# NBA infromation query and management system based on Php and MySQL

Chang Zhou and Jiang Song

04/21/2016

# Introduction

- NBA has world-wide influence and hundreds of millions of fans.

- NBA fans need an easy way to query NBA information.

- Database administrators require an easy way to maintain NBA data.

- We designed and inplemented an easy-to-use website which can be used to query and maintain NBA data.

# Requirements

- By Administrator:

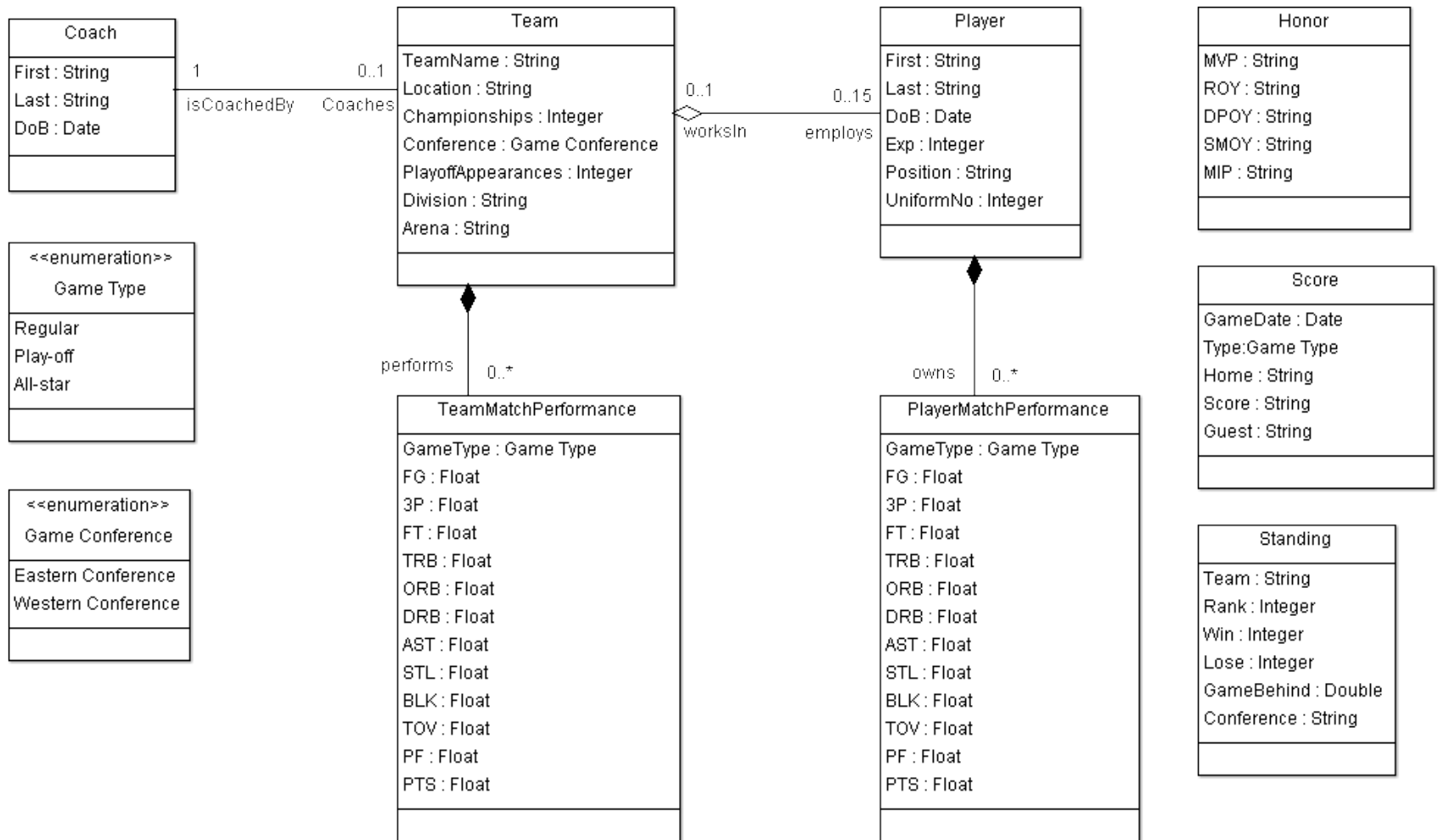| Query teams | Query players | Delete a player |
|---|---|---|
| Insert a player | Update the performance of a player | Insert the performance of a player |
| Update the performance of a team | Update the coach of a team | Insert the honor of a player |

- By User:

| Query teams | Query players | Query coaches |
|---|---|---|

- Addtional:

| Query schedules&scores | Update schedules&scores | Query standings |
|---|---|---|

# Design

# Database and data resource-1

- MySQL: phpMyAdmin

Databases

Create database

| NBA | Collation ▲▼ | **Create** |

- Create tables

Create table

Name: Player    Number of columns: 8 ⬍

| **Name** | **Type** ❓ | **Length/Values** ❓ |
|---|---|---|
| id | INT ▲▼ | 20 |
| Pick from Central Columns | | |
| Name | VARCHAR ▲▼ | 255 |

# Database and data resource-2

- NBA data from http://www.basketball-reference.com



- Import the data into the database: Select one table→Import→Choose File→Format: CSV using LOAD DATA→Columns separated with: ","→Use LOCAL keyword→Go

# Discussion

- Examples of query a player

# Use case: query a player

**NBA Players**                     Home    Teams    Coaches    Scores&Schedules    Standings    Honors

**Enter Player Name:** [james]  [Search]

© 2016 NBA

**NBA Players**                     Home    Teams    Coaches    Scores&Schedules    Standings    Honors

**Enter Player Name:** [        ]  [Search]

**Players Search Results**

| Name | BirthDate | NBAYears | Position | Team | Uniform Number |
|------|-----------|----------|----------|------|----------------|
| James Johnson | 1987-02-20 | 6 | PF | Toronto Raptors | 3 |
| James Young | 1995-08-16 | 1 | SG | Boston Celtics | 13 |
| LeBron James | 1984-12-30 | 12 | SF | Cleveland Cavaliers | 23 |
| James Jones | 1980-10-04 | 12 | SF | Cleveland Cavaliers | 1 |
| James Michael McAdoo | 1993-01-04 | 1 | PF | Golden State Warriors | 20 |
| James Anderson | 1989-03-25 | 4 | SG | Sacramento Kings | 5 |
| James Harden | 1989-08-26 | 6 | SG | Houston Rockets | 13 |
| James Ennis | 1990-07-01 | 1 | SF | New Orleans Pelicans | 4 |

© 2016 NBA

**NBA PLAYER STATS**         Home    Teams    Players    Coaches    Scores&Schedules    Standings    Honors

**LeBron James 2015-16 SEASON**

**Per Game**

| Game Type | FG% | 3P% | FT% | TRB | ORB | DRB | AST | STL | BLK | TOV | PF | PTS |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Regular | 0.514 | 0.293 | 0.728 | 7.5 | 1.4 | 6 | 6.8 | 1.4 | 0.6 | 3.3 | 1.9 | 25 |

© 2016 NBA

# Use case: update team performance-1

**NBA STATS Admin**

## Manage Teams

| | | | | | |
|---|---|---|---|---|---|
| Boston Celtics | Dallas Mavericks | Chicago Bulls | Denver Nuggets | Atlanta Hawks | Golden State Warriors |
| Brooklyn Nets | Houston Rockets | Cleveland Cavaliers | Minnesota Timberwolves | Charlotte Hornets | Los Angeles Clippers |
| New York Knicks | Memphis Grizzlies | Detroit Pistons | Portland Trail Blazers | Miami Heat | Los Angeles Lakers |
| Philadelphia 76ers | New Orleans Pelicans | Indiana Pacers | Oklahoma City Thunder | Orlando Magic | Phoenix Suns |
| Toronto Raptors | San Antonio Spurs | Milwaukee Bucks | Utah Jazz | Washington Wizards | Sacramento Kings |

## Manage Players

**Enter Player Name:** [                    ] [ Search ]

## Manage Scores

**Enter Game Date:** [                    ] [ Search ]

# Use case: update team performance-2

**Boston Celtics Admin**

### Boston Celtics INFO 2015-16

| Conference | Division | Arena | Location | Playoffs | Champions | Head Coach |
|---|---|---|---|---|---|---|
| Eastern | Atlantic | TD Garden | Boston, Massachusetts | 53 | 17 | Brad Stevens |

**Enter New Coach Info:** | Brad | Stevens | 1976-10-22 | Update |

### Boston Celtics STATS 2015-16

| Game Type | FG% | 3P% | FT% | TRB | ORB | DRB | AST | STL | BLK | TOV | PF | PTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regular | 0.439 | 0.333 | 0.788 | 45.2 | 11.7 | 33.5 | 24.1 | 9.3 | 4.2 | 13.5 | 22 | 105.6 |
| Playoff | 0.422 | 0.256 | 0.775 | 40.8 | 10 | 30.8 | 20 | 5.3 | 3.8 | 13.5 | 26.8 | 94.8 |
| Playoff | 0.422 | 0.256 | 0.775 | 40.8 | 10 | 30.8 | | | | | | |
| 20 | 5.3 | 3.8 | 13.5 | 26.8 | 94.8 | Update | Insert | | | | | |

### Boston Celtics Players List

| Name | BirthDate | NBAYears | Position | Uniform Number |
|---|---|---|---|---|
| Avery Bradley | 1990-11-26 | 5 | SG | 0 |
| Jared Sullinger | 1992-03-04 | 3 | PF | 7 |
| Tyler Zeller | 1990-01-17 | 3 | C | 44 |
| Kelly Olynyk | 1991-04-19 | 2 | C | 41 |
| Isaiah Thomas | 1989-02-07 | 4 | PG | 4 |
| Marcus Smart | 1994-03-06 | 1 | PG | 36 |

**NBA STATS Admin**

Update complete!

# References

- [1] https://en.wikipedia.org/wiki/National_Basketball_Association
- [2] https://www.codecademy.com/learn/make-a-website
- [3] http://www.w3schools.com/php/
- [4] https://www.apachefriends.org/index.html
- [5] http://www.basketball-reference.com