CS3563: DBMS II
Assignment 1

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Design ER diagrams for IMDb website

Design an ER Diagram for IMDb website with the **'referential integrity'** being maintained.

- The movie/tv-series/episode entity has information such as ID, original title and titles in other languages, regions, languages of release, run time, release date, cast and crew, genre, production companies.
- TV-series also have the end date in addition to the release date.
- TV-series are associated with episodes and vice versa.
- Since a movie/tv-series/episode can be released at different times in different countries and languages, they can have several start and end dates.
- Since movies, episodes in different regions can be cut differently, they can also have different run-times.
- Movies and TV-series have a budget associated with them. Movies also have box office gross.
- They can also be associated with multiple genres (at least 1).
- They can be produced by multiple production companies
- Each TV-series/Movie/Episode has an average rating associated with it (on a scale of 10). These are taken from the users of IMDb.
- As new episodes come in the the cast, crew, runtime etc. for a tv series are updated.
- TV-series also have running status associated with them (ongoing/completed).
- People (actors, directors, producers etc.) have ID, languages, movies, tv-series and episodes associated with them.

- They also have awards/accolades/nominations (corresponding to each piece of work they have acted in / directed / produced etc.).
- Same person can have multiple roles in a movie/tv-show (writer/director, actor/producer etc.).
- Actors also have the name of their character in the movie associated with them.
- The ID field cannot be blank for movies, tv-series, episodes or actors.
- A movie can have more than 1 actor and an actor can be part of more than 1 movie.
- Use at least one weak entity while making the ER diagram.
- Ensure that you design your ER Diagram using appropriate symbols / notations (like primary key, weak relationship, multi valued attribute, derived attribute etc.) wherever necessary. Also do not forget to use the appropriate mapping symbols (like 1-many, many-1 etc.)
- If you feel the need to explain anything, use the label option in ERDPlus to add notes. However, explaining the relationships used along with the mapping is mandatory.
- Once your ER Diagram is complete, you need to find the minimum number of database tables required for the same. You have to justify your answer.

Please Note:
You need not restrict your ER Diagram to the entities and attributes described here alone. You are encouraged to have an exhaustive ER diagram. Please ensure you have designed your ER diagram maintaining all the required constraints. Also, the dataset provided doesn't contain all the data required, you will have to crawl the data that is unavailable, when needed for Assignment 2.

Submissions:
Please use the website https://erdplus.com for creating the ER diagram. The functioning is pretty straight-forward. You need to create an account in order to save your progress. Please only submit the final diagram.