

Relational Schema

Entities: Stat, Player, Player_College, Plays, Player_Position, Team, Coach, Person, Person, Conference, Conference_Division, Division, Compete, Season

- ❖ Stat(StatID, PlayerID, GP, FG, GS, BLK, PTS, Turnover, AST, STL, REB, PF,)
- ❖ Player(PlayerID, FirstName, LastName, DOB, TeamID)
- ❖ Player_College(PlayerID, College)
- ❖ Plays(PlayID, PlayerID, PositionID, Weight, Height)
- ❖ Player_Position(PositionID, Title)
- ❖ Team(TeamID, TeamName, ArenaLocation, ArenaName, ConfID)
- ❖ Coach(CoachID, FirstName, LastName, StartYear, TeamID)
- ❖ Person(PersonID, Name, DOB, CoachID, PlayerID)
- ❖ Conference(ConfID, ConfName)
- ❖ Conference_Division(CDID, ConfID, DivID)
- ❖ Division(DivID, DivName)
- ❖ Compete(CompeteID, Win, Loss, TeamID, SeasonID)
- ❖ Season(SeasonID, RegGames, EndDate, Year, StartDate, PlayoffGames)

Changes made from 2nd deliverable were:

Stat (updated PK to include PlayerID, removed '%' from FG attribute, removed FT attribute, and changed TO attribute name), **Player** (updated FK to include TeamID due to M-1 relationship), **Player_Position** (updated name of entity), **Team** (updated FK to include ConfID), **Conference** (updated to no FK due to relational entity being created), and **Conference_Division** (created this entity due to conference to division being M-M). Schemas and business rules were updated accordingly from 2nd deliverable feedback along with an additional relational entity (conference_division) due to the relationship of

Conference to Division being updated to an M-M. Additionally, some attribute names were updated to better suit the SQL implementation such as “Player_Position” and the Stat attribute “turnover”. We also changed some arrows in our ERD based on previous homework feedback stating that arrows are unnecessary in the ERD when on the “Many” side of a relationship. We also updated an additional business rule to represent our new Conference_Division entity. Outside of these changes, no other updates occurred to the ERD, schema, or business rules.

Logical Design Business Rules

- Every Stat is assigned to **one and only one** player, and each Player can have **zero or more** assigned Stats
- Every Player plays **one or more** positions, and every Position is played by **one or more** Player
- Every Player belongs to **one and only one** Team, but each Team belongs to **zero or more** Players
- Each Player represent **one and only one** Person, but each Person represents **zero or one** Player
- Each Person represents **one and only one** Coach, but each Coach represents **zero or one** Person
- Every Coach coaches **one and only one** Team, but every Team can be coached by **one or more** Coaches
- Every Team compete in **one or more** Seasons, and each Season has **multiple** Teams competing
- Every Team participate **one and only one** Conference, and each Conference can have **zero or more** participating Teams
- Each Conference contains **one or more** Divisions, and each Division contains **one or more** Conferences
- Each Plays relationship connects **many** Player to **many** Position
- Each Compete relationship connects **many** Teams to **many** Seasons
- Each Conference_division relationship connects **many** Conferences to **many** Divisions