

NBA Stats App

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Application Description: Our application is a web application that provides up-to-date statistics on NBA basketball players and their teams. The application provides a simple and clean UI design allowing users to search for specific statistics of NBA players and teams. They can also sort players and teams by certain statistics to find the best performers, giving users information to make well informed fantasy basketball picks. Each team has seven statistics to present a knowledgeable idea of their performance, while players can have up to 23 statistics of their performance, from injury status to minutes played per game. We get updated NBA statistics from a JSON based API from *MySportsFeed.com* that is updated at deployment of the application. The application runs on an Apache server. PHP load functions parse the JSON file and load our PostgreSQL database with the desired statistics. The application deploys PHP, JQUERY and Bootstrap to share data on the front-end. PHP functions are used to query the PostgreSQL databases based off desired statistics from the user and sends the data to JQUERY which creates HTML objects with Bootstrap style. The application can be run on a user's local machine.

teamsTable contains all the teams in the NBA with the following information stored as columns. The underlined attribute, teamID, is the primary key for the team.

teamsTable(teamID, teamCity, teamName, teamAbbreviation, ptsPerGame, ptsAgainstPerGame, wins, losses, plusMinusPerGame, fgAttPerGame, possessionsPerGame)

playersTable contains all the players in the NBA with the following information stored as columns. The underlined attribute, playerID, is the primary key for each player.

playersTable(playerID, firstName, lastName, primaryPosition, currentTeamID, currentTeamAbbrev, injuryStatus, gamesPlayed, fgAttPerGame, fgPct, fg2PtAttPerGame, fg2PtAttPerGame, fg2PtPct, fg3PtAttPerGame, fg3PtPct, ftAttPerGame, ftPct, rebPerGame, offRebPerGame, defRebPerGame, astPerGame, ptsPerGame, tovPerGame, stlPerGame, blkPerGame, plusMinusPerGame, minutesPlayedPerGame, trueShootingPct, PER, imageURL)

Assumptions about Data Being Model

- Our assumptions here primarily rest on the fact that we assume the data that our API requests from MySportsFeed are correct, updated, and valid; if for instance, the MySportsFeeds assigns the same playerID to two different players, one of them may not exist in our database
- This also means that we assume that the composition of our database matches the composition of the API -> each time we update our database, which occurs when the app is deployed, we will have all the teams and players returned by the API call. This means that when a player is sent to the G-League or cut, he will still appear in our NBA database provided he has been in the NBA at one point in the season
- Additionally, we assume that the imageURLs provided by the API are correct – it's possible that the MySportsFeed API puts in the wrong URL for the wrong player, leading to a mismatched image on our website.
- We also assume that the number of teams in the NBA never changes and the same teams remain with the same names and logos because the logos for the team are put in manually with links that we derived rather than from the API because MySportsFeeds has not added team logos to its API

