

CSE 111 Project Report

Functionality:

Create a database that holds 2018 NBA statistics on teams and players to allow users to search for their favorite player or team. Allowing users to see how well their team did in the 2018 NBA Season. Users have the ability to sort through a variety of statistics including wins, losses, points, and field goal percentage. Users can see who went to the playoffs and how well each team did and find out who actually won the 2018 NBA Finals. Users can click on individual Team pages and look at their matchups and even see every state the team used to be in All time.

What was used:

Used a sqlite3 database was used as the back-end of our application.

Django was used to create a web application that can communicate with the back end to display all the required information.

We used python as the main language and also created html and css files. All queries can be found in views.py.

How it was Built:

Django was used to make the web application and we built different html files in order to display the data. Views were used to execute the SQL Queries for the database and the views would then transfer the collected data to the html file for displaying.

E/R Diagram:

Our 2 many-to-many relationships involve: (Locations, teamLocations, Team) and (Matchup, teamMatchup, Matchup) we needed three tables for each many-to-many relationship in order to properly get and manipulate the data correctly. Other tables like division and conference are used to group and divide the teams based on either one.

Use Cases:

- 1) Search Teams and Stats - Search for any NBA Team and see how they did in 2018.
- 2) Compare Teams by Matchups - Compare Heads up Matchups between different teams in 2018.
- 3) Find Playoff Teams - Find the teams who went to the 2018 NBA Playoffs and how they did.
- 4) Find out who won 2018 Championship- Find the 2018 NBA Champion.
- 5) Search Players and Stats - Search for certain players and Look at Stats for 2018.
- 6) Find Out Locations Team Played In - Find out all States team has played for over the years.

Division
DivisionID
DivisionName

Conference
ConferenceID
Conference Name

TeamMatchup
TeamMatchupID
matchupID
TeamA_ID
TeamB_Name

Team
TeamID
Name
Loss
Wins
W/L Ratio
FGP
3PP
Conference ID
Divison ID
ABR

Matchup
MatchupID
Team A ID
Team B Name
team A Name
team A Result
Team B result
date

Team Locations
TeamLocID
Team ID
Location ID
From Year
To Year

Player
PlayerID
Name
Points
Assists
Age
FGP
3PP
Minutes
Rebounds
ABR

Playoffs
PlayoffID
Team ID
Playoff Wins
Playoff Losses
WonChampionship

Locations
LocationID
State