

Domain Description & Data Source

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Domain Description: National Basketball Association (NBA) statistics for players and teams during the 2017-2018 season. We plan on creating approximately 8 tables in our database, including *PlayerRawStats*, *PlayerAdvStats*, *TeamRawStats*, and *TeamAdvStats* for the regular season, and a similar group of tables for the playoffs. Raw statistics include totals across the season, and advanced statistics require calculations to be made. There may be additional tables for Raw Player Stats, Aggregate Player Stats, Playoff Averages, Playoff Raw Stats, etc.

Questions:

- Question 1: Which players have averaged 25 or more points per game?
- Question 2: Which player has the most free throw (FT) attempts on each team?
- Question 3: Of the players that have the most free throw attempts (FTA) on each team, what is each of their free throw percentages?
- Question 4: What are the top ten teams with the highest field goal attempts (FGA), in order from highest to lowest?
- Question 5: What are the top ten teams with the highest effective field goal percentages (EFG%), in order from highest to lowest?
- Question 6: On average, how many turnovers did a particular team commit?
- Question 7: On average, how often did each team foul their opponent?
- Question 8: Which teams' assists on field goals percentage is more than 50%?
- Question 9: On average, which teams scored the most free throws?
- Question 10: Which teams had the highest number of personal fouls in a season, on average?
- Question 11: Which player played on the most teams?
- Question 12: Which player had the highest assist to turnover ratio?
- Question 13: What was the oldest team in the league?
- Question 14: What were the 25 highest scoring players under 25?
- Question 15: Who was the most time efficient scorer in the league?

- Question 16: What players played less than or equal to half the season but scored over 15 points a game?
- Question 17: Who has the highest +/- on each team?
- Question 18: Which team had the most minutes in overtime?
- Question 19: Which team averaged the most turnovers in the playoffs?
- Question 20: How many players averaged between 10 and 20 points per game?

Data Source: We intend to use online resources to obtain data on NBA players and teams. Specifically, <https://www.basketball-reference.com> is an excellent resource for basketball statistics. To ingest the data, we can export the tables as CSV (for Excel) from the website. Then we can create a temporary table with the same attributes as the CSV file, and copy the rows from the CSV into the temporary table using the following command:

```
COPY table_name FROM '/path_to_csv_file.csv' DELIMITERS ',' CSV
```

Finally, we can insert the data (from the temporary tables created) that we want to store in our database using insert statements.