

1. FINAL DDL

```
CREATE TABLE GAME (  
    game_date DATE NOT NULL,  
    start_time TIME NOT NULL,  
    visitor_team_id VARCHAR(255) NOT NULL,  
    visitor_pts INT,  
    home_team_id VARCHAR(255) NOT NULL,  
    home_pts INT,  
    attendance INT,  
    arena VARCHAR(50) NOT NULL,  
    FOREIGN KEY (home_team_id) REFERENCES teams(team_name),  
    FOREIGN KEY (visitor_team_id) REFERENCES teams(team_name)  
);
```

```
CREATE TABLE PLAYER (  
    Rk INT NOT NULL,  
    Player VARCHAR(255) NOT NULL,  
    Age INT NOT NULL,  
    Team VARCHAR(10) NOT NULL,  
    Pos VARCHAR(10) NOT NULL,  
    G INT NOT NULL,  
    GS INT NOT NULL,  
    MP DECIMAL(4,1) NOT NULL,  
    FG DECIMAL(4,1) NOT NULL,  
    FGA DECIMAL(4,1) NOT NULL,  
    `FG%` DECIMAL(4,3) NOT NULL,  
    `3P` DECIMAL(4,1) NOT NULL,  
    `3PA` DECIMAL(4,1) NOT NULL,  
    `3P%` DECIMAL(4,3) NOT NULL,  
    `2P` DECIMAL(4,1) NOT NULL,  
    `2PA` DECIMAL(4,1) NOT NULL,  
    `2P%` DECIMAL(4,3) NOT NULL,  
    `eFG%` DECIMAL(4,3) NOT NULL,  
    FT DECIMAL(4,1) NOT NULL,  
    FTA DECIMAL(4,1) NOT NULL,  
    `FT%` DECIMAL(4,3) NOT NULL,  
    ORB DECIMAL(4,1) NOT NULL,  
    DRB DECIMAL(4,1) NOT NULL,  
    TRB DECIMAL(4,1) NOT NULL,  
    AST DECIMAL(4,1) NOT NULL,  
    STL DECIMAL(4,1) NOT NULL,  
    BLK DECIMAL(4,1) NOT NULL,  
    TOV DECIMAL(4,1) NOT NULL,  
    PF DECIMAL(4,1) NOT NULL,  
    PTS DECIMAL(4,1) NOT NULL,  
    Awards VARCHAR(50),  
    Player_ID VARCHAR(50) NOT NULL PRIMARY KEY,  
    Year INT NOT NULL,  
    FOREIGN KEY (Team) REFERENCES teams(team_id)  
);
```

```

CREATE TABLE game_stats (
  SEASON_YEAR VARCHAR(9),
  TEAM_ID INTEGER,
  TEAM_ABBREVIATION VARCHAR(5),
  TEAM_NAME VARCHAR(50),
  GAME_ID BIGINT,
  GAME_DATE DATE,
  MATCHUP VARCHAR(20),
  WL CHAR(1),
  MIN REAL,
  FGM INTEGER,
  FGA INTEGER,
  FG_PCT REAL,
  FG3M INTEGER,
  FG3A INTEGER,
  FG3_PCT REAL,
  FTM INTEGER,
  FTA INTEGER,
  FT_PCT REAL,
  OREB INTEGER,
  DREB INTEGER,
  REB INTEGER,
  AST INTEGER,
  TOV REAL,
  STL INTEGER,
  BLK INTEGER,
  BLKA INTEGER,
  PF INTEGER,
  PFD INTEGER,
  PTS INTEGER,
  PLUS_MINUS REAL,
  GP_RANK INTEGER,
  W_RANK INTEGER,
  L_RANK INTEGER,
  W_PCT_RANK INTEGER,
  MIN_RANK INTEGER,
  FGM_RANK INTEGER,
  FGA_RANK INTEGER,
  FG_PCT_RANK INTEGER,
  FG3M_RANK INTEGER,
  FG3A_RANK INTEGER,
  FG3_PCT_RANK INTEGER,
  FTM_RANK INTEGER,
  FTA_RANK INTEGER,
  FT_PCT_RANK INTEGER,
  OREB_RANK INTEGER,
  DREB_RANK INTEGER,
  REB_RANK INTEGER,
  AST_RANK INTEGER,
  TOV_RANK INTEGER,

```

```

        STL_RANK INTEGER,
        BLK_RANK INTEGER,
        BLKA_RANK INTEGER,
        PF_RANK INTEGER,
        PFD_RANK INTEGER,
        PTS_RANK INTEGER,
        PLUS_MINUS_RANK INTEGER,
        AVAILABLE_FLAG BOOLEAN,
        FOREIGN KEY (TEAM_ABBREVIATION) REFERENCES teams(team_id)
    );

```

```

mysql> CREATE TABLE GAME (
    ->     game_date DATE NOT NULL,
    ->     start_time TIME NOT NULL,
    ->     visitor_team_id VARCHAR(255) NOT NULL,
    ->     visitor_pts INT,
    ->     home_team_id VARCHAR(255) NOT NULL,
    ->     home_pts INT,
    ->     attendance INT,
    ->     arena VARCHAR(50) NOT NULL,
    ->     FOREIGN KEY (home_team_id) REFERENCES teams(team_name),
    ->     FOREIGN KEY (visitor_team_id) REFERENCES teams(team_name)
    -> );
Query OK, 0 rows affected (0.23 sec)

mysql> |

```

```

1136 rows in set (0.00 sec)

mysql> select count(*) from GAME;
+-----+
| count(*) |
|-----|
|      1136 |
+-----+
1 row in set (0.01 sec)

mysql>

```

Uploads and CS-411-Primary-key-Pr... operations

- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 21:08:35 GMT+5
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 22:56:38 GMT+5
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 22:55:44 GMT+5
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 23:37:06 GMT+5
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 23:35:32 GMT+5
- Failed to import from 23:35:03 GMT+5

```

1 row in set (0.00 sec)

mysql> select count(*) from GAME;
+-----+
| count(*) |
|-----|
|      1136 |
+-----+
1 row in set (0.01 sec)

mysql>

```

Uploads and CS-411-Primary-key-Pr... operations

- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 23:22:35 GMT+5
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) Complete
- Imported from [nba_2023_pts_thru_nba_games.csv to cs411-primarykeyplayers](#) 23:17:24 GMT+5

```

mysql> CREATE TABLE PLAYER (
    ->     Rk INT NOT NULL,
    ->     Player VARCHAR(255) NOT NULL,
    ->     Age INT NOT NULL,
    ->     Team VARCHAR(10) NOT NULL,
    ->     Pos VARCHAR(10) NOT NULL,
    ->     G INT NOT NULL,
    ->     GS INT NOT NULL,
    ->     MP DECIMAL(4,1) NOT NULL,
    ->     FG DECIMAL(4,1) NOT NULL,
    ->     FGA DECIMAL(4,1) NOT NULL,
    ->     'FG%' DECIMAL(4,3) NOT NULL,
    ->     '3P%' DECIMAL(4,1) NOT NULL,
    ->     '3PA%' DECIMAL(4,1) NOT NULL,
    ->     '3P%' DECIMAL(4,3) NOT NULL,
    ->     '2P%' DECIMAL(4,1) NOT NULL,
    ->     '2PA%' DECIMAL(4,1) NOT NULL,
    ->     '2P%' DECIMAL(4,3) NOT NULL,
    ->     'eFG%' DECIMAL(4,3) NOT NULL,
    ->     FT DECIMAL(4,1) NOT NULL,
    ->     FTA DECIMAL(4,1) NOT NULL,
    ->     'FT%' DECIMAL(4,3) NOT NULL,
    ->     ORB DECIMAL(4,1) NOT NULL,
    ->     DRB DECIMAL(4,1) NOT NULL,
    ->     TRB DECIMAL(4,1) NOT NULL,
    ->     AST DECIMAL(4,1) NOT NULL,
    ->     STL DECIMAL(4,1) NOT NULL,
    ->     BLK DECIMAL(4,1) NOT NULL,
    ->     TOV DECIMAL(4,1) NOT NULL,
    ->     PF DECIMAL(4,1) NOT NULL,
    ->     PTS DECIMAL(4,1) NOT NULL,
    ->     Awards VARCHAR(50),
    ->     Player_ID VARCHAR(50) NOT NULL PRIMARY KEY,
    ->     Year INT NOT NULL,
    ->     FOREIGN KEY (Team) REFERENCES teams(team_id)
    -> );
Query OK, 0 rows affected (0.25 sec)

```

```

mysql> CREATE TABLE game_stats (
-> SEASON_YEAR VARCHAR(9),
-> TEAM_ID INTEGER,
-> TEAM_ABBREVIATION VARCHAR(5),
-> TEAM_NAME VARCHAR(50),
-> GAME_ID BIGINT,
-> GAME_DATE DATE,
-> MATCHUP VARCHAR(20),
-> WL CHAR(1),
-> MIN REAL,
-> FGM INTEGER,
-> FGA INTEGER,
-> FG_PCT REAL,
-> FG3M INTEGER,
-> FG3A INTEGER,
-> FG3_PCT REAL,
-> FTM INTEGER,
-> FTA INTEGER,
-> FT_PCT REAL,
-> OREB INTEGER,
-> DREB INTEGER,
-> REB INTEGER,
-> AST INTEGER,
-> TOV REAL,
-> STL INTEGER,
-> BLK INTEGER,
-> BLKA INTEGER,
-> PF INTEGER,
-> PFD INTEGER,
-> PTS INTEGER,
-> PLUS_MINUS REAL,
-> GP_RANK INTEGER,
-> W_RANK INTEGER,
-> L_RANK INTEGER,
-> W_PCT_RANK INTEGER,
-> MIN_RANK INTEGER,
-> FGM_RANK INTEGER,
-> FGA_RANK INTEGER,
-> FG_PCT_RANK INTEGER,
-> FG3M_RANK INTEGER,
-> FG3A_RANK INTEGER,
-> FG3_PCT_RANK INTEGER,
-> FTM_RANK INTEGER,
-> FTA_RANK INTEGER,
-> FT_PCT_RANK INTEGER,
-> OREB_RANK INTEGER,
-> DREB_RANK INTEGER,
-> REB_RANK INTEGER,
-> AST_RANK INTEGER,
-> TOV_RANK INTEGER,
-> STL_RANK INTEGER,
-> BLK_RANK INTEGER,
-> BLKA_RANK INTEGER,
-> PF_RANK INTEGER,
-> PFD_RANK INTEGER,
-> PTS_RANK INTEGER,
-> PLUS_MINUS_RANK INTEGER,
-> AVAILABLE_FLAG BOOLEAN,
-> FOREIGN KEY (TEAM_ABBREVIATION) REFERENCES teams(team_id)
-> );
Query OK, 0 rows affected (0.33 sec)

```

```
mysql> SELECT t.team_name, SUM(gs.pts) AS total_pts, SUM(gs.reb) AS total_rebounds
-> FROM game_stats AS gs
-> JOIN teams AS t ON gs.team_abbreviation = t.team_id
-> GROUP BY t.team_name
-> ORDER BY total_pts DESC;
```

team_name	total_pts	total_rebounds
Golden State Warriors	122280	48866
Houston Rockets	121715	48559
Denver Nuggets	121441	49495
Oklahoma City Thunder	120802	50119
Los Angeles Clippers	120547	48224
San Antonio Spurs	119434	48528
Phoenix Suns	119234	48050
Milwaukee Bucks	119192	49323
Sacramento Kings	118693	47754
Los Angeles Lakers	118643	49331
Portland Trail Blazers	118624	48704
Dallas Mavericks	118554	47141
Minnesota Timberwolves	118231	47630
Toronto Raptors	118203	47693
Atlanta Hawks	117980	47288
Washington Wizards	117863	47514
Indiana Pacers	117804	48199
Utah Jazz	117124	49018
Philadelphia 76ers	116599	48294
Miami Heat	116252	46768
Cleveland Cavaliers	115356	47285
Memphis Grizzlies	115192	48367
New York Knicks	114952	48264
Chicago Bulls	114395	48878
Orlando Magic	113825	48122
Charlotte Hornets	113611	47321
Detroit Pistons	113451	47884
Brooklyn Nets	102956	41871
New Orleans Pelicans	96298	39227

```
mysql> SELECT p.Player, p.Year, p.PTS, t.team_name
-> FROM PLAYER AS p
-> JOIN teams as t ON p.Team = t.team_id
-> WHERE p.PTS > (
-> SELECT AVG(p2.PTS)
-> FROM PLAYER p2
-> WHERE p2.Year = p.Year
-> )
-> LIMIT 15;
```

Player	Year	PTS	team_name
Bam Adebayo	2024	19.3	Miami Heat
Santi Aldama	2024	10.7	Memphis Grizzlies
Jarrett Allen	2024	16.5	Cleveland Cavaliers
Giannis Antetokounmpo	2024	30.4	Milwaukee Bucks
Cole Anthony	2024	11.6	Orlando Magic
Deni Avdija	2024	14.7	Washington Wizards
Deandre Ayton	2024	16.7	Portland Trail Blazers
Lonzo Ball	2025	7.6	Chicago Bulls
Paolo Banchero	2024	22.6	Orlando Magic
Desmond Bane	2024	23.7	Memphis Grizzlies
Harrison Barnes	2024	12.2	Sacramento Kings
Scottie Barnes	2024	19.9	Toronto Raptors
Jamison Battle	2025	6.5	Toronto Raptors
Malik Beasley	2024	11.3	Milwaukee Bucks
Saddiq Bey	2024	13.7	Atlanta Hawks

15 rows in set (0.02 sec)