

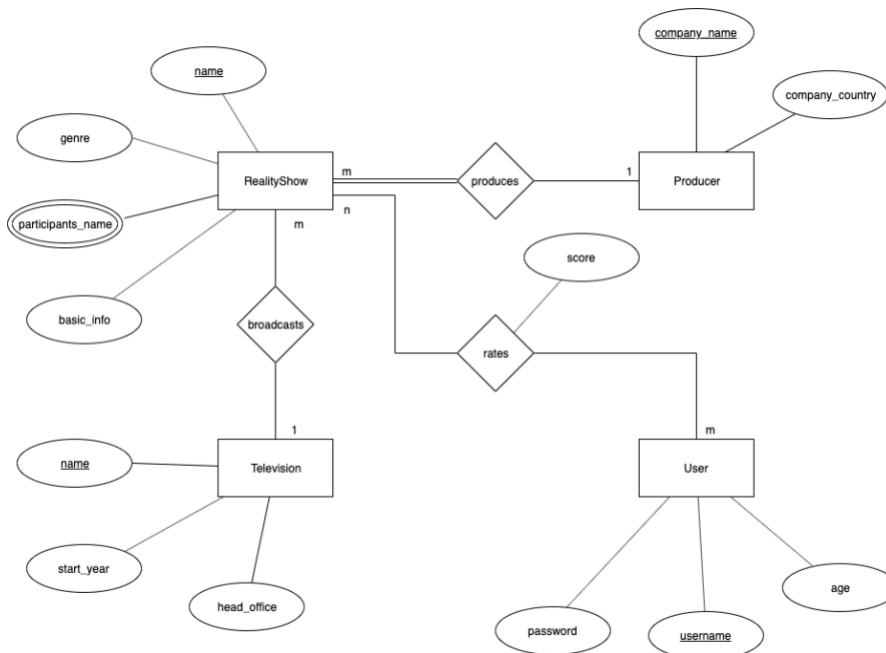
**For the following case study, draw an ER diagram to represent the data requirements as following:**

- Identify the main entity types.
- Identify the main relationship types between the entity types.
- Identify attributes and associate them with entity or relationship types.
- Determine primary (or partial) key attributes for each entity type.
- Determine the multiplicity constraints for each relationship.
- State any assumptions necessary to support your design.

Suppose that you are designing a schema to record information about TV shows. Your database needs to record the following information:

- For each show, its name, genre, basic\_info and participants name. Any show has at least two or more participants.
- For each producer, the company name, company country. A show is produced by exactly one producer. And one producer produces exactly one show.
- For each channel, its name, start year, head office. A channel may broadcast multiple shows. Each show is broadcasted by exactly one channel.
- For each user, his/her username, password, and age. A user may rate multiple shows, and a show may be rated by multiple users. Each rating has a score of 0 to 10.

Draw an entity relationship diagram for this database.





3) Suppose you are given the following requirements for a simple database for the National Hockey League (NHL):

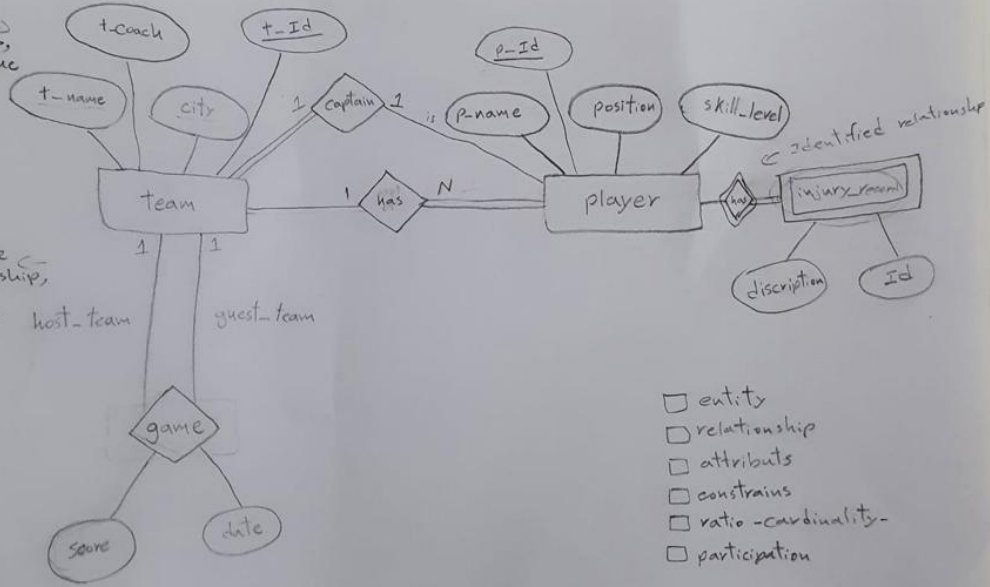
1. The National Hockey League has many teams,
2. each team has a name, a city, a coach, a captain, and a set of players,
3. each player belongs to only one team,
4. each player has a name, a position, a skill level, and a set of injury records,
5. a team captain is also a player,
6. a game is played between two teams (referred to as `host_team` and `guest_team`) and has a date and a score

Construct a clean and concise ER diagram for the NHL database



not key  
Attributes,  
Not unique

recursive relationship,  
we must write roles



- entity
- relationship
- attributes
- constraints
- ratio-cardinality-
- participation