COSC344 Assignment 1
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31 July 2020

Group of 1 (Darcy Knox)

Mini-world description:

I have chosen to create a database for a professional sports league - based on the NZNBL (New Zealand National Basketball League). The NBL has existed as the premier basketball league in New Zealand for nearly 40 years.

The database will contain data for each team's players, staff, and games.

- The league is organised into teams. Each team has a unique name, and location.
- Each team has several players that play for the team.
- Each team has a player payroll that is the sum of all of the player salaries of their own team.
- Every team has Front Office staff that oversee the running of the organisation.
- Teams have a number of Games/Fixtures that they will contest in a season.
- Each team has one Coach.

Entities and Attributes:

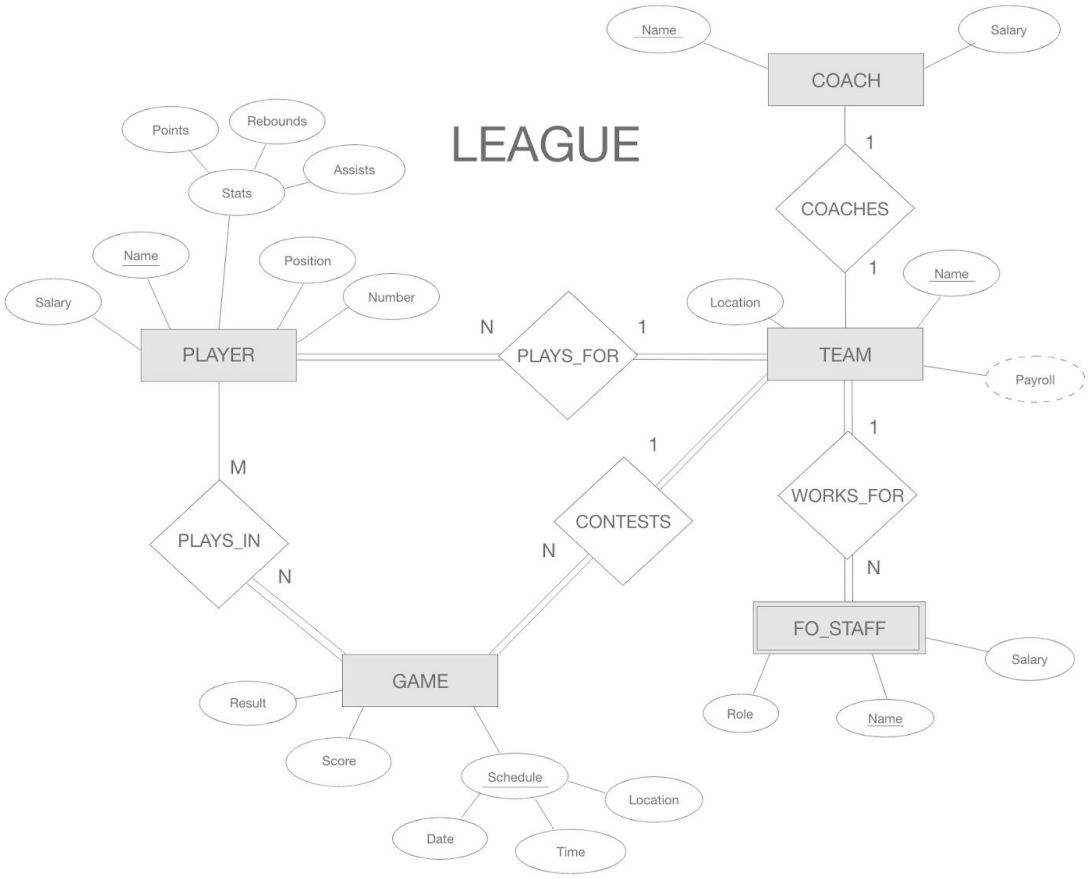
- PLAYER
    - NAME: simple, SV (single valued), string, key
    - DOB: simple, SV, date
    - SALARY: simple, SV, real
    - NUMBER: simple, SV, integer
    - POSITION: simple, SV, string
    - STATS: composite (Points, Rebounds, Assists), SV (single valued), string
- TEAM
    - NAME: simple, SV, string, key
    - LOCATION: simple, SV, string
    - PAYROLL: derived, SV, real
- COACH
    - NAME: simple, SV, string, key
    - SALARY: simple, SV, real
- GAME
    - RESULT: simple, SV, string
    - SCORE: simple, SV, string
    - SCHEDULE: composite (DATE, TIME, LOCATION, OPPONENT), SV, string, key

- FO_STAFF (Front Office)
    - NAME: simple, SV, string, weak key attribute
    - SALARY: simple, SV, real
    - Role: simple, SV, string

Relationships:

- PLAYS_FOR
    - N:1 relationship.
    - Many players can play for one team. A player can only play for one team.
    - PLAYER has total participation, TEAM has total participation (a player must be in a team and a team must have players).
- WORKS_FOR
    - 1:N relationship.
    - A team may have one or more FO_STAFF, and a FO_STAFF can only work for one team.
    - Total participation for FO_STAFF and TEAM.
- PLAYS_IN
    - M:N relationship.
    - A PLAYER can play several games, and a GAME is played by several players.
    - PLAYER has partial participation (a player may not play in a game). GAME has total participation (each GAME must have players playing).
- CONTESTS
    - 1:N relationship.
    - A TEAM plays several games, and a GAME has one TEAM (as well as the opponent attribute in the GAME).
- COACHES
    - 1:1 relationship.
    - Every team has a coach, every coach has a team.
    - Total participation for TEAM and COACH.

ER Diagram



Teamwork Summary:

As I was in a group by myself, I completed all of the work individually. I found it challenging to make sure that all of the requirements were fulfilled by being selective with certain attributes and understanding relationships differently than how I see them from my perspective.