**Exercise 1 Movie Database**

Diagram

Description automatically generated

Given the constrains shown in ER diagram above respond to the following statement with *True*, *False*, *Maybe.* Assign a response of *Maybe* to statements that are not explicitly shown to be *true*, can not be proven *False* based on the ER diagram. Discuss and explain your answer:

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Statement** | **True/False/Maybe** | **Explain/Justify your Answer** |
| 1 | There are no actors in this database that have been in no movies |  |  |
| 2 | A movie can have only one director |  |  |
| 3 | A movie can have one or more producers |  |  |
| 4 | A movie can have only a maximum of two lead actors |  |  |
| 5 | It might be that a director has been an actor in some movie |  |  |
| 6 | It can be that no producer has ever been an actor |  |  |
| 7 | A producer can not be an actor in some other movie |  |  |
| 8 | There can be movies with more than a dozen actors |  |  |
| 9 | Some producers have been a director as well |  |  |
| 10 | There are movies which have one director and one producer |  |  |
| 11 | Some movies have one director but several producers |  |  |
| 12 | There can be some actors who have done a lead role, directed a movie, and produced a movie |  |  |

**Exercise 2 Mail order**

Consider a MAIL\_ORDER database in which employees take orders for parts from customers. The data requirements are summarized as follows:

* + 1. The mail order company has employees, each identified by a unique employee number, first and last name, and Zip code.
  + 2. Each customer of the company is identified by a unique customer number, first and last name, and Zip code.
  + 3. Each part sold by the company is identified by a unique part number, a part name, price, and quantity in stock.
  + 4. Each order placed by a customer is taken by an employee and is given a unique number. Each order contains specified quantities of one or more parts. Each order has a date of receipt as well as an expected ship date. The actual ship date is also recorded.

Design an ER (Entity-Relationship) diagram for the mail order database