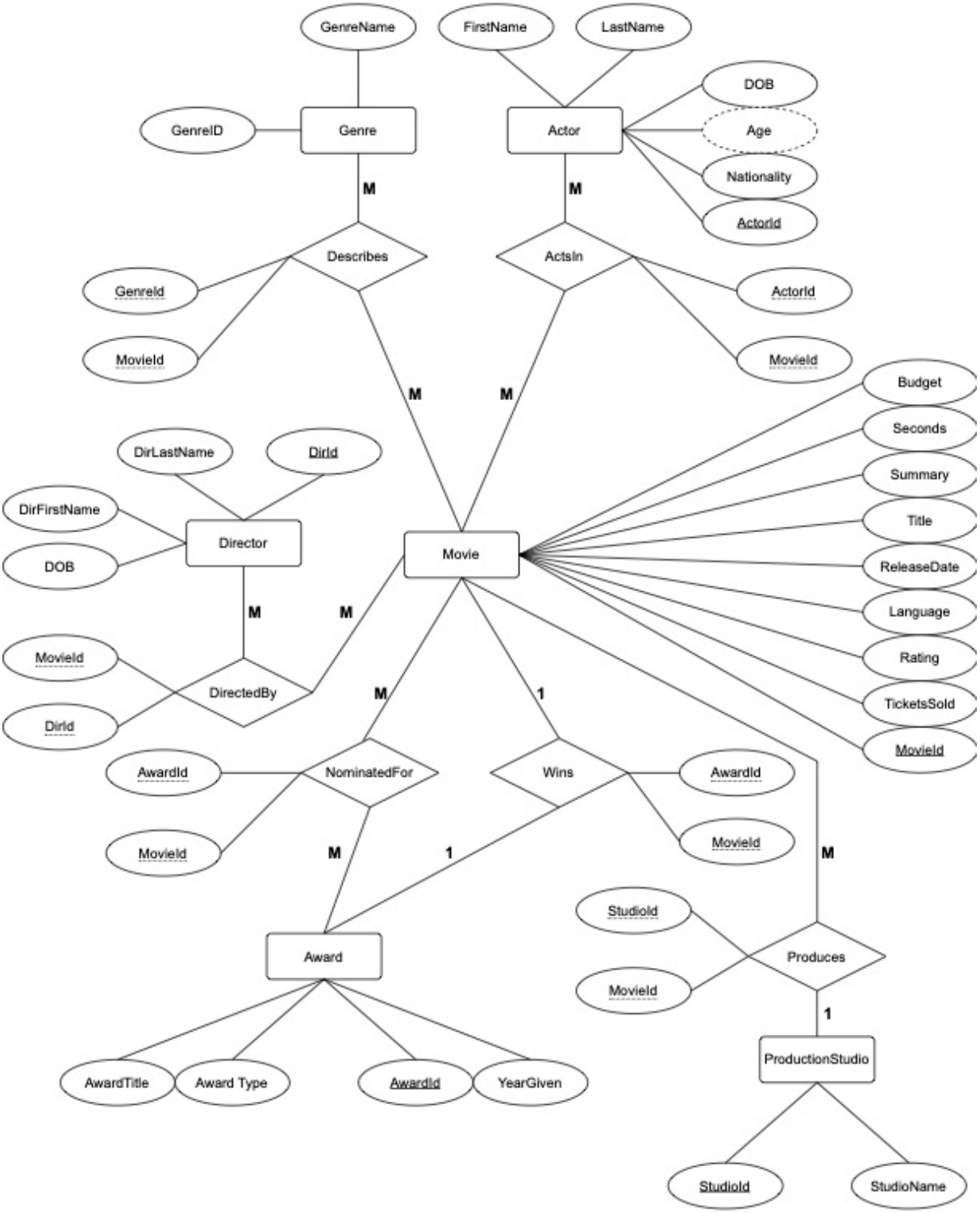
- List all awards that have a movie that was released before an actor was 30

Stakeholders:

Potential users will be movie critics and casual movie watchers. Movie critics would use the service to find movies and rank/review them. Casual movie watchers would use the service to find information on movies to determine what to watch (i.e. look at ratings to see if they would want to watch the movie or see what actors are in the movie). Both types could use the service to look up technical information on the movie such as runtime, length, etc.

Technological Requirements:

We envision implementing this database on the web. We anticipate that this will require us to use HTML, CSS, and JavaScript. We both have experience in front end web design. We will be making a web GUI and hosting a dynamic website with a server. Quinn has experience with backend web development and will be using Express on the backend and will handle server hosting with Eucalyptus. John will handle the domain. To connect our database to our website we plan on using Nodejs MYSQL. We plan to use GitHub to share code which we are both very familiar with and have been using for about a year (https://github.com/jff97/movieWebDatabase).


GenreName
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