

Basketball League Database System

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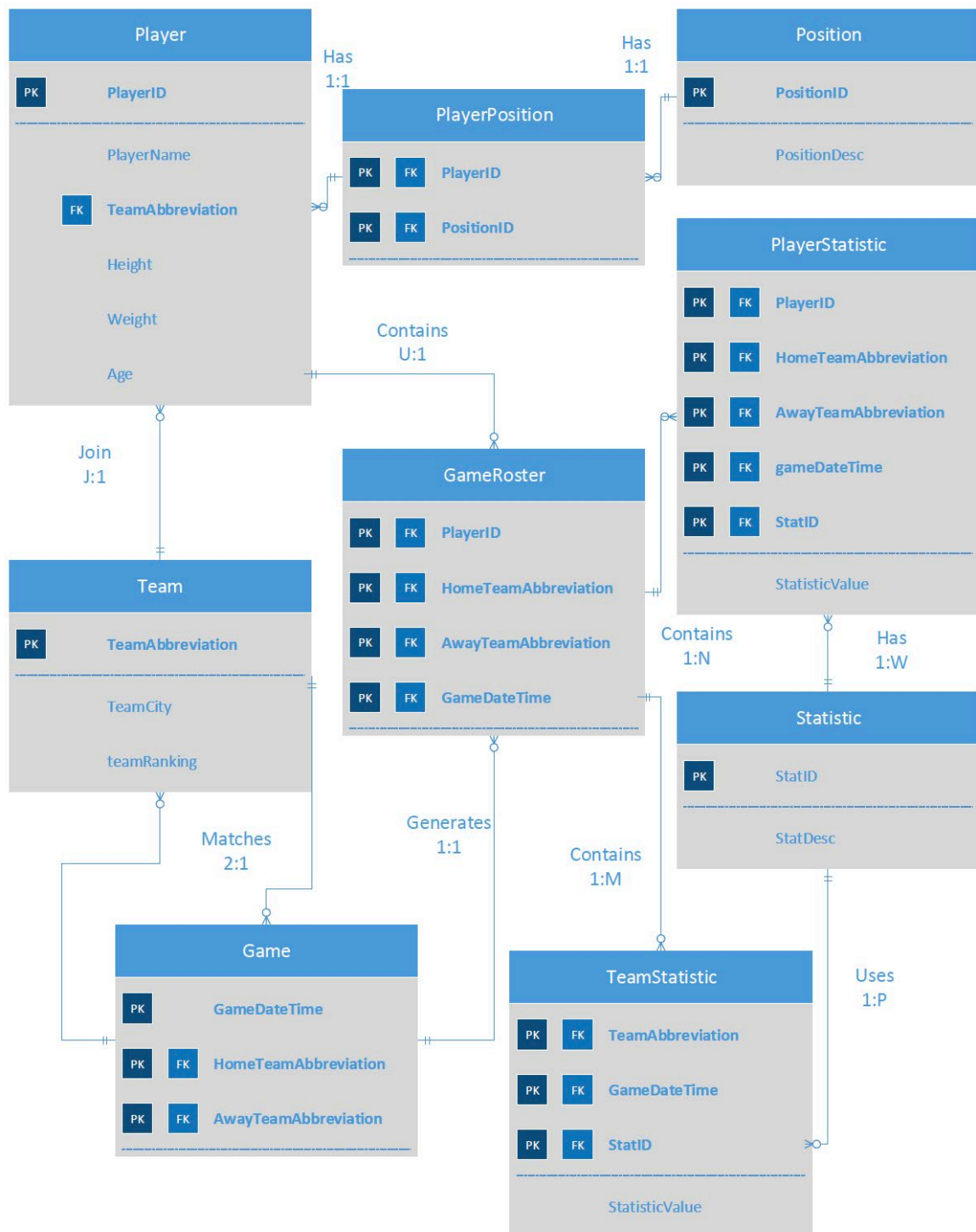
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Section II: A Project Summary

The project is about designing a database system for the NBA. There are 30 teams and over 400 players in this league. Every year, NBA holds regular season and playoff games. Players and teams who have great game performance are more likely to become famous and earn more from endorsement deals. Therefore, sponsors, game analytics, and fans are trying to evaluate and compare the players and teams all the time. Team that did not do well in the previous tournaments may consider recruit star players from other teams. Nevertheless, currently, the information of the game, team, and player is kept manually and separately, which makes it difficult for people to receive comprehensive, accurate, and up-to-date information about these players and teams.

Therefore, we try to solve this problem by creating a model to efficiently house statistics that one could use. The relational database contains information of the players, player's overall statistics, teams, and games. By accessing the database, fans can enjoy debating about who are the best players, sponsors can target on the players that may become the next star, and teams design specific transfer strategy.

Section III: Physical Model



Section IV: Data Dictionary

Entities and Attributes	Description
PLAYER	
PlayerID	Primary Key
TeamAbbreviation	Foreign Key
PlayerName	
Height	
Weight	
Age	
PlayerPosition	Position the player is assigned to
PlayerID	Primary Key; Foreign Key
PositionID	Primary Key; Foreign Key
Position	Position information
PositionID	Primary Key
PositionDesc	Description of the position
Statistic	Statistic information
StatID	Primary Key
StatDesc	Description of the statistic
PlayerStatistic	Statistic Player gets during a game
StatsID	Primary Key; Foreign Key
HomeTeamAbbreviation	Primary Key; Foreign Key
AwayTeamAbbreviation	Primary Key; Foreign Key
PlayerID	Primary Key; Foreign Key
GameDateTime	Primary Key; Foreign Key
StatisticValue	Value of the statistic
TeamStatistic	Statistic Team gets during a game
StatsID	Primary Key; Foreign Key
TeamAbbreviation	Primary Key; Foreign Key
GameDateTime	Primary Key; Foreign Key
StatisticValue	Value of the statistic
TEAM	Details of a Basketball Team
TeamAbbreviation	Primary Key
TeamCity	Origin city of the team
TeamRanking	Ranking of the team in the league
GAME	Details of the Basketball Game
GameDateTime	Primary Key
HomeTeamAbbreviation	Primary Key; Foreign Key
AwayTeamAbbreviation	Primary Key; Foreign Key
GameRoster	Roster of the game
GameDateTime	Primary Key; Foreign Key
HomeTeamAbbreviation	Primary Key; Foreign Key
AwayTeamAbbreviation	Primary Key; Foreign Key
PlayerID	Primary Key; Foreign Key

Section V: Database System Infrastructure

We use the following tools to implement the Basketball Database Project:

1. MS Visio: entity-relationship visualization
2. SQL Server: table creation, data insertion, data questions answering through SQL queries
3. MS Access: interface creation, including forms and reports

Section VI: SQL Script for Creating Tables and Inserting Sample Data

Create Table Statements

```
CREATE TABLE Team
(
    TeamAbbr VARCHAR (5) NOT NULL PRIMARY KEY,
    TeamCity VARCHAR (20) NOT NULL,
    TeamRanking INTEGER NOT NULL
);

CREATE TABLE Player
(
    PlayerId INTEGER NOT NULL PRIMARY KEY,
    PFName VARCHAR (20) NOT NULL,
    PLName VARCHAR (20) NOT NULL,
    TeamAbbr VARCHAR (5) NOT NULL FOREIGN KEY REFERENCES Team (TeamAbbr),
    Height DECIMAL(5,2) NOT NULL,
    Weight DECIMAL(5,2) NOT NULL,
    AGE INTEGER NOT NULL
);

CREATE TABLE Position
(
    PositionId INTEGER NOT NULL PRIMARY KEY,
    PositionDesc TEXT
);

CREATE TABLE PlayerPosition
(
    PlayerId INTEGER NOT NULL,
    PositionId INTEGER NOT NULL,

    CONSTRAINT PlayerPosition_PK PRIMARY KEY (PlayerId, PositionId),
    CONSTRAINT PlayerPosition_FK1 FOREIGN KEY (PlayerId) REFERENCES
Player(PlayerId),
    CONSTRAINT PlayerPosition_FK2 FOREIGN KEY (PositionId) REFERENCES
Position(PositionId),
);

CREATE TABLE Game
(
    GameDateTime DateTime NOT NULL,
    HomeTeamAbbr VARCHAR (5) NOT NULL,
    AwayTeamAbbr VARCHAR (5) NOT NULL,
```

```

    CONSTRAINT Game_PK PRIMARY KEY (GameDateTime),
    CONSTRAINT Game_FK1 FOREIGN KEY (HomeTeamAbbr) REFERENCES Team(TeamAbbr),
    CONSTRAINT Game_FK2 FOREIGN KEY (AwayTeamAbbr) REFERENCES Team(TeamAbbr),
);

CREATE TABLE Statistic
(
    StatID INTEGER NOT NULL PRIMARY KEY,
    StatDesc TEXT
);

CREATE TABLE TeamStatistic
(
    TeamAbbr VARCHAR(5) NOT NULL,
    GameDateTime DateTime NOT NULL,
    StatID Integer NOT NULL,
    StatisticValue INTEGER,

    CONSTRAINT TeamStatistic_PK PRIMARY KEY (TeamAbbr, GameDateTime, StatID),
    CONSTRAINT TeamStatistic_FK1 FOREIGN KEY (TeamAbbr) REFERENCES
Team(TeamAbbr),
    CONSTRAINT TeamStatistic_FK2 FOREIGN KEY (GameDateTime) REFERENCES
Game(GameDateTime),
    CONSTRAINT TeamStatistic_FK3 FOREIGN KEY (StatID) REFERENCES
Statistic(StatID)
);

CREATE TABLE GameRoster
(
    PlayerID INTEGER NOT NULL,
    GameDateTime DateTime NOT NULL,
    HomeTeamAbbr VARCHAR(5) NOT NULL,
    AwayTeamAbbr VARCHAR(5) NOT NULL,

    CONSTRAINT GameRoster_PK PRIMARY KEY (PlayerID,
GameDateTime, HomeTeamAbbr, AwayTeamAbbr),
    CONSTRAINT GameRoster_FK1 FOREIGN KEY (PlayerID) REFERENCES
Player(PlayerId),
    CONSTRAINT GameRoster_FK2 FOREIGN KEY (GameDateTime) REFERENCES
Game(GameDateTime),
    CONSTRAINT GameRoster_FK3 FOREIGN KEY (HomeTeamAbbr) REFERENCES
Team(TeamAbbr),
    CONSTRAINT GameRoster_FK4 FOREIGN KEY (AwayTeamAbbr) REFERENCES
Team(TeamAbbr)
);

CREATE TABLE PlayerStatistic
(
    PlayerId INTEGER NOT NULL,
    GameDateTime DateTime NOT NULL,
    HomeTeamAbbr VARCHAR(5) NOT NULL,
    AwayTeamAbbr VARCHAR(5) NOT NULL,
    StatID Integer NOT NULL,
    StatisticValue INTEGER,

    CONSTRAINT PlayerStatistic_PK PRIMARY KEY (PlayerId, GameDateTime,
HomeTeamAbbr, AwayTeamAbbr, StatID),
    CONSTRAINT PlayerStatistic_FK1 FOREIGN KEY (PlayerId) REFERENCES
Player(PlayerId),

```

```

    CONSTRAINT PlayerStatistic_FK2 FOREIGN KEY (GameDateTime) REFERENCES
Game (GameDateTime),
    CONSTRAINT PlayerStatistic_FK3 FOREIGN KEY (HomeTeamAbbr) REFERENCES
Team (TeamAbbr),
    CONSTRAINT PlayerStatistic_FK4 FOREIGN KEY (AwayTeamAbbr) REFERENCES
Team (TeamAbbr),
    CONSTRAINT PlayerStatistic_FK5 FOREIGN KEY (StatID) REFERENCES
Statistic (StatID)
);

```

Insert Data Statements

```

INSERT INTO Team VALUES ('Wiz', 'Washington', '21');
INSERT INTO Team VALUES ('Jazz', 'Salt Lake City', '12');
INSERT INTO Team VALUES ('Celt', 'Boston', '6');
INSERT INTO Team VALUES ('Lak', 'Los Angeles', '1');
INSERT INTO Team VALUES ('Pist', 'Detroit', '23');
INSERT INTO Team VALUES ('Bull', 'Chicago', '25');
INSERT INTO Team VALUES ('Warr', 'San Francisco', '30');
INSERT INTO Team VALUES ('76ers', 'Philadelphia', '8');
INSERT INTO Team VALUES ('Knic', 'New York City', '28');
INSERT INTO Team VALUES ('Kings', 'Sacramento', '16');
INSERT INTO Team VALUES ('Spur', 'San Antonio', '22');
INSERT INTO Team VALUES ('Nets', 'New York City', '14');
INSERT INTO Team VALUES ('Caval', 'Cleveland', '27');
INSERT INTO Team VALUES ('Thund', 'Oklahoma City', '19');
INSERT INTO Team VALUES ('Hawk', 'Atlanta', '29');
INSERT INTO Team VALUES ('Rock', 'Houston', '9');

INSERT INTO Position VALUES (1, 'Point Guard');
INSERT INTO Position VALUES (2, 'Shooting Guard');
INSERT INTO Position VALUES (3, 'Small Forward');
INSERT INTO Position VALUES (4, 'Power Forward');
INSERT INTO Position VALUES (5, 'Center');

INSERT INTO Player VALUES (1, 'John', 'Wall', 'Wiz', '6.33', '210', 29);
INSERT INTO Player VALUES (2, 'Bradley', 'Beal', 'Wiz', '6.25', '207', 26);
INSERT INTO Player VALUES (3, 'Ian', 'Mahinmi', 'Wiz', '6.91', '207', 33);
INSERT INTO Player VALUES (4, 'C.J.', 'Miles', 'Wiz', '6.50', '220', 32);

INSERT INTO Player VALUES (5, 'Mike', 'Conley', 'Jazz', '6.08', '175', 32);
INSERT INTO Player VALUES (6, 'Rudy', 'Gobert', 'Jazz', '7.08', '258', 27);
INSERT INTO Player VALUES (7, 'Bojan',
'Bogdanovic', 'Jazz', '6.66', '226', 30);
INSERT INTO Player VALUES (8, 'Joe', 'Ingles', 'Jazz', '6.58', '220', 32);

INSERT INTO Player VALUES (9, 'Julius', 'Randle', 'Knic', '6.67', '250', 25);
INSERT INTO Player VALUES (10, 'Bobby', 'Portis', 'Knic', '6.83', '250', 24);
INSERT INTO Player VALUES (11, 'Marcus', 'Morris', 'Knic', '6.67', '218', 30);

INSERT INTO Player VALUES (12, 'LeBron', 'James', 'Lak', '6.75', '250', 34);
INSERT INTO Player VALUES (13, 'Anthony', 'Davis', 'Lak', '6.83', '253', 26);
INSERT INTO Player VALUES (14, 'Danny', 'Green', 'Lak', '6.50', '215', 32);

INSERT INTO Player VALUES (15, 'Chandler',
'Parsons', 'Hawk', '6.75', '230', 31);
INSERT INTO Player VALUES (16, 'Evan', 'Turner', 'Hawk', '6.50', '220', 31);
INSERT INTO Player VALUES (17, 'Allen', 'Crabbe', 'Hawk', '6.42', '212', 27);

```



```

INSERT INTO Player VALUES (18, 'Kemba', 'Walker', 'Celt', '6.00', '184', 29);
INSERT INTO Player VALUES (19, 'Gordon', 'Hayward', 'Celt', '6.58', '225', 29);
INSERT INTO Player VALUES (20, 'Marcus', 'Smart', 'Celt', '6.25', '220', 25);
INSERT INTO Player VALUES (21, 'Jayson', 'Tatum', 'Celt', '6.67', '210', 28);

INSERT INTO Player VALUES (22, 'Blake', 'Griffin', 'Pist', '6.75', '250', 30);
INSERT INTO Player VALUES (23, 'Andre', 'Drummond', 'Pist', '6.83', '279', 26);
INSERT INTO Player VALUES (24, 'Reggie', 'Jackson', 'Pist', '6.25', '208', 32);

INSERT INTO Player VALUES (25, 'Russell',
'Westbrook', 'Rock', '6.25', '200', 31);
INSERT INTO Player VALUES (26, 'James', 'Harden', 'Rock', '6.42', '220', 30);
INSERT INTO Player VALUES (27, 'Clint', 'Capela', 'Rock', '6.83', '240', 25);
INSERT INTO Player VALUES (28, 'Eric', 'Gordon', 'Rock', '6.25', '215', 30);
INSERT INTO Player VALUES (29, 'PJ', 'Tucker', 'Rock', '6.42', '245', 34);
INSERT INTO Player VALUES (30, 'Ben', 'McLemore', 'Rock', '6.25', '195', 26);
INSERT INTO Player VALUES (31, 'Danuel', 'Houser', 'Rock', '6.50', '220', 26);
INSERT INTO Player VALUES (32, 'Austin', 'Rivers', 'Rock', '6.25', '200', 27);

INSERT INTO Player VALUES (33, 'Otto', 'Porter', 'Bull', '6.67', '198', 26);
INSERT INTO Player VALUES (34, 'Zach', 'LaVine', 'Bull', '6.50', '200', 24);
INSERT INTO Player VALUES (35, 'Thaddeus', 'Young', 'Bull', '6.67', '235', 31);
INSERT INTO Player VALUES (36, 'Tomas',
'Satoransky', 'Bull', '6.58', '210', 28);

INSERT INTO Player VALUES (37, 'Stephen', 'Curry', 'Warr', '6.25', '185', 31);
INSERT INTO Player VALUES (38, 'Klay', 'LaVine', 'Warr', '6.50', '215', 29);
INSERT INTO Player VALUES (39, 'DAngelo',
'Russell', 'Warr', '6.33', '193', 23);
INSERT INTO Player VALUES (40, 'Draymond', 'Green', 'Warr', '6.50', '230', 29);
INSERT INTO Player VALUES (41, 'Kevon', 'Looney', 'Warr', '6.75', '222', 23);

INSERT INTO Player VALUES (42, 'Tobias', 'Harris', '76ers', '6.67', '226', 27);
INSERT INTO Player VALUES (43, 'Al', 'Horford', '76ers', '6.75', '240', 33);
INSERT INTO Player VALUES (44, 'Joel', 'Embiid', '76ers', '7.00', '280', 25);
INSERT INTO Player VALUES (45, 'Josh',
'Richardson', '76ers', '6.42', '200', 26);
INSERT INTO Player VALUES (46, 'Ben', 'Simmons', '76ers', '6.83', '240', 23);

INSERT INTO Player VALUES (47, 'Harrison',
'Barnes', 'Kings', '6.67', '225', 27);
INSERT INTO Player VALUES (48, 'Dewayne',
'Dedmon', 'Kings', '7.00', '245', 30);
INSERT INTO Player VALUES (49, 'Trevor', 'Ariza', 'Kings', '6.67', '215', 34);
INSERT INTO Player VALUES (50, 'Cory', 'Joseph', 'Kings', '6.25', '200', 28);
INSERT INTO Player VALUES (51, 'Marvin', 'Bagley', 'Kings', '6.92', '235', 20);
INSERT INTO Player VALUES (52, 'Bogdan',
'Bogdanovic', 'Kings', '6.50', '220', 27);
INSERT INTO Player VALUES (53, 'Nemanja',
'Bjelica', 'Kings', '6.83', '234', 31);

INSERT INTO Player VALUES (54, 'DeMar', 'DeRozan', 'Spur', '6.50', '220', 30);
INSERT INTO Player VALUES (55, 'LaMarcus',
'Aldridge', 'Spur', '6.91', '250', 34);
INSERT INTO Player VALUES (56, 'Rudy', 'Gay', 'Spur', '6.67', '250', 33);
INSERT INTO Player VALUES (57, 'Patty', 'Mills', 'Spur', '6.08', '180', 31);

INSERT INTO Player VALUES (58, 'Kevin', 'Durant', 'Nets', '6.83', '240', 31);
INSERT INTO Player VALUES (59, 'Kyrie', 'Irving', 'Nets', '6.17', '195', 27);
INSERT INTO Player VALUES (60, 'Spencer',
'Dinwiddie', 'Nets', '6.42', '215', 26);

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INSERT INTO Player VALUES (61, 'DeAndre', 'Jordan','Nets','6.92','265',31);

INSERT INTO Player VALUES (62, 'Kevin', 'Love','Caval','6.67','251',31);
INSERT INTO Player VALUES (63, 'Tristan',
'Thompson','Caval','6.75','254',28);
INSERT INTO Player VALUES (64, 'Brandon',
'Knight','Caval','6.17','182',27);
INSERT INTO Player VALUES (65, 'Jordan',
'Clarkson','Caval','6.33','194',27);

INSERT INTO Player VALUES (66, 'Chris', 'Paul','Thund','6.08','175',34);
INSERT INTO Player VALUES (67, 'Steven', 'Adams','Thund','6.92','265',26);
INSERT INTO Player VALUES (68, 'Danilo',
'Gallinari','Thund','6.83','233',31);
INSERT INTO Player VALUES (69, 'Dennis',
'Schroder','Thund','6.08','172',26);

INSERT INTO PlayerPosition VALUES (1,1);
INSERT INTO PlayerPosition VALUES (2,2);
INSERT INTO PlayerPosition VALUES (3,5);
INSERT INTO PlayerPosition VALUES (4,2);

INSERT INTO PlayerPosition VALUES (5,1);
INSERT INTO PlayerPosition VALUES (6,5);
INSERT INTO PlayerPosition VALUES (7,3);
INSERT INTO PlayerPosition VALUES (8,3);

INSERT INTO PlayerPosition VALUES (9,4);
INSERT INTO PlayerPosition VALUES (10,4);
INSERT INTO PlayerPosition VALUES (11,3);

INSERT INTO PlayerPosition VALUES (12,3);
INSERT INTO PlayerPosition VALUES (13,4);
INSERT INTO PlayerPosition VALUES (14,2);

INSERT INTO PlayerPosition VALUES (15,3);
INSERT INTO PlayerPosition VALUES (16,2);
INSERT INTO PlayerPosition VALUES (17,2);

INSERT INTO PlayerPosition VALUES (18,1);
INSERT INTO PlayerPosition VALUES (19,3);
INSERT INTO PlayerPosition VALUES (20,1);
INSERT INTO PlayerPosition VALUES (21,4);

INSERT INTO PlayerPosition VALUES (22,4);
INSERT INTO PlayerPosition VALUES (23,5);
INSERT INTO PlayerPosition VALUES (24,1);

INSERT INTO PlayerPosition VALUES (25,1);
INSERT INTO PlayerPosition VALUES (26,1);
INSERT INTO PlayerPosition VALUES (27,5);
INSERT INTO PlayerPosition VALUES (28,2);
INSERT INTO PlayerPosition VALUES (29,4);
INSERT INTO PlayerPosition VALUES (30,2);
INSERT INTO PlayerPosition VALUES (31,3);
INSERT INTO PlayerPosition VALUES (32,1);

INSERT INTO PlayerPosition VALUES (33,3);
INSERT INTO PlayerPosition VALUES (34,1);
INSERT INTO PlayerPosition VALUES (35,4);
INSERT INTO PlayerPosition VALUES (36,2);

```

```

INSERT INTO PlayerPosition VALUES (37,1);
INSERT INTO PlayerPosition VALUES (38,2);
INSERT INTO PlayerPosition VALUES (39,2);
INSERT INTO PlayerPosition VALUES (40,4);
INSERT INTO PlayerPosition VALUES (41,4);

INSERT INTO PlayerPosition VALUES (42,3);
INSERT INTO PlayerPosition VALUES (43,5);
INSERT INTO PlayerPosition VALUES (44,5);
INSERT INTO PlayerPosition VALUES (45,2);
INSERT INTO PlayerPosition VALUES (46,1);

INSERT INTO PlayerPosition VALUES (47,3);
INSERT INTO PlayerPosition VALUES (48,5);
INSERT INTO PlayerPosition VALUES (49,3);
INSERT INTO PlayerPosition VALUES (50,1);
INSERT INTO PlayerPosition VALUES (51,4);
INSERT INTO PlayerPosition VALUES (52,2);
INSERT INTO PlayerPosition VALUES (53,4);

INSERT INTO PlayerPosition VALUES (54,2);
INSERT INTO PlayerPosition VALUES (55,5);
INSERT INTO PlayerPosition VALUES (56,3);
INSERT INTO PlayerPosition VALUES (57,1);

INSERT INTO PlayerPosition VALUES (58,3);
INSERT INTO PlayerPosition VALUES (59,1);
INSERT INTO PlayerPosition VALUES (60,1);
INSERT INTO PlayerPosition VALUES (61,5);

INSERT INTO PlayerPosition VALUES (62,4);
INSERT INTO PlayerPosition VALUES (63,5);
INSERT INTO PlayerPosition VALUES (64,1);
INSERT INTO PlayerPosition VALUES (65,1);

INSERT INTO PlayerPosition VALUES (66,1);
INSERT INTO PlayerPosition VALUES (67,5);
INSERT INTO PlayerPosition VALUES (68,4);
INSERT INTO PlayerPosition VALUES (69,1);

INSERT INTO Game VALUES ('2019-10-03 15:14:39', 'Wiz', 'Jazz');
INSERT INTO Game VALUES ('2019-10-10 15:14:39', 'Lak', 'Jazz');
INSERT INTO Game VALUES ('2019-11-05 15:14:39', 'Celt', 'Hawk');
INSERT INTO Game VALUES ('2018-10-16 15:14:39', 'Pist', 'Rock');
INSERT INTO Game VALUES ('2018-10-22 15:14:39', 'Bull', 'Wiz');
INSERT INTO Game VALUES ('2017-10-18 15:14:39', 'Warr', '76ers');
INSERT INTO Game VALUES ('2019-10-06 15:14:39', 'Knic', 'Kings');
INSERT INTO Game VALUES ('2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO Game VALUES ('2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO Game VALUES ('2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO Game VALUES ('2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO Game VALUES ('2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO Game VALUES ('2019-12-25 15:14:39', 'Bull', 'Celt');

INSERT INTO GameRoster VALUES (1, '2019-10-03 15:14:39', 'Wiz', 'Jazz');
INSERT INTO GameRoster VALUES (2, '2019-10-03 15:14:39', 'Wiz', 'Jazz');
INSERT INTO GameRoster VALUES (3, '2019-10-03 15:14:39', 'Wiz', 'Jazz');
INSERT INTO GameRoster VALUES (4, '2019-10-03 15:14:39', 'Wiz', 'Jazz');
INSERT INTO GameRoster VALUES (5, '2019-10-03 15:14:39', 'Wiz', 'Jazz');

```

[illegible]

```

INSERT INTO GameRoster VALUES (33, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (34, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (35, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (36, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (54, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (55, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (56, '2019-10-13 15:14:39', 'Spur', 'Bull');
INSERT INTO GameRoster VALUES (57, '2019-10-13 15:14:39', 'Spur', 'Bull');

INSERT INTO GameRoster VALUES (58, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (59, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (60, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (61, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (62, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (63, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (64, '2017-07-23 15:14:39', 'Nets', 'Caval');
INSERT INTO GameRoster VALUES (65, '2017-07-23 15:14:39', 'Nets', 'Caval');

INSERT INTO GameRoster VALUES (5, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (6, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (7, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (8, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (41, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (40, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (39, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (38, '2018-05-03 15:14:39', 'Warr', 'Jazz');
INSERT INTO GameRoster VALUES (37, '2018-05-03 15:14:39', 'Warr', 'Jazz');

INSERT INTO GameRoster VALUES (62, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (63, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (64, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (65, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (66, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (67, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (68, '2019-05-01 15:14:39', 'Thund', 'Caval');
INSERT INTO GameRoster VALUES (69, '2019-05-01 15:14:39', 'Thund', 'Caval');

INSERT INTO GameRoster VALUES (12, '2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO GameRoster VALUES (14, '2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO GameRoster VALUES (13, '2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO GameRoster VALUES (22, '2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO GameRoster VALUES (23, '2019-10-04 15:14:39', 'Lak', 'Pist');
INSERT INTO GameRoster VALUES (24, '2019-10-04 15:14:39', 'Lak', 'Pist');

INSERT INTO GameRoster VALUES (18, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (19, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (20, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (21, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (33, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (34, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (35, '2019-12-25 15:14:39', 'Bull', 'Celt');
INSERT INTO GameRoster VALUES (36, '2019-12-25 15:14:39', 'Bull', 'Celt');

INSERT INTO Statistic VALUES (1, 'Score');
INSERT INTO Statistic VALUES (2, '3-Pointer Shots missed');
INSERT INTO Statistic VALUES (3, '3-Pointer Shots sunk');
INSERT INTO Statistic VALUES (4, 'Field Goals missed');
INSERT INTO Statistic VALUES (5, 'Field Goals sunk');
INSERT INTO Statistic VALUES (6, 'Rebounds grabbed');

```

```

INSERT INTO TeamStatistic VALUES ('Wiz','2019-10-03 15:14:39', 1,13 );
INSERT INTO TeamStatistic VALUES ('Jazz','2019-10-03 15:14:39', 1,32 );

INSERT INTO TeamStatistic VALUES ('Lak','2019-10-10 15:14:39', 1, 17);
INSERT INTO TeamStatistic VALUES ('Jazz','2019-10-10 15:14:39', 1, 3);

INSERT INTO TeamStatistic VALUES ('Celt','2019-11-05 15:14:39', 1, 11);
INSERT INTO TeamStatistic VALUES ('Hawk','2019-11-05 15:14:39', 1, 19);

INSERT INTO TeamStatistic VALUES ('Pist','2018-10-16 15:14:39', 1, 85);
INSERT INTO TeamStatistic VALUES ('Rock','2018-10-16 15:14:39', 1, 45);

INSERT INTO TeamStatistic VALUES ('Bull','2018-10-22 15:14:39', 1, 9);
INSERT INTO TeamStatistic VALUES ('Wiz','2018-10-22 15:14:39', 1, 4);

INSERT INTO TeamStatistic VALUES ('Warr','2017-10-18 15:14:39', 1,16);
INSERT INTO TeamStatistic VALUES ('76ers','2017-10-18 15:14:39', 1,15);

INSERT INTO TeamStatistic VALUES ('Knic','2019-10-06 15:14:39', 1,27);
INSERT INTO TeamStatistic VALUES ('Kings','2019-10-06 15:14:39', 1,24);

INSERT INTO TeamStatistic VALUES ('Spur','2019-10-13 15:14:39', 1, 23);
INSERT INTO TeamStatistic VALUES ('Bull','2019-10-13 15:14:39', 1,16);

INSERT INTO TeamStatistic VALUES ('Nets','2017-07-23 15:14:39', 1,15);
INSERT INTO TeamStatistic VALUES ('Caval','2017-07-23 15:14:39', 1,62);

INSERT INTO TeamStatistic VALUES ('Warr','2018-05-03 15:14:39', 1,22);
INSERT INTO TeamStatistic VALUES ('Jazz','2018-05-03 15:14:39', 1,50);

INSERT INTO TeamStatistic VALUES ('Thund','2019-05-01 15:14:39', 1, 53);
INSERT INTO TeamStatistic VALUES ('Caval','2019-05-01 15:14:39', 1,35);

INSERT INTO TeamStatistic VALUES ('Lak','2019-10-04 15:14:39',1,9);
INSERT INTO TeamStatistic VALUES ('Pist','2019-10-04 15:14:39', 1,11);

INSERT INTO TeamStatistic VALUES ('Bull','2019-12-25 15:14:39', 1,21);
INSERT INTO TeamStatistic VALUES ('Celt','2019-12-25 15:14:39', 1,1);

INSERT INTO PlayerStatistic VALUES (1,'2019-10-03 15:14:39', 'Wiz',
'Jazz',4,14);
INSERT INTO PlayerStatistic VALUES (1,'2019-10-03 15:14:39', 'Wiz',
'Jazz',2,4);
INSERT INTO PlayerStatistic VALUES (2,'2019-10-03 15:14:39', 'Wiz',
'Jazz',5,5);
INSERT INTO PlayerStatistic VALUES (3,'2019-10-03 15:14:39', 'Wiz',
'Jazz',6,1);
INSERT INTO PlayerStatistic VALUES (5,'2019-10-03 15:14:39', 'Wiz',
'Jazz',3,6);
INSERT INTO PlayerStatistic VALUES (5,'2019-10-03 15:14:39', 'Wiz',
'Jazz',4,1);
INSERT INTO PlayerStatistic VALUES (5,'2019-10-03 15:14:39', 'Wiz',
'Jazz',5,5);
INSERT INTO PlayerStatistic VALUES (6,'2019-10-03 15:14:39', 'Wiz',
'Jazz',5,2);
INSERT INTO PlayerStatistic VALUES (7,'2019-10-03 15:14:39', 'Wiz',
'Jazz',6,5);
INSERT INTO PlayerStatistic VALUES (8,'2019-10-03 15:14:39', 'Wiz',
'Jazz',4,15);

```



```

INSERT INTO PlayerStatistic VALUES (8,'2019-10-10 15:14:39', 'Lak',
'Jazz',3,1);
INSERT INTO PlayerStatistic VALUES (7,'2019-10-10 15:14:39', 'Lak',
'Jazz',2,15);
INSERT INTO PlayerStatistic VALUES (6,'2019-10-10 15:14:39', 'Lak',
'Jazz',4,26);
INSERT INTO PlayerStatistic VALUES (12,'2019-10-10 15:14:39', 'Lak',
'Jazz',6,5);
INSERT INTO PlayerStatistic VALUES (13,'2019-10-10 15:14:39', 'Lak',
'Jazz',5,5);
INSERT INTO PlayerStatistic VALUES (14,'2019-10-10 15:14:39', 'Lak',
'Jazz',5,3);
INSERT INTO PlayerStatistic VALUES (14,'2019-10-10 15:14:39', 'Lak',
'Jazz',4,9);

INSERT INTO PlayerStatistic VALUES (15,'2019-11-05 15:14:39', 'Celt',
'Hawk',5,5);
INSERT INTO PlayerStatistic VALUES (15,'2019-11-05 15:14:39', 'Celt',
'Hawk',4,3);
INSERT INTO PlayerStatistic VALUES (16,'2019-11-05 15:14:39', 'Celt',
'Hawk',6,3);
INSERT INTO PlayerStatistic VALUES (17,'2019-11-05 15:14:39', 'Celt',
'Hawk',5,1);
INSERT INTO PlayerStatistic VALUES (18,'2019-11-05 15:14:39', 'Celt',
'Hawk',3,6);
INSERT INTO PlayerStatistic VALUES (21,'2019-11-05 15:14:39', 'Celt',
'Hawk',6,1);

INSERT INTO PlayerStatistic VALUES (22,'2018-10-16 15:14:39', 'Pist',
'Rock',5,30);
INSERT INTO PlayerStatistic VALUES (23,'2018-10-16 15:14:39', 'Pist',
'Rock',3,5);
INSERT INTO PlayerStatistic VALUES (24,'2018-10-16 15:14:39', 'Pist',
'Rock',5,5);
INSERT INTO PlayerStatistic VALUES (25,'2018-10-16 15:14:39', 'Pist',
'Rock',6,2);
INSERT INTO PlayerStatistic VALUES (29,'2018-10-16 15:14:39', 'Pist',
'Rock',4,15);
INSERT INTO PlayerStatistic VALUES (27,'2018-10-16 15:14:39', 'Pist',
'Rock',5,15);
INSERT INTO PlayerStatistic VALUES (28,'2018-10-16 15:14:39', 'Pist',
'Rock',3,5);
INSERT INTO PlayerStatistic VALUES (29,'2018-10-16 15:14:39', 'Pist',
'Rock',2,3);

INSERT INTO PlayerStatistic VALUES (1,'2018-10-22 15:14:39', 'Bull',
'Wiz',6,5);
INSERT INTO PlayerStatistic VALUES (2,'2018-10-22 15:14:39', 'Bull',
'Wiz',5,3);
INSERT INTO PlayerStatistic VALUES (3,'2018-10-22 15:14:39', 'Bull',
'Wiz',4,5);
INSERT INTO PlayerStatistic VALUES (4,'2018-10-22 15:14:39', 'Bull',
'Wiz',3,1);
INSERT INTO PlayerStatistic VALUES (33,'2018-10-22 15:14:39', 'Bull',
'Wiz',2,5);
INSERT INTO PlayerStatistic VALUES (34,'2018-10-22 15:14:39', 'Bull',
'Wiz',5,2);
INSERT INTO PlayerStatistic VALUES (35,'2018-10-22 15:14:39', 'Bull',
'Wiz',4,10);
INSERT INTO PlayerStatistic VALUES (36,'2018-10-22 15:14:39', 'Bull',
'Wiz',6,3);

```

```

INSERT INTO PlayerStatistic VALUES (37,'2017-10-18 15:14:39', 'Warr',
'76ers',6,3);
INSERT INTO PlayerStatistic VALUES (37,'2017-10-18 15:14:39', 'Warr',
'76ers',2,3);
INSERT INTO PlayerStatistic VALUES (38,'2017-10-18 15:14:39', 'Warr',
'76ers',5,8);
INSERT INTO PlayerStatistic VALUES (39,'2017-10-18 15:14:39', 'Warr',
'76ers',4,5);
INSERT INTO PlayerStatistic VALUES (44,'2017-10-18 15:14:39', 'Warr',
'76ers',3,2);
INSERT INTO PlayerStatistic VALUES (45,'2017-10-18 15:14:39', 'Warr',
'76ers',3,2);
INSERT INTO PlayerStatistic VALUES (46,'2017-10-18 15:14:39', 'Warr',
'76ers',3,1);

INSERT INTO PlayerStatistic VALUES (9,'2019-10-06 15:14:39', 'Knics',
'Kings',3,3);
INSERT INTO PlayerStatistic VALUES (10,'2019-10-06 15:14:39', 'Knics',
'Kings',5,10);
INSERT INTO PlayerStatistic VALUES (11,'2019-10-06 15:14:39', 'Knics',
'Kings',6,5);
INSERT INTO PlayerStatistic VALUES (47,'2019-10-06 15:14:39', 'Knics',
'Kings',2,1);
INSERT INTO PlayerStatistic VALUES (48,'2019-10-06 15:14:39', 'Knics',
'Kings',5,10);
INSERT INTO PlayerStatistic VALUES (49,'2019-10-06 15:14:39', 'Knics',
'Kings',4,5);
INSERT INTO PlayerStatistic VALUES (50,'2019-10-06 15:14:39', 'Knics',
'Kings',5,2);

INSERT INTO PlayerStatistic VALUES (33,'2019-10-13 15:14:39', 'Spurs',
'Bulls',3,3);
INSERT INTO PlayerStatistic VALUES (33,'2019-10-13 15:14:39', 'Spurs',
'Bulls',2,6);
INSERT INTO PlayerStatistic VALUES (34,'2019-10-13 15:14:39', 'Spurs',
'Bulls',5,7);
INSERT INTO PlayerStatistic VALUES (34,'2019-10-13 15:14:39', 'Spurs',
'Bulls',4,7);
INSERT INTO PlayerStatistic VALUES (35,'2019-10-13 15:14:39', 'Spurs',
'Bulls',6,1);
INSERT INTO PlayerStatistic VALUES (54,'2019-10-13 15:14:39', 'Spurs',
'Bulls',4,10);
INSERT INTO PlayerStatistic VALUES (55,'2019-10-13 15:14:39', 'Spurs',
'Bulls',5,4);
INSERT INTO PlayerStatistic VALUES (56,'2019-10-13 15:14:39', 'Spurs',
'Bulls',5,4);
INSERT INTO PlayerStatistic VALUES (57,'2019-10-13 15:14:39', 'Spurs',
'Bulls',6,2);

INSERT INTO PlayerStatistic VALUES (58,'2017-07-23 15:14:39', 'Nets',
'Cavaliers',6,5);
INSERT INTO PlayerStatistic VALUES (59,'2017-07-23 15:14:39', 'Nets',
'Cavaliers',5,5);
INSERT INTO PlayerStatistic VALUES (60,'2017-07-23 15:14:39', 'Nets',
'Cavaliers',3,1);
INSERT INTO PlayerStatistic VALUES (61,'2017-07-23 15:14:39', 'Nets',
'Cavaliers',5,1);
INSERT INTO PlayerStatistic VALUES (61,'2017-07-23 15:14:39', 'Nets',
'Cavaliers',2,1);

```



```

INSERT INTO PlayerStatistic VALUES (62,'2017-07-23 15:14:39', 'Nets',
'Caval',5,30);
INSERT INTO PlayerStatistic VALUES (63,'2017-07-23 15:14:39', 'Nets',
'Caval',5,1);
INSERT INTO PlayerStatistic VALUES (62,'2017-07-23 15:14:39', 'Nets',
'Caval',4,10);
INSERT INTO PlayerStatistic VALUES (65,'2017-07-23 15:14:39', 'Nets',
'Caval',6,15);

INSERT INTO PlayerStatistic VALUES (5,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (6,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (7,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (8,'2018-05-03 15:14:39', 'Warr',
'Jazz',6,1);
INSERT INTO PlayerStatistic VALUES (41,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (40,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (39,'2018-05-03 15:14:39', 'Warr',
'Jazz',3,3);
INSERT INTO PlayerStatistic VALUES (38,'2018-05-03 15:14:39', 'Warr',
'Jazz',5,1);

INSERT INTO PlayerStatistic VALUES (62,'2019-05-01 15:14:39', 'Thund',
'Caval',3,15);
INSERT INTO PlayerStatistic VALUES (62,'2019-05-01 15:14:39', 'Thund',
'Caval',3,30);
INSERT INTO PlayerStatistic VALUES (63,'2019-05-01 15:14:39', 'Thund',
'Caval',3,2);
INSERT INTO PlayerStatistic VALUES (63,'2019-05-01 15:14:39', 'Thund',
'Caval',5,1);
INSERT INTO PlayerStatistic VALUES (68,'2019-05-01 15:14:39', 'Thund',
'Caval',5,16);
INSERT INTO PlayerStatistic VALUES (69,'2019-05-01 15:14:39', 'Thund',
'Caval',6,5);
INSERT INTO PlayerStatistic VALUES (69,'2019-05-01 15:14:39', 'Thund',
'Caval',3,1);

INSERT INTO PlayerStatistic VALUES (12,'2019-10-04 15:14:39', 'Lak',
'Pist',6,5);
INSERT INTO PlayerStatistic VALUES (14,'2019-10-04 15:14:39', 'Lak',
'Pist',5,3);
INSERT INTO PlayerStatistic VALUES (13,'2019-10-04 15:14:39', 'Lak',
'Pist',3,1);
INSERT INTO PlayerStatistic VALUES (22,'2019-10-04 15:14:39', 'Lak',
'Pist',3,3);
INSERT INTO PlayerStatistic VALUES (23,'2019-10-04 15:14:39', 'Lak',
'Pist',5,1);
INSERT INTO PlayerStatistic VALUES (24,'2019-10-04 15:14:39', 'Lak',
'Pist',4,5);

INSERT INTO PlayerStatistic VALUES (18,'2019-12-25 15:14:39', 'Bull',
'Celt',6,5);
INSERT INTO PlayerStatistic VALUES (19,'2019-12-25 15:14:39', 'Bull',
'Celt',5,5);
INSERT INTO PlayerStatistic VALUES (20,'2019-12-25 15:14:39', 'Bull',
'Celt',5,5);

```

```

INSERT INTO PlayerStatistic VALUES (21,'2019-12-25 15:14:39', 'Bull',
'Celt',2,3);
INSERT INTO PlayerStatistic VALUES (33,'2019-12-25 15:14:39', 'Bull',
'Celt',2,8);
INSERT INTO PlayerStatistic VALUES (34,'2019-12-25 15:14:39', 'Bull',
'Celt',4,6);
INSERT INTO PlayerStatistic VALUES (35,'2019-12-25 15:14:39', 'Bull',
'Celt',6,8);

```

Section VII: SQL Statements for Answering Major Data Questions

1. What are the teams in the database and who are the players of each team?

By answering this data questions, fans can have a general picture of the teams and their players.

SQL code:

```

SELECT t.TeamAbbr,p.PFName, p.PLName
FROM dbo Team t, dbo Player p
WHERE t.TeamAbbr = p.TeamAbbr;

```

Output Screenshot:

TeamAbbr	PFName	PLName
76ers	Tobias	Harris
76ers	Al	Horford
76ers	Joel	Embiid
76ers	Josh	Richardson
76ers	Ben	Simmons
Bull	Tomas	Satoransky
Bull	Otto	Porter
Bull	Thaddeus	Young
Bull	Zach	LaVine
Caval	Brandon	Knight
Caval	Jordan	Clarkson
Caval	Tristan	Thompson
Caval	Kevin	Love
Celt	Kemba	Walker
Celt	Gordon	Hayward
Celt	Marcus	Smart
Celt	Jayson	Tatum
Hawk	Evan	Turner
Hawk	Allen	Crabbe
Hawk	Chandler	Parsons
Jazz	Mike	Conley
Jazz	Bojan	Bogdanovic
Jazz	Joe	Ingles
Jazz	Rudy	Gobert
Kings	Dewayne	Dedmon
Kings	Trevor	Ariza
Kings	Cory	Joseph
Kings	Marvin	Bagley
Kings	Bogdan	Bogdanovic
Kings	Nemanja	Bjelica
Kings	Harrison	Barnes

2. What is the average weight of each position?

NBA team managers can compare the weight of their transfer targets with the average weight of players in that position so as to make better business decision.

SQL code:

```

SELECT po.PositionId, po.PositionDesc, Round(AVG(p.Weight),2) AS AVG_Weight
FROM dbo_Player p, dbo_Position po, dbo_PlayerPosition pp
WHERE p.PlayerId = pp.PlayerId
AND po.PositionId = pp.PositionId
GROUP BY po.PositionId, po.PositionDesc;

```

Output Screenshot:

PositionId	PositionDesc	AVG_Weight
1	Point Guard	197.63
2	Shooting Guard	210.92
3	Small Forward	226.38
4	Power Forward	238.31
5	Center	253

3. Who is the shortest Power Forward? What is his height and team?

‘Small-ball’, the style of play that sacrifices height and weight in favour of smaller players for speed and agility, has become popular in modern basketball. In this question, we would like to examine if ‘Small-ball’ trend is happening and explore how short a Power Forward can be in today’s NBA.

SQL code:

```

SELECT p.PFName, p.PLName, p.Height, p.TeamAbbr, t.TeamCity
FROM dbo_Player p, dbo_Position po, dbo_PlayerPosition pp, dbo_Team t
WHERE p.PlayerId = pp.PlayerId
AND t.TeamAbbr = p.TeamAbbr
AND po.PositionId = pp.PositionId
AND po.PositionDesc = "Power Forward"
AND p.Height = (
    SELECT MIN (p.Height)
    FROM dbo_Player p, dbo_Position po, dbo_PlayerPosition pp
    WHERE p.PlayerId = pp.PlayerId
    AND po.PositionId = pp.PositionId
    AND po.PositionDesc = "Power Forward")

```

Output Screenshot:

PFName	PLName	Height	TeamAbbr	TeamCity	PositionDesc
PJ	Tucker	6.42	Rock	Houston	Power Forward

4. Who is the tallest Point Guard? What is his height and team?

In this question, we would like to explore if tall Point Guard still exists in the NBA.

SQL code:

```

SELECT p.PFName, p.PLName, p.Height, p.TeamAbbr, t.TeamCity, po.PositionDesc
FROM dbo_Player p, dbo_Position po, dbo_PlayerPosition pp, dbo_Team t
WHERE p.PlayerId = pp.PlayerId
AND t.TeamAbbr = p.TeamAbbr
AND po.PositionId = pp.PositionId
AND po.PositionDesc = "Point Guard"
AND p.Height = (
    SELECT MAX (p.Height)
    FROM dbo_Player p, dbo_Position po, dbo_PlayerPosition pp
    WHERE p.PlayerId = pp.PlayerId
    AND po.PositionId = pp.PositionId
    AND po.PositionDesc = "Point Guard");

```

Output Screenshot:

PFName	PLName	Height	TeamAbbr	TeamCity	PositionDes
Ben	Simmons	6.83	76ers	Philadelphia	Point Guard

- Who is the player that missed the most three-point shots in one game? When did it happen?

In this question, we would like to find the overconfident player who missed a lot of three-point shot in a game.

SQL Code:

```

SELECT p.PFName, p.PLName, s.StatDesc, ps.StatisticValue, g.GameDateTime, g.HomeTeamAbbr,
g.AwayTeamAbbr
FROM dbo_Player p, dbo_PlayerStatistic ps, dbo_Statistic s, dbo_Game g
WHERE p.PlayerId = ps.PlayerId
AND g.GameDateTime = ps.GameDateTime
AND s.StatID = ps.StatID
AND s.StatDesc = '3-Pointer Shots missed'
AND ps.StatisticValue = (
    SELECT MAX(ps.StatisticValue)
    FROM dbo_PlayerStatistic ps, dbo_Statistic s
    WHERE s.StatID = ps.StatID
    AND s.StatDesc = '3-Pointer Shots missed'
)

```

Output Screenshot:

PFName	PLName	StatDesc	StatisticValue	GameDateTime	HomeTeamAbbr	AwayTeamAbbr
Bojan	Bogdanovic	3-Pointer Shots missed	15	10/10/2019 3:14:39 PM	Lak	Jazz

- Who is the player that grabbed the most rebounds? What is his age, height and weight?

Rebounds are essential for winning a basketball game. In this question, we try to find the player who grabbed the most rebounds in a single game in order to recommend him to a team that needs such talent.

SQL Code:

```

SELECT t.TeamCity, p.TeamAbbr, p.PFName, p.PLName, p.Height, p.Weight, s.StatDesc, ps.StatisticValue
FROM dbo_Player p, dbo_PlayerStatistic ps, dbo_Statistic s, dbo_Team t
WHERE p.PlayerId = ps.PlayerId
AND t.TeamAbbr = p.TeamAbbr
AND s.StatID = ps.StatID
AND s.StatDesc = 'Rebounds grabbed'
AND ps.StatisticValue = (
    SELECT MAX(ps.StatisticValue)
    FROM dbo_PlayerStatistic ps, dbo_Statistic s
    WHERE s.StatID = ps.StatID
    AND s.StatDesc = 'Rebounds grabbed'
)

```

Output Screenshot:

TeamCity	TeamAbbr	PFName	PLName	Height	Weight	StatDesc	StatisticValue
Cleveland	Caval	Jordan	Clarkson	6.33	194	Rebounds grabbed	15

Section VIII: Forms

1. Game Form: to navigate the scores and roster of a game

Game Form

Game Date/Time

7/23/2017 3:14:39 PM

Home Team Abbreviation

Nets

Away Team Abbreviation

Caval


PFName	PLName	PlayerId	HomeTeamAbbr	AwayTeamAbbr	StatID	StatisticValue	StatDesc
Kevin	Durant	58	Nets	Caval	6	5	Rebounds grabbed
Kyrie	Irving	59	Nets	Caval	5	5	Field Goals sunk
Spencer	Dinwiddie	60	Nets	Caval	3	1	3-Pointer Shots sunk
DeAndre	Jordan	61	Nets	Caval	2	1	3-Pointer Shots missec
DeAndre	Jordan	61	Nets	Caval	5	1	Field Goals sunk
Kevin	Love	62	Nets	Caval	4	10	Field Goals missed
Kevin	Love	62	Nets	Caval	5	30	Field Goals sunk
Tristan	Thompson	63	Nets	Caval	5	1	Field Goals sunk

Record: 1 of 9

Game Statistics by Team:

TeamAbbr	StatID	StatisticValue	StatDesc
Caval	1	62	Score
Nets	1	15	Score

2. Player Form: to navigate the basic information of a player

 Player

PlayerId

9

PFName

Julius

PLName

Randle

TeamAbbr

Knic

Height

6.67

Weight

250

AGE

25

Player Position

PositionDesc

Power Forward

*

3. Team Form: to navigate the ranking, location, and players of a team

Team Roster

TeamAbbr

76ers

TeamCity

Philadelphia

TeamRanking

8

Player

	PlayerId	First Name	Last Name
▶	42	Tobias	Harris
	43	Al	Horford
	44	Joel	Embiid
	45	Josh	Richardson
	46	Ben	Simmons
*			

Record: 1 of 5 No Filter Search

Record: 1 of 16 No Filter Search

Section VIII: Reports

1. What are the teams in the database and who are the players of each team?

Team Player Report

TeamAbbr	First Name	Last Name
76ers	Al	Horford
	Joel	Embiid
	Josh	Richardson
	Ben	Simmons
Bull	Tobias	Harris
	Tomas	Satoransky
	Otto	Porter
	Zach	LaVine
Caval	Thaddeus	Young
	Jordan	Clarkson
	Brandon	Knight
	Kevin	Love
Celt	Tristan	Thompson
	Jayson	Tatum
	Kemba	Walker
	Gordon	Hayward
Hawk	Marcus	Smart
	Allen	Crabbe
	Chandler	Parsons
	Evan	Turner
Jazz	Mike	Conley
	Rudy	Gobert
	Bojan	Bogdanovic
	Joe	Ingles

2. What is the average weight of each position?

Position Weight Report

PositionId	PositionDesc	AVG_Weight(lb)
1	Point Guard	197.63
2	Shooting Guard	210.92
3	Small Forward	226.38
4	Power Forward	238.31
5	Center	253

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3. Who is the shortest Power Forward? What is his height and team?

The Shortest Power Forward

First Name	PJ
Last Name	Tucker
Height	6.42
TeamAbbr	Rock
TeamCity	Houston



4. Who is the tallest Point Guard? What is his height and team?

The Tallest Point Guard

PFName	Ben
PLName	Simmons
Height	6.83
TeamAbbr	76ers
TeamCity	Philadelphia



5. Who is the player that missed the most three-point shots in one game? When did it happen?

The Worst Three-Point Shooting Performance

PFName	Bojan
PLName	Bogdanovic
StatDesc	3-Pointer Shots missed
StatisticValue	15
GameDateTime	10/10/2019 3:14:39 PM
HomeTeamAbbr	Lak
AwayTeamAbbr	Jazz



6. Who is the player that grabbed the most rebounds? What is his age, height and weight?

Rebound Expert

TeamCity	Cleveland
TeamAbbr	Caval
PFName	Jordan
PLName	Clarkson
Height	6.33
Weight	194
StatDesc	Rebounds grabbed
StatisticValue	15

