Worksheet 6

Working with Entity Relationship Diagrams

1. A database is being constructed to keep track of the teams and games of a sports league. A team has a number of players, not all of whom play in each game. Players are not allowed to move between teams. It is desired to keep track of the players participating in each game for each team, the positions they played in that game, and the result of the game. Each game has a home team and an away team. Design an ER schema diagram for this applications, stating any assumptions that you make. You should include any attributes that you think will be useful for this database. Choose your favourite team sport (e.g. football, basketball, etc.).

2. Examine the ER diagram on the following page. Assume that this describes a real database. For each of the following statements, say whether it is "true", "false" or "maybe" (Use "maybe" when a statement is possibly true, but is not certainly true). In each case explain your answer.
    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 one lead actor.
    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 12 actors.
    i. The database contains people who are not producers, actors or directors.
    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 has also acted in that movie.

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                └──────────┘ └──────────┘ └──────────┘
                      N      N         1        1
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| Produces | Performs in | Leading role | Directs |

N   N   N   N

Movie