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Project 5

Noted that project states for ERD to be in pdf, but format is hard to read, so png included

Starting with the producer, the company must have a name which is unique and is thus a primary key and combined with the address eliminates the possibility of two companies with the same name. The addresses need to be primary too in conjunction with name also because two companies could be operating in the same building that has the same address. The producer produces movies. This is a one to many relationship since a production company can produce many movies. The movie also has total participation because movies need companies to produce them (excluding freelance or small film companies which might not use one, but this is a small case since the intention of the database from the examples seemed like largely produced and known movies).

The movies entity is a weak entity because most all movies need a writer and director and like stated above, a producer. The movie does have one primary key which is the title which should be unique to any movie produced. The release year is a weak attribute because it cannot exist without the movie existing. I also gave movies a one to many relationship called 'has sequel' with itself since a single movie can have many or no sequels that are also movies.

The director and writer are both strong entities that can exist by themselves. They both have a primary key that is their name. It is possible that there could be two directors with the same name, but again, very slim chances and there is not better primary key that comes to mind. Both of these also share a one to many relationship with the movie entity. This is because a movie can have several writers or directors. There is also total participation from a movie to these because a movie can't exist if nobody writes or directs it.

The actor entity's primary attribute is the actor's name and residence. There is almost guaranteed (unless there are multiple people in the family with the exact same name who are actors living in that house) a unique person when the two are put together. The age attribute is derived from the weak attributes death date and birth date. This is because a birth date and death date can't exist without an actor and both these can be used to calculate the age of the actor (if death date is NULL, then birth date to current date). Actors also have a relationship called starring with a movie. This is a one to many relationship because movies can have many or no actors. There is not total participation because there are movies that don't have any actors in them (Blue Planet per say) yet both can exist without the other. Actors also have a one to many relationship called acted in. This describes the movies an actor has starred in. It is a one to many relationship because actors can star in many or no movies throughout their careers. There is not total participation because like stated above, both can exist without the other.

The last required entity is the Publication entity. This represents all the reviewers, publications, and websites. They have a primary attribute called name because each would have to and want to have a unique name. They share a many to many relationship with the movie entity. This is because many Publications review many movies. The relationship also has a weak attribute called rating. It can't exist without a review of a movie.

My added entity was a film editor. Movies can have many film editors and editors can edit many movies. The entity is connected to movies with a many to many relationship called edit. There isn't total participation since both can exist without the other (I guess a movie doesn't need to be edited; Hulu just produced one like this taken in a single shot).