

DBMS Project Report 1  
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Intro:

Our scenario (mini world) is the NBA. Our mini world describes the relationship between players, their teams, and player stats.

Requirements Analysis:

Our data will be pulled from the publically available 2022-2023 regular season NBA player stats.

NBA players each have a position, player ID, age, name, field goal percentage, 3 pointer percentage, minutes played and points per game.

NBA teams each have a win count, loss count, name, conference, color, home city, and abbreviation.

The relationship between players and teams, Plays\_On, denotes the number of years any given player has played for any given team.

Constraints:

Team abbreviation must be 3 letter string

Win count, loss count, age, and minutes are integers

Position must be a string from the array: [C,PF,SF,SG,PG]

Points per game (PPG), field goal percentage(FG%) and 3 point percentage(3P%) must be floats

No numeric value can be negative

Any abbreviation + player ID combination must be unique

PID is also unique

Operations:

Best scorer overall by team and position

Best player by position per team

Player ranking by position within age bracket independent of team

Minutes played per position ranked descendingly per team

Team wins ordered by player PPG

All players by team color

Relational Schema (Normalized):

[\* star \* denotes primary keys]

Team(\*abrv\*, name)

Team\_info(\*abrv\*,wins,loss,conf,city,color)

Plays\_for(\*abrv\*,\*PID\*,years)

Player(\*PID\*,position,PPG,FG%,3P%,name,age,minutes)