

Soccer Sport Description and ER Diagram

1. Description of Soccer

Soccer, also known as football in many parts of the world, is a globally popular team sport played between two teams

of eleven players. The objective of the game is to score goals by getting the ball into the opposing team's net.

The team with the most goals at the end of the match wins. Soccer is governed by a set of rules known as the Laws

of the Game, which are maintained by the International Football Association Board (IFAB).

Key Entities in Soccer:

1. Player: Players have attributes like name, nationality, weight, height, position, and dominant foot. They participate in matches, undergo transfers, and may suffer injuries.

2. Team: Soccer teams consist of players and are managed by staff. Teams have contracts with sponsors and participate in tournaments.

3. Match: The match is the core event, where teams compete. Matches take place in stadiums and are officiated by match officials, with details like match date, attendance, and scores.

4. Stadium: Matches are hosted in stadiums, identified by name, city, country, capacity, and pitch dimensions.

5. Match Official: Officials ensure the match is conducted fairly according to the rules.

6. Transfer: Players can be transferred between teams, involving transfer fees and contracts.

7. Player Statistics: Player performance is tracked through statistics such as goals, assists, and

cards received.

8. Injury: Players may suffer injuries, with each injury recorded, including its type, severity, and expected return date.

9. Staff: Teams employ staff such as managers and coaches who help manage the team.

10. Contract: Contracts define relationships between players, teams, and sponsors.

11. Sponsor: Sponsors support teams financially and have contracts specifying the sponsorship details.

12. Tournament: Teams compete in tournaments for prizes and awards.

2. ER Diagram

(Refer to the attached diagram)

3. Exhaustive List of Assumptions

1. A player can only play for one team at a time.

2. Each player has a unique player ID for identification.

3. A match is always played between two teams (home and away).

4. A team can have multiple contracts with different sponsors.

5. A player can undergo multiple transfers during their career, but each transfer must involve two distinct teams.

6. Injuries are recorded with an injury ID, and a player can suffer multiple injuries throughout their career.

7. A stadium can host multiple matches, but each match is played in a single stadium.

8. Each tournament can host many teams, and each team can participate in multiple tournaments over time.

9. Contracts are signed for a fixed duration and can be renewed or terminated.

10. Player statistics are recorded for each match, tracking various performance metrics.
11. Staff members are associated with teams, and each staff member has a role (e.g., manager, coach, medical).
12. The match official oversees a match and ensures that it adheres to the rules of the game.
13. A player can be transferred multiple times, but not to the same team within the same transfer window.