

Assignment 1

Course name: 1DV503

By: Philomina Ejegi Ede

And

Melat Getachew Haile

Task1

1) True

Motivation: With performs-in relation, there exists many to many relationship between actors and movies. According to the diagram, there are no actors in this database that have been in no movies.

2) Maybe

Motivation: From the MoviesDB, we do not know the number actors and movies there are, so it is difficult to know if the actors have acted in more than ten movies or not. Although it is a many to many relationship, actual numbers are not specified in the database.

3) True

Motivation: There exists one to many relationship with lead-role relation between actors and movies. So, there are some actors in the database who have done a lead role in multiple movies.

4) True

Motivation: With the lead role relation, a movie can have only a maximum of two lead actors.

5) False

Motivation: It is a one-to-one relation with (also a director). So, there may be an actor who is also a director, but every director cannot be an actor in the database.

6) False

Motivation: There is a one-to-one relation with (actor-producer) between producers and actors. Hence there may be at least a producer who was once an actor.

7) False

Motivation: According to MoviesDB the relations; actor-producer and performs-in, it shows that a producer can be an actor and an actor can act in any movie. So, a producer can act in any movie.

8) Maybe

Motivation: There exists many to many relation with performs-in relation between actors and movies. A movie can have more or less than a dozen actors performing in it, since there are no specifications.

9) True

Motivation:

- A) There exists a one-to-one relationship between actors and directors with also-a-director relation.
- B) There also exist a one-to-one relationship between producers and actors with actor-producer relation.

Therefore, there could be an actor who is a producer and also a director(Transitive Dependency).

10) Maybe

Motivation: There exists a many to one relationship between movies and director with direct relation, so a director can direct one movie.

On the other hand, there exists many to many relationship between producers and movies with the relation "Produces", so a movie can have one or more producers.

Hence, a movie may have one director and one producer.

11) True

Motivation: There exists a many to one relationship between movies and director with direct relation, so a director can direct one movie.

But there exists many to many relationship between producers and movies with the relation "Produces", so a movie can have several producers.

Hence, some movies can have one director and several producers.

12) True

Motivation:

- A) There exists one to many relationship between actors and movies with the relation "lead-role".
- B) There exists a one-to-one relationship between actors and directors with the relation "also a director".
- C) There exists many to many relationship between movies and producers with the relation "produces".
- D) There exists one to one relationship between actors and producers with the relation "actor-producer".

Therefore, there may be an actor who is a producer, director and has performed a lead role in a movie.

13) False

There exists a one-to-one relationship between actors and directors with the relation “also a director”.

There is a relation between actors, movies and directors. Hence there is at least one director that have directed and also acted in that movie because it is a one to one relationship