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In this project we have decided to make a database of a sports team, specifically for a basketball team. The model is mostly based on an the features of an NBA team. The focus of a basketball team database is the team itself. A team is the most important entity of the E/R diagram. In the NBATeam entity, it includes the attribute conference and the key attribute teamName.

In a basketball team database, people usually would like to query the followings:

a) *Games the NBA team has played through the season or the team history.*
b) *The owner or people that own the teams, including the management team.*
c) *The coaching staff on a team.*
d) *Team statistics of the team history.*
e) *Last of all, the NBA players that play on the team.*

We will discuss the entity in order in the following.

a) In the NBAGame entity set we included the attributes of homeTeam, date, awayTeam, and score. The first two attributes are the keys for the entity set. We chose date and home-Team as key attribute due to the fact that most Home Teams keep the records of the games that was played on there court.

b) Owners and management team are always one of the most important aspect of a team. This is the reason that we included it into the database. In this entity, Owner, we have ownerName, companyName, and type as the attributes. The ownerName is the key attribute for this entity set. The type attribute is to distinguish the different role of the management team from general manager to scouts.

c) Coaching staff are another important aspect of the team. A good coaching staff can bring a team to their best status, while a mediocre coaching staff can ruin a team. We included coachName, type, previousPosition, and experience as the attributes in this entity set, while taking coachName and type together as the key attribute. The type attribute is the role that the particular coaching staff has on the team. This may include the head coach, assistant coach, trainers, or any other staffs that may be on the team. The previousPosition is the attribute that records the previous coaching role the person was. This attribute is important because people may want to know the work they have been doing before the became the staff here. The experience attribute shows the years that the staff has worked on this expertise.

d) The entity teamStatistics has the attributes of year and record. This is a weak entity, since we do not have attribute(s) that can differentiate the members of the entity set. So we need the key of NBATeam which is teamName and the year attribute of teamStatistics to form the key attribute.

e) Last but not least, the NBAPlayer entity set which is the most sophisticated schema. The NBAPlayer entity set includes the attributes playerName, jerseyNo, birthDate, Height, Weight, nationality and education. The keys of this entity set is composed by playerName, jerseyNo, and birthDate. The education attribute shows the University or the last level of school the player previously attended. If the player is an international player, then it will show the nationality of the player in the nationality attribute. The NBAPlayer entity set has two other relationship with two other entity set, one of them is the sportCompany that the player endorses and the other one is playerStatistics. In the sportCompany entity set, the attributes are phoneNo, headquarter, companyName, and companyNo that they have registered. The companyNo is the key attribute for the entity set. The playerStatistics has the basic attributes that people would want to query, this includes Points per game (PPG), Rebounds per game (RPG), Assists per game (APG), Blocks per game (BPG), Steals per game (SPG), and the year that the users wants to query. Since this is a weak entity, the NBAPlayer entity set's key and the Year attribute of playerStatistics forms the key attribute for playerStatistics.

Most of the basic information are included in this database and hopefully the informations are all in a precise hierarchy order.