Project Title: *Film Finder*

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a) Overview

The Film Finder website is losing its fanbase due to lack of organization of the movies and how they correspond to what the user is interested in watching, the database backend would allow a more precise and personalized way of storing the information associated with each individual movie as in, what mood, genre, age range, and what actors. The other issue the database would solve is having specified users on the application to make it more streamline and personalized to the user to better the movie picking process, the reason for needing users is to better accommodate the 2000 customers it has now and to promote growth for the business instead of losing customers. Film Finder is having major issues putting together data to produce accurate movie suggestions for each specified user and a database would help make the process more efficient and organized.

With so many options for on-demand streaming content to choose from, it's easy to feel inundated and find yourself spending more time looking for something to watch than actually enjoying a movie. That's where Avalanche comes in.

We spend the time watching all kinds of movies and assess them based on our proprietary system of both qualitative and quantitative metrics to sort them into many different categories. The end result is a movie recommendation system that goes way beyond a simple collection of stars or a set of broad genres.

Maybe you've got a movie night planned with a potential romantic interest and need a movie that will help set the mood, but without making things awkward. Maybe you've been having a rough time lately and could use a good laugh, but don't want to see anything featuring that popular comedian you can't stand. Maybe you're unexpectedly babysitting your young niblings and need to find an age-appropriate movie that will keep them entertained without sending them home with an expanded vocabulary.

Our database of potential recommendations is here to help you find just the right movie to watch and is growing by the day.

b) Database Outline, in Words

- **Users:** The customers using the recommendation service
    - user_id: int, auto_increment, unique, not NULL, PK

        - user_email: varchar, not NULL
        - movie_history: int, movie_id from Movies as FK
        - actor_prefs: int, actor_id from Actors as FK
        - genre_prefs: int, genre_id from Genres as FK
        - User_phone: varchar - optional
        - Relationships:
            - 1:M with Movies - one user can have watched many movies
            - M:N with Genres - user can have many genres they prefer and there can be many genres per user
- **Movies:** The movies currently in the database of potential recommendations
    - movie_id: int, auto_increment, unique, not NULL, PK
    - title: varchar, not NULL
    - year: year, not NULL
    - age_rating: tinyint, not NULL, FK
    - mood_id: int, not NULL, FK
    - genre_id: int, not NULL, FK
    - actor_id: int, not NULL, FK
    - Relationships:
        - M:1 with Actors - movie can have one or many actors but the actors can only be in that movie
        - M:N with Moods - movie can have one or many moods and a mood can be in many movies
        - 1:M with Age Ratings - movie will have only one age rating
- **Actors:** The stars of the movies
    - actor_id: int, auto_increment, unique, not NULL, PK
    - first_name: varchar, not NULL
    - last_name: varchar, not NULL
    - actor_birth_date: date
        - 1:M with Movies - a Movie can have one or many actors
- **Genres:** The categories of movies in the database
    - genre_id: int, auto_increment, unique, not NULL, PK
    - genre_name: varchar, not NULL
        - 1:M with Movies - Genres can be with many different movies like the genre horror can be associated with many different movies

        - M:N with Users - Genres can be associated with many different users and many users can have multiple genres

    Moods: The various moods that movies inspire/are suitable for

    - mood_id: int, auto_increment, unique, not NULL, PK
    - mood_name: varchar, not NULL
        - M:N with movies - Movies can have many moods and many moods can be associated with different movies
- **Age Ratings:** The age range appropriate for the movie
    - age_rating_id: tinyint, not NULL, auto_increment, unique, PK
    - age_rating: varchar, not NULL
        - 1:M with Movies - There can be the same age rating for multiple movies

c) Entity-Relationship Diagram: