



**Team name:** Younglings

**Reason:** Because we are young apprentices and Anakin's greatest threat.

**Team Members:**

- Joshua Serna
- Zhiwei Ruan
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- Cooper Brown
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**THEME**

Sports have a big part in people's lives and culture. Sports are also big spectacles of human invention, with large competitions and tournaments that require detailed organization to provide a great environment for the audience and players. We will lay the groundwork for designing a database for the NBA.

**Employee-**

Player- a person who plays in a game representing a team.

Coach- a person who provides guidance, training, and direction for a team.

Staff- a person belonging to a team.

Referee- a person who officiated the game.

Owner- a person who owns the franchise.

**Broadcasting Team-** a team of people who are responsible for televising a game( weak)

Camera Operator- a person who operates camera

Commentator- a person who commentates on the game.

Production Crew- part of the broadcasting team.

**NBA**

Franchise- an organization competing in a league.

Sponsor- an organization that partners with a team or league.

Security- an organization providing security for a venue.

**LOCATIONS**

Venue- The place where the match will take place.

Training Facility- A place where a team practices

## SEASONS

Regular Season- a collection of competitive games

Game- a single non playoff meeting between two teams

Playoffs- a tournament played after the regular season by the best teams

Finals- the last match played in the playoffs to determine the champion

## Service

Tickets - a ticket to watch a game live.

Streaming- watch the game live via an online Streaming broadcast.

Cable- watch the game live via Cable TV broadcast.

SeasonPass- can watch both online via App or live for a specific team.

## Assumption:

- Staff is anyone other than a player, or coach of a team.
- The only accepted payment methods are cash, cryptocurrency, and credit cards.
- The only way to view a game is through live at a venue, streaming, cable, or seasonPass.
- Sponsors can sponsor many teams.
- There are only three ways to pay in our mini-world: cash, crypto, credit card.
- Franchise is a single team in the NBA.
- The Broadcast Team should be a weak entity because it's a unique team created by Franchise and only televises them.
- Each team name is unique and can only belong to one team
- Medical staff and staff are not related in the franchise structure.
- Each franchise televises their own game.
- Staff can be cheerleaders, waterboys, and cleaning staff.
- Broadcasting is based on local channels for each team.
- A coach is not a staff member.
- The production crew only uses one software
- An owner is an employee as he receives financial compensation
- The production crew is not employed by the NBA or a franchise.
- Two teams can only play each other once a day
- Season tickets will only be offered by some teams but not all teams.

## Entity Dictionary

### Entity: Broadcast Team

- **Description:**
  - The team responsible for transmitting the game on TV.
- **Attributes:**
  - name: VarChar(80), the name of the broadcasting team
  - teamSize: Integer, the number of teams members in the team
  - Primary Key: teamName, inherits from Franchise

### ~~Entity: Cable~~

- ~~● **Description:**
  - A type of service that transmits the game live to a TV.~~
- ~~● **Attributes:**
  - Channel Name: VarChar(40), the name of the channel that the NBA game is being shown on
  - Primary Key: TaxID, inherits from Service~~

### Entity: Camera Operator

- **Description:**
  - An operator of the cameras which broadcast the game
- **Attributes:**
  - Camera\_Type: VarChar(40), the camera equipment used by the operator
  - Primary Key: teamName, inherits from Franchise

### Entity: Coach

- **Description:**
  - Person responsible for creating strategies and instructing players.
- **Attributes:**
  - Experience: Integer, the number of year a coach has been a coach
  - Primary Key: employeeID, inherits from Employee

### Entity: Commentator

- **Description:**
  - Person responsible for providing live commentary of a game.
- **Attributes:**
  - Mic\_Type: VarChar(40), the microphone equipment used by the commentator
  - Primary Key: teamName, inherits from Franchise

### Entity: Company

- **Description:**
  - The company that sponsors many franchises
- **Attributes:**
  - name: VarChar(80), name of the sponsor company.
  - sponsorshipAmount: Integer, the amount of sponsorship money to a franchise
  - taxID: Integer, the tax id of the company
  - Primary Key: taxID

### Entity: Employee

- **Description:**
  - The person that will be employed by a franchise or the NBA league
- **Attributes:**
  - Date\_Of\_Birth: Date, the date of birth of an employee
  - employeeID: Integer, the unique ID number for an employee
  - Name: Compound attribute, legal name consisting of first and last name
    - First: VarChar(40), the legal first name of an employee
    - Last: VarChar(40), the legal last name of an employee
  - Sex: VarChar(6), the gender of the employee
  - Primary Key: employeeID

### Entity: Franchise

- **Description:**
  - The team competing in the NBA.
- **Attributes:**
  - Location: Compound attribute, the location of the NBA franchise consisting of a city and state
    - City: VarChar(40), the city that the NBA franchise is located in
    - State: VarChar(40), the state that the NBA franchise is located in
  - Num\_Championships: Integer, the number of championships won by an NBA franchise
  - Team\_Name: The unique name of the NBA franchise
  - Primary Key: Team\_Name

### Entity: NBA

- **Description:**

- The league which comprises the franchises and by which the tournament will be played.
- **Attributes:**
  - TaxID: [Integer](#), the tax ID for the National Basketball Association
  - Primary Key: TaxID

#### Entity: Owner

- **Description:**
  - A person that owns an NBA franchise and has control over who is hired.
- **Attributes:**
  - Ownership\_years: Integer, the number of years the owner has maintained ownership of a franchise
  - Primary Key: employeeID, inherits from Employee

#### Entity: Player

- **Description:**
  - Person that is part of a franchise and plays in games.
- **Attributes:**
  - Height- Integer, the height of a player in inches
  - ~~Name- VarChar(80), the name of the player~~
  - Rating- Integer, the rating of a player, out of 99
  - Rings- Integer, the number of rings a player has
  - Primary Key: employeeID, inherits from Employee

#### Entity: Production Crew

- **Description:**
  - Group of people responsible for filming, editing, commentating, and broadcasting an NBA game.
- **Attributes:**
  - Production\_Software: VarChar(40), the software used by the production crew to broadcast the game
  - Primary Key: teamName, inherits from Franchise

#### Entity: Referee

- **Description:**
  - Person responsible for inspecting equipment before the game, enforcing rules of the game in real-time.

- **Attributes:**

- Number\_of\_games: Integer, the number of games a referee officiates
- Primary Key: employeeID, inherits from Employee

**Entity:** Season Pass

- **Description:**

- A subscription that gives access to live and on-demand games on their phones and TVs.

- **Attributes:**

- ~~○ Video Quality: Integer, the quality of the video being shown to viewers~~
- year: Integer, the year the season pass is valid for.
- Primary Key: TaxID, inherits from Service

**Entity:** Season Ticket

- **Description:**

- A collection of tickets to enter a venue to watch a game live

- **Attributes:**

- ~~○ Service Name: VarChar(40), the name of the streaming service where fans can watch games~~
- teamName: VarChar(40), the name of the team that the season ticket is for
- Primary Key: TaxID, inherits from Service

**Entity:** Seasons

- **Description:**

- A collection of regular season and postseason games that are played to determine the champion.

- **Attributes:**

- ~~○ Playoffs: Compound Attribute, postseason elimination tournament to determine the champion
  - ~~Finals: VarChar(40), the annual championship series to determine the winner of the NBA playoffs~~
  - ~~Tournament: VarChar(40), an elimination tournament that occurs after the regular season~~~~
- ~~○ Regular Season: Compound Attribute, a collection of games to determine playoff rankings~~

~~■ Game: VarChar(80), a single game before the postseason between two NBA franchises~~

- Finals: Boolean, whether the current game is the championship game
- Game: Compound Attribute, a match between two teams/franchises
  - gameDate: Date, the date that the game is played
  - team1Name: VarChar(40), name of first team in the match
  - team2Name: VarChar(40), name of second team in the match
- Playoffs: Boolean, whether the current game is a playoff game
- Season\_Num: Integer, chronological order identifying each NBA season
- year: Integer, the calendar year that the season is being played in.
- Primary Key: Season\_Num

**Entity: Service**

- **Description:**
  - A method of televising NBA games.
- **Attributes:**
  - ~~○ Length\_Of\_Contract: Integer, the number of years a service has a contract with the NBA~~
  - Price: Integer, the cost of buying one service.
  - TaxID: Integer, the tax ID for the service
  - Primary Key: TaxID

**Entity: Staff**

- **Description:**
  - A person employed by a franchise other than player or coach.
- **Attributes:**
  - Role- VarChar(80), the role the staff is doing
  - Primary Key: employeeID, inherits from Employee

**Entity: Streaming Service**

- **Description:**
  - An online provider of NBA game streams that are available on a yearly plan.
- **Attributes:**
  - ~~○ Service Name: VarChar(40), the name of the streaming service where fans can watch games~~



- streamPlatform: VarChar(40), the name of the streaming service where fans can watch games.
- Primary Key: TaxID, inherits from Service

### **Relationship Dictionary**

#### **Relationship: Consists Of**

- **Description:**
  - The NBA consists of many franchises. All of the franchises make up the NBA.
- **Entities:** Franchise, NBA
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Partial to Partial

#### **Relationship: Contracts**

- **Description:**
  - The NBA has a contract with a service provider. The service provider is contracted by the NBA.
- **Entities:** NBA, Service
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Partial to Partial

#### **Relationship: Fran\_Employs**

- **Description:**
  - The franchise employs an employee. The employees are employed by the NBA.
- **Entities:** Employee, Franchise
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Partial to Partial

#### **Relationship: Hosts**

- **Description:**
  - The NBA hosts many seasons. Each season is hosted by the NBA.
- **Entities:** NBA, Seasons
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Partial to Partial

**Relationship: NBA\_Employs**

- **Description:**
  - The NBA employs an employee. The employees are employed by the NBA.
- **Entities:** Employee, NBA
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Partial to Partial

**Relationship: Sponsors**

- **Description:**
  - A company sponsors a franchise. A franchise is sponsored by a company.
- **Entities:** Company, Franchise
- **Cardinality:** M:N (Many to Many)
- **Participation:** Partial to Partial

**Relationship: Televises**

- **Description:**
  - The broadcasting team televises/transmits the game.
- **Entities:** Broadcasting Team, Franchise
- **Cardinality:** M:1 (Many to 1)
- **Participation:** Total Participation to Partial