

ACTIVITY: ER FOR NOTOWN RECORDS

Each musician has an SSN, name, address, phone. Poor musicians often share the same address, and no address has more than one phone.

Each instrument that is used in songs recorded at Notown has a name (e.g., guitar, flute) and a musical key (e.g., C, B-flat).

Each album has a title, a copyright date, a format (e.g., CD or MC), and an album identifier.

Each song recorded at Notown has a title and an author.

Each musician may play several instruments, and an instrument may be played by several musicians.

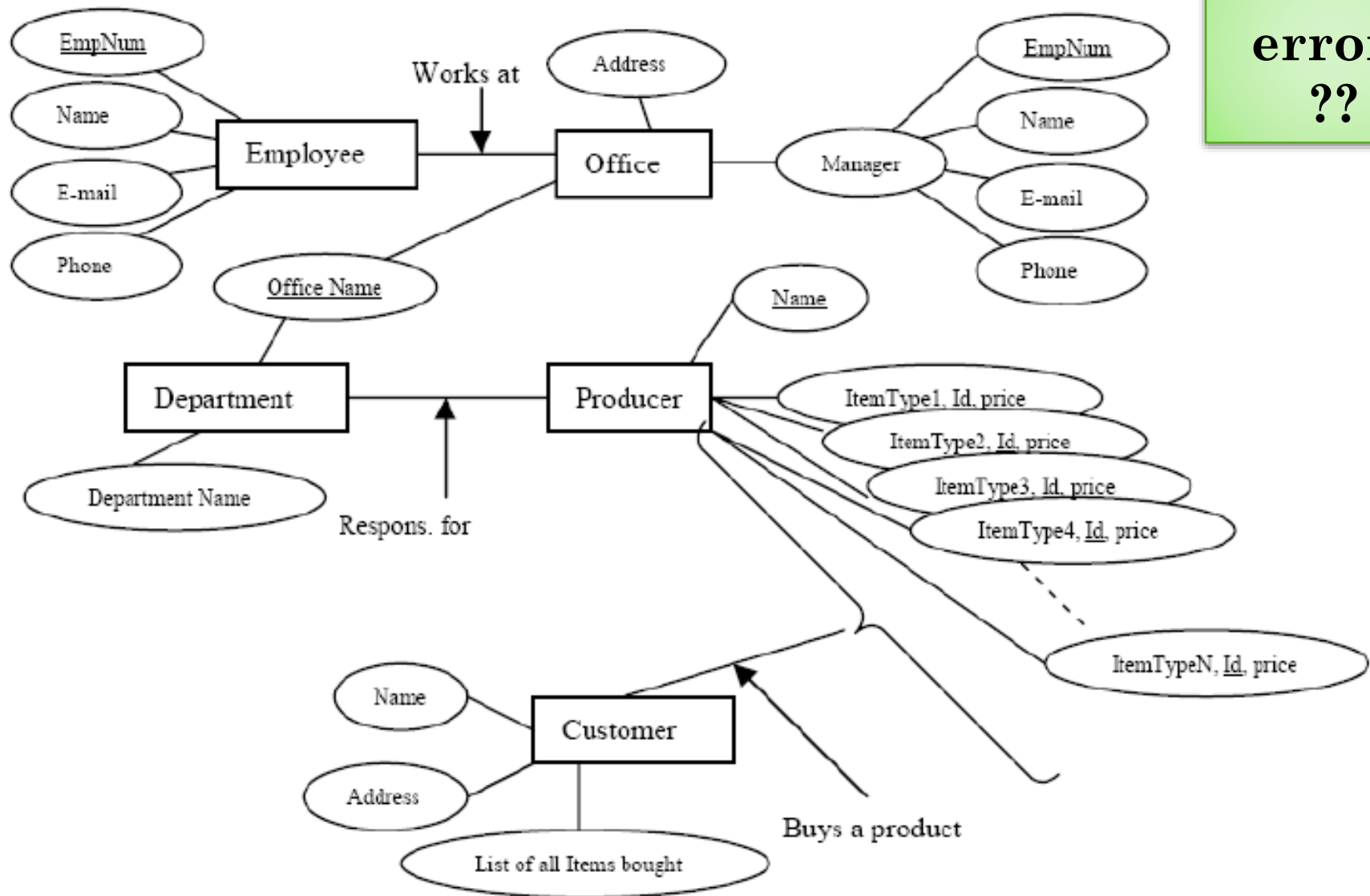
Each album has a number of songs on it, but no song may appear on more than one album.

Each song is performed by one or more musicians and *we keep track of the instrument used by each musician*. A musician may perform a number of songs.

Each album has exactly one musician who acts as its producer. A musician may produce several albums, of course.

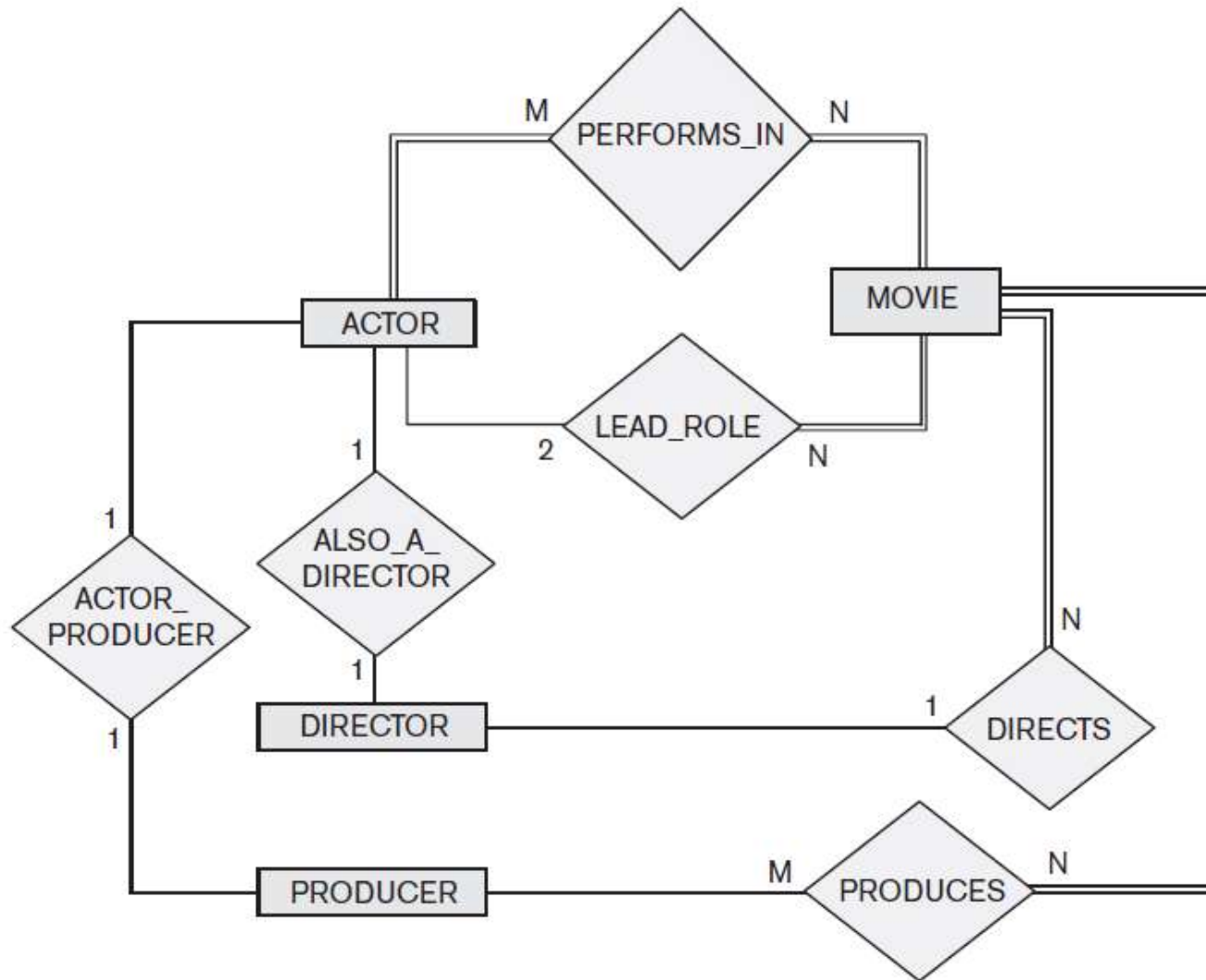
THIS DIAGRAM IS SUPPOSED TO MODEL A COMPANY THAT BUY PRODUCTS FROM PRODUCERS AND SELL THEM TO CUSTOMERS.

Find errors ??

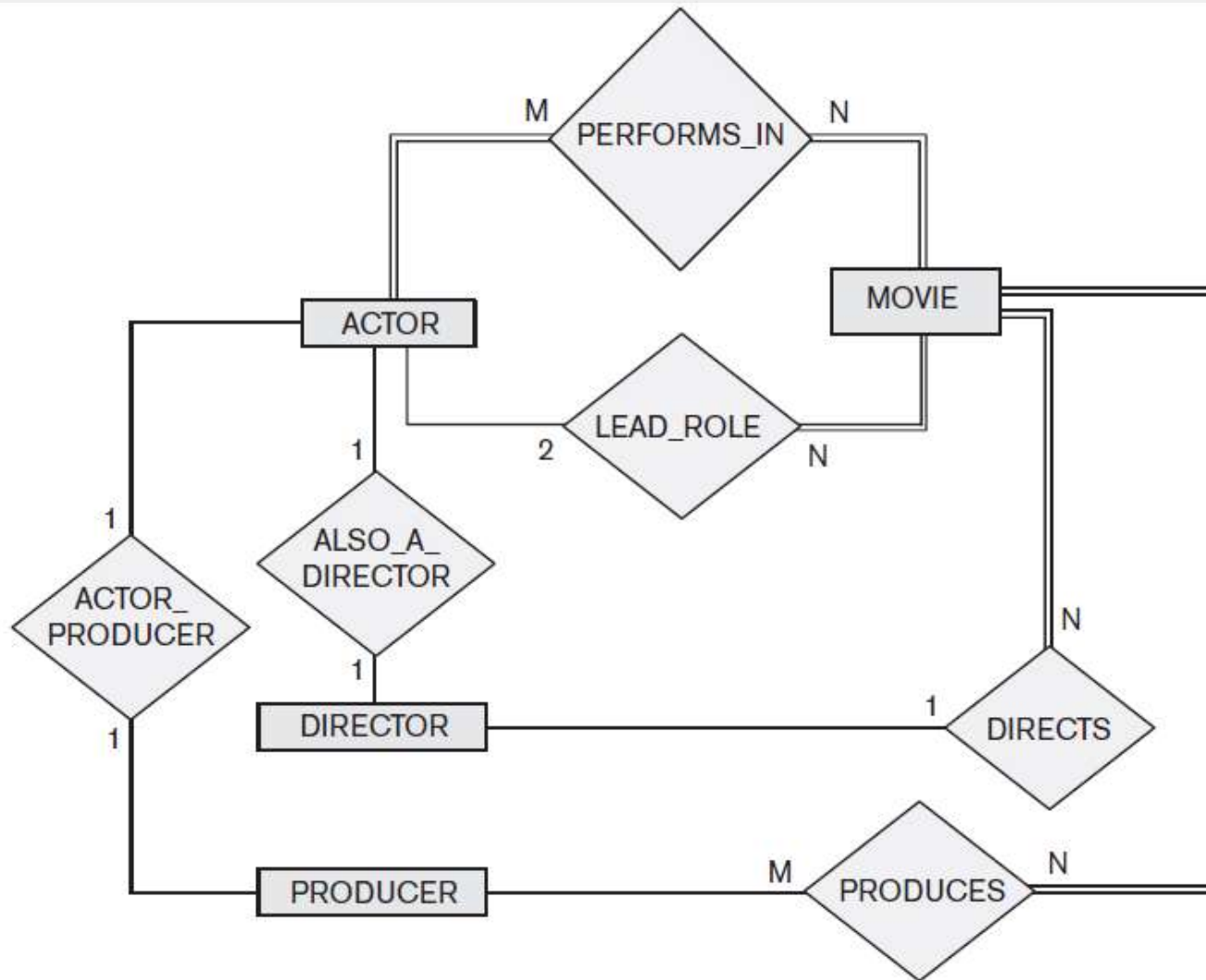


Assume that MOVIES is a populated database. ACTOR is used as a generic term and includes actresses.

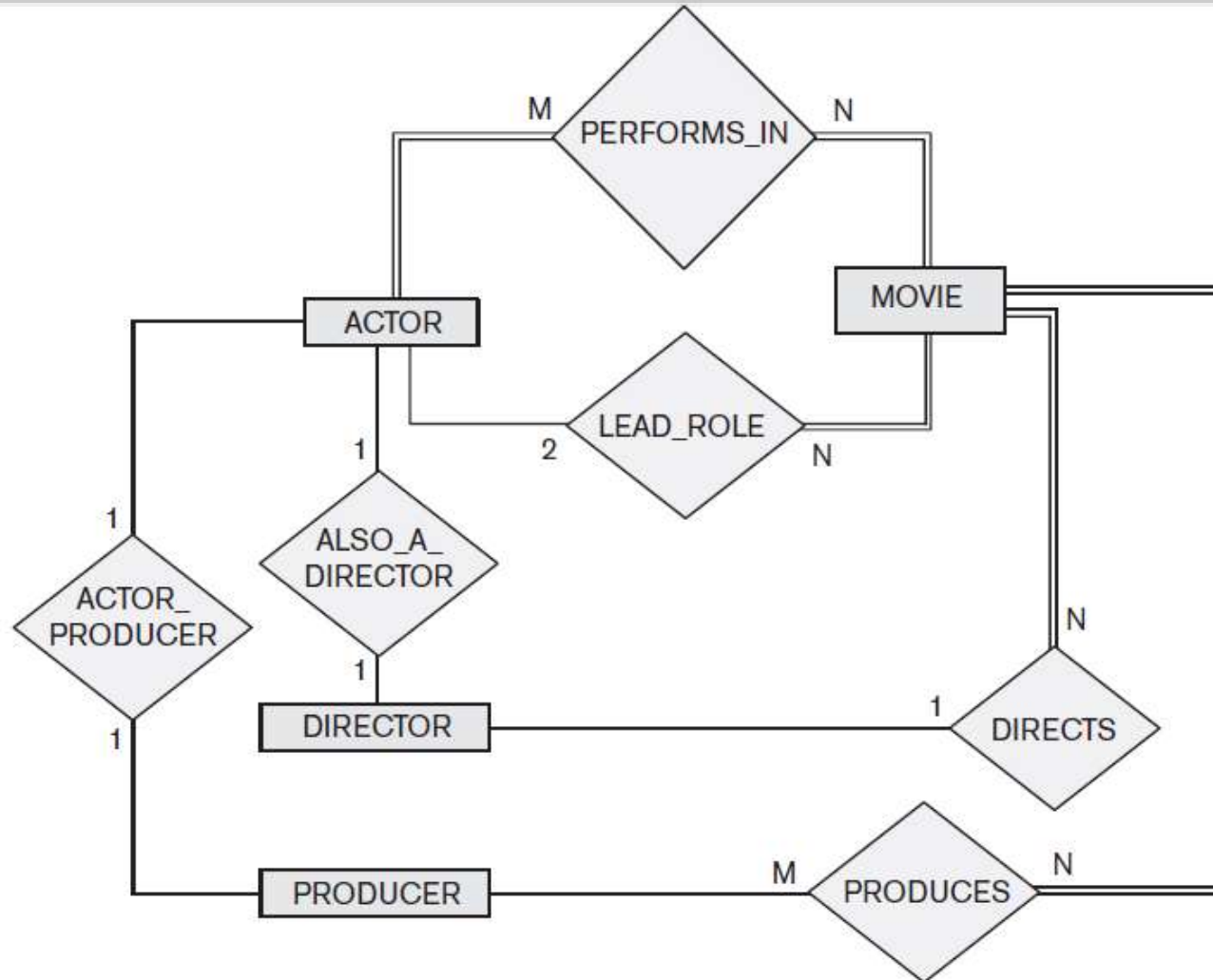
Given the constraints shown in the ER schema, respond to the following statements with *True*, *False*, or *Maybe*.



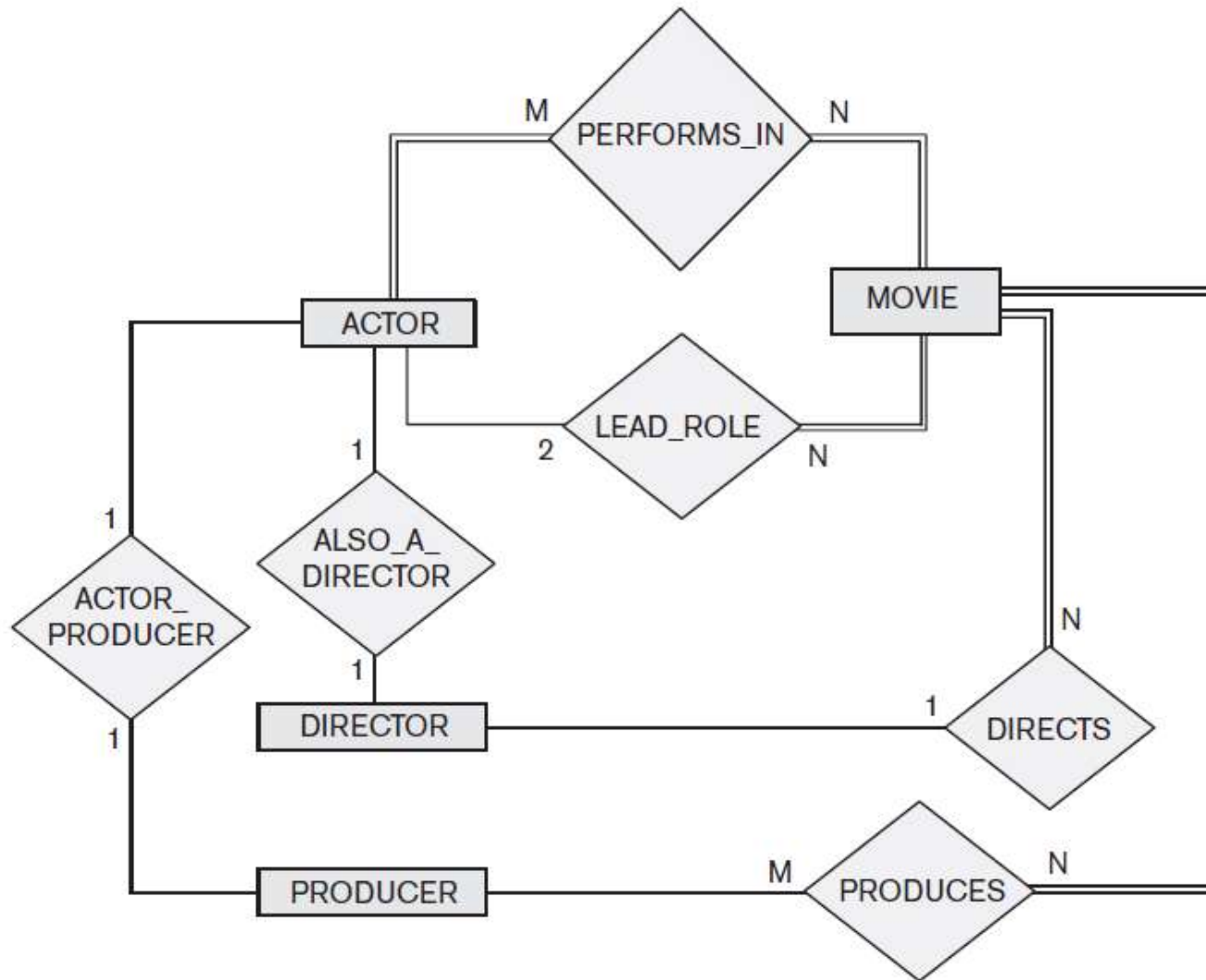
- a. There are no actors in this database that have been in no movies.
- b. There are some actors who have acted in more than ten movies.
- c. Some actors have done a lead role in multiple movies.
- d. A movie can have only a maximum of two lead actors.
- e. Every director has been an actor in some movie.



- f. No producer has ever been an actor.
- g. A producer cannot be an actor in some other movie.
- h. There are movies with more than a dozen actors.
- i. Some producers have been a director as well.
- j. Most movies have one director and one producer.



- k. Some movies have one director but several producers.
- l. There are some actors who have done a lead role, directed a movie, and produced some movie.
- m. No movie has a director who also acted in that movie.



PRACTICE QUESTIONS

- Fundamental of Database System (Edition 7)
 - **Example 3.10**
 - **Exercise Questions**
 - 3.16 - 3.19
 - 3.21 - 3.29
 - 3.32 – 3.34
 - **In these questions you are asked to draw ER Model on ERWIN ... but for now you just have to do it on paper.**

TEAM WORK IS ALLOWED FOR PRACTICE
QUESTIONS



CHAPTER SUMMARY

- ER Model Concepts: Entities, attributes, relationships
- Constraints in the ER model
- Using ER in step-by-step conceptual schema design for the COMPANY database
- ER Diagrams - Notation
- Alternative Notations – UML class diagrams, others