

CS 354 Mid Semester

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List of Weak Entity Sets

- 1) Entity set "Player performance" is a weak entity set because the statistics are related to a particular player and unless the entity is related to a player, it wouldn't make sense.
- 2) Entity set "Points Table" is a weak entity set because the attributes in the entity are specific to a particular team for a particular year and they wouldn't make sense unless they are related to a team in a season.

Both these entity sets cannot independently exist without the existence of the parent entity sets, and are therefore deemed to be Weak Entity Sets.

Structural Constraints of relationships

- 1) Player Performance to Player is One-to-one as stats are particular to a player and Player Performance is a total participation describing existent players stats. Players is a partial participation as a particular player might not play for a season. Structural constraints (1, 1) \rightarrow (0, 1)
- 2) Matches to Teams is Many-to-many as a match is played by 2 teams and each team plays multiple matches. Both would have a partial participation as Team might not be present in the season at all and a match could be cancelled due to weather. Structural constraints (0, 2) \rightarrow (0, n)
- 3) Players to Teams is Many-to-one as a player can play in a single team but a team contains many players. Both have partial participation as either a player isn't present for a season or a team isn't playing in a season. Structural constraints (0, 1) \rightarrow (0, n)
- 4) Season to Teams is Many-to-many as in a season multiple teams play and a team may play multiple seasons. Seasons would have a total participation as we store only the years where the tournament is played for trivial reasons, although a team might not play for a season and hence is a partial participant with structural constraints (1, n) \rightarrow (0, n)
- 5) Points Table to Teams is one-to-one as points are particular to a team. Points table is a total participation as it just indicates the position of the existent teams. While all teams might not always participate in a season. Structural constraints (1, 1) \rightarrow (0, 1)

