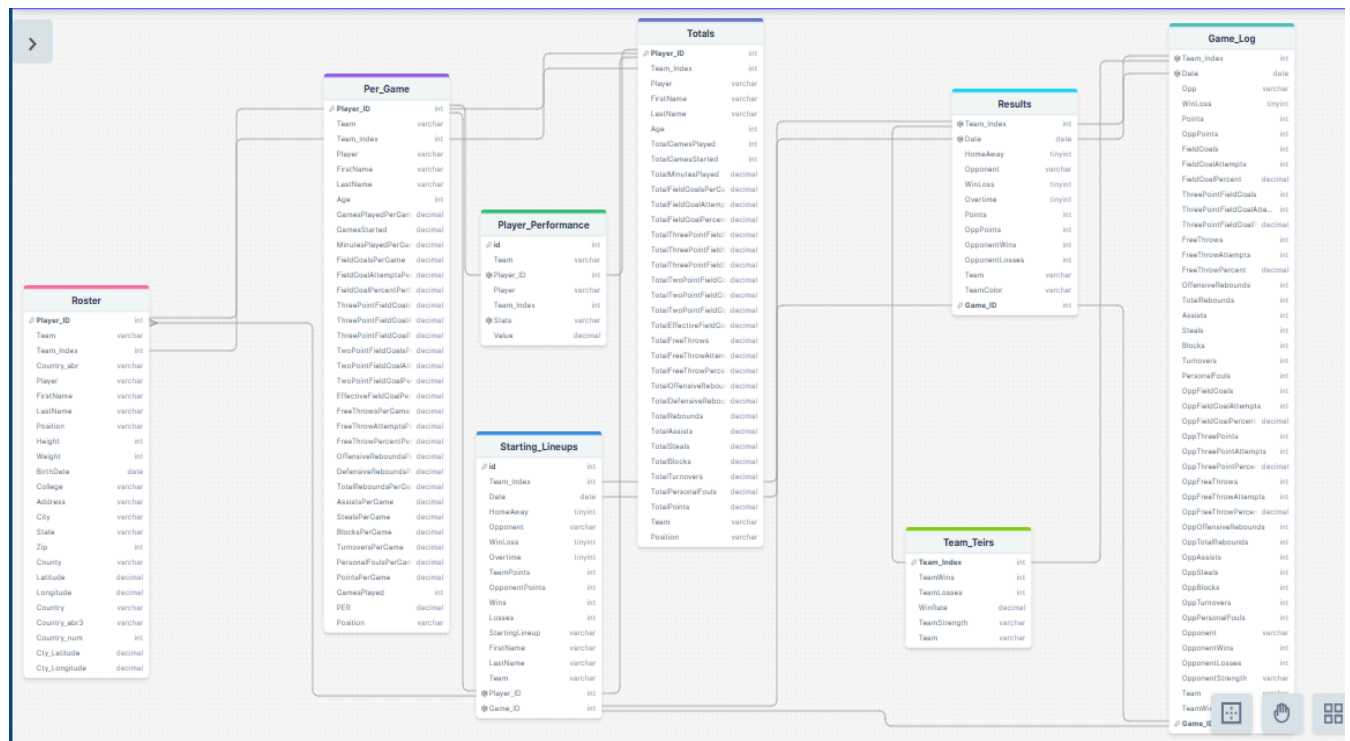


MySQL Server

NBA Data Upload to Tables

Sawandi Kirby

2024-7-14

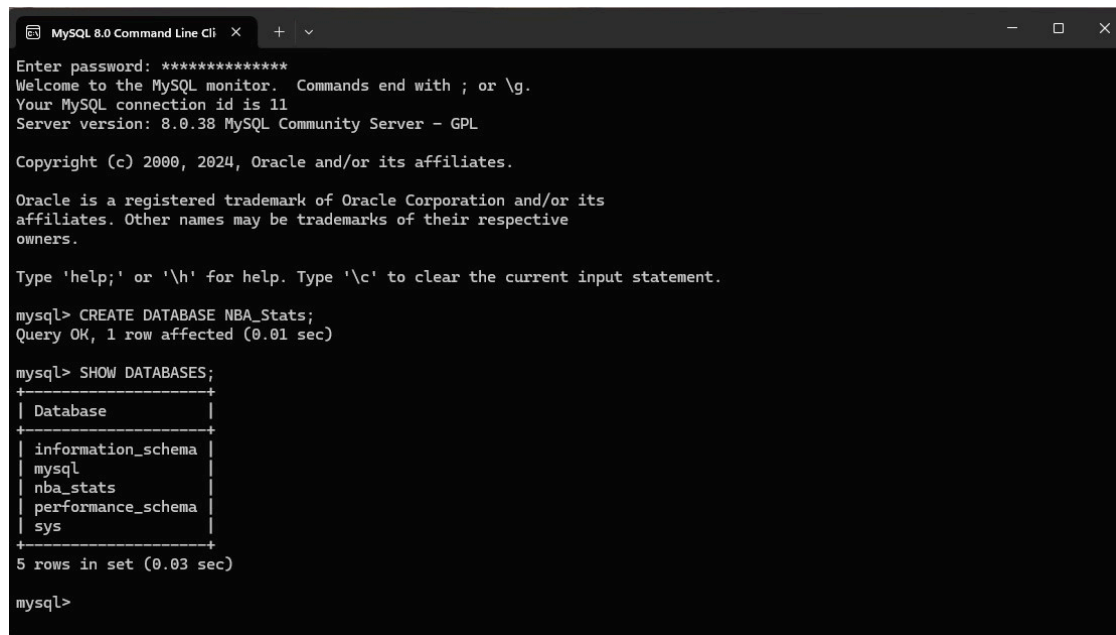


NBA Stats Database Diagram

MYSQL server

There are multiple options to Upload your data into MYSQL server using MYSQL Workbench, VisualStudioCode and many other softwares.

First we will insert the table data using SQL directly on the MYSQL server



```
MySQL 8.0 Command Line Cli x + v
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 11
Server version: 8.0.38 MySQL Community Server - GPL

Copyright (c) 2000, 2024, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

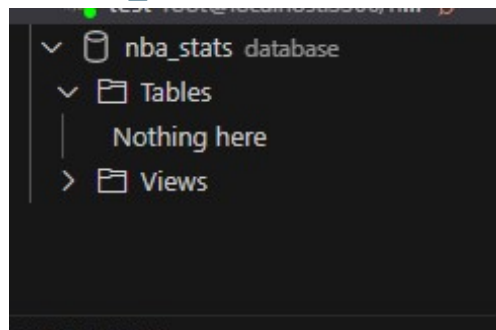
mysql> CREATE DATABASE NBA_Stats;
Query OK, 1 row affected (0.01 sec)

mysql> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| nba_stats |
| performance_schema |
| sys |
+-----+
5 rows in set (0.03 sec)

mysql>
```

Database Creation

USE nba_stats;



Database Start

```
CREATE TABLE Roster (  
Team VARCHAR(255),  
Team_Index VARCHAR(255),  
Country_abr VARCHAR(255),  
Player VARCHAR(255),  
FirstName VARCHAR(255),  
LastName VARCHAR(255),  
Position VARCHAR(255),  
Height INT,  
Weight INT,  
BirthDate DATE,  
College VARCHAR(255),  
Address VARCHAR(255),  
City VARCHAR(255),  
State VARCHAR(255),  
Zip INT,  
County VARCHAR(255),  
Latitude DECIMAL(10, 2),  
Longitude DECIMAL(10, 2),  
Country VARCHAR(255),  
Country_abr3 VARCHAR(255),  
Country_num INT,  
Cty_Latitude DECIMAL(10, 2),  
Cty_Longitude DECIMAL(10, 2),  
Player_ID INT PRIMARY KEY  
);
```

```
LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Roster.csv'
```

```
INTO TABLE roster
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS;
```

Team	Team_Index	Country_abr	Player	FirstName	LastName
Filter...	Filter...	Filter...	Filter...	Filter...	Filter...
ATL	1	ao	bruno fernando	bruno	fernando
ATL	1	ch	clint capela	clint	capela
ATL	1	cz	vit krejci	vit	krejci
ATL	1	rs	bogdan bogdanović	bogdan	bogdanović
ATL	1	sn	mouhamed gueye	mouhamed	gueye
ATL	1	us	dejounte murray	dejounte	murray
ATL	1	us	jalen johnson	jalen	johnson
ATL	1	us	garrison mathews	garrison	mathews
ATL	1	us	saddiq bey	saddiq	bey
ATL	1	us	de'andre hunter	de'andre	hunter
ATL	1	us	trent forrest	trent	forrest
ATL	1	us	onyeka okongwu	onyeka	okongwu
ATL	1	us	trae young	trae	young
ATL	1	us	aj griffin	aj	griffin
ATL	1	us	kobe bufkin	kobe	bufkin
ATL	1	us	wesley matthews	wesley	matthews
ATL	1	us	dylan windler	dylan	windler
ATL	1	us	seth lundy	seth	lundy
BOS	2	ca	oshae brissett	oshae	brissett

CONSOLE

RE-RUN QUERY

EXPORT

OPEN

1-50 of 530

CREATED TABLE Roster

```
CREATE TABLE per_game (  
Team VARCHAR(255),  
Team_Index INT,  
Player VARCHAR(255),  
FirstName VARCHAR(255),  
LastName VARCHAR(255),  
Age INT,  
GamesPlayed DECIMAL(8, 2),  
GamesStarted DECIMAL(8, 2),  
MinutesPlayed DECIMAL(8, 2),  
FieldGoalsPerGame DECIMAL(8, 2),  
FieldGoalAttemptsPerGame DECIMAL(8, 2),  
FieldGoalPercentPerGame DECIMAL(8, 3),  
ThreePointFieldGoalsPerGame DECIMAL(8, 2),  
ThreePointFieldGoalAttemptsPerGame DECIMAL(8, 2),  
ThreePointFieldGoalPercentPerGame DECIMAL(8, 3),  
TwoPointFieldGoalsPerGame DECIMAL(8, 2),  
TwoPointFieldGoalAttemptsPerGame DECIMAL(8, 2),  
TwoPointFieldGoalPercentPerGame DECIMAL(8, 3),  
EffectiveFieldGoalPercent DECIMAL(8, 3),  
FreeThrowsPerGame DECIMAL(8, 2),  
FreeThrowAttemptsPerGame DECIMAL(8, 2), FreeThrowPercentPerGame  
DECIMAL(8, 3),  
OffensiveReboundsPerGame DECIMAL(8, 2),  
DefensiveReboundsPerGame DECIMAL(8, 2),  
TotalReboundsPerGame DECIMAL(8, 2), AssistsPerGame DECIMAL(8, 2),  
StealsPerGame DECIMAL(8, 2),
```

```

BlocksPerGame DECIMAL(8, 2),
TurnoversPerGame DECIMAL(8, 2),
PersonalFoulsPerGame DECIMAL(8, 2),
PointsPerGame DECIMAL(8, 2),
PER DECIMAL(8, 3),
Position VARCHAR(255),
Player_ID INT,
PRIMARY KEY (Player_ID)
);

LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Per_Game.csv' INTO
TABLE per_game
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;

```

Team	Team_Index	Player	FirstName	LastName	Age
Filter...	Filter...	Filter...	Filter...	Filter...	Filter...
ATL	1	bruno fernando	bruno	fernando	25
ATL	1	clint capela	clint	capela	29
ATL	1	vit krejci	vit	krejci	23
ATL	1	bogdan bogdanović	bogdan	bogdanović	31
ATL	1	mouhamed gueye	mouhamed	gueye	21
ATL	1	dejounte murray	dejounte	murray	27
ATL	1	jalen johnson	jalen	johnson	22
ATL	1	garrison mathews	garrison	mathews	27
ATL	1	saddiq bey	saddiq	bey	24
ATL	1	de'andre hunter	de'andre	hunter	26
ATL	1	trent forrest	trent	forrest	25
ATL	1	onyeka okongwu	onyeka	okongwu	23
ATL	1	trae young	trae	young	25
ATL	1	aj griffin	aj	griffin	20
ATL	1	kobe bufkin	kobe	bufkin	20
ATL	1	wesley matthews	wesley	matthews	37

CREATED TABLE Per Game

```
CREATE TABLE totals (  
Team_Index INT,  
Player VARCHAR(255),  
FirstName VARCHAR(255),  
LastName VARCHAR(255),  
Age INT,  
TotalGamesPlayed INT,  
TotalGamesStarted INT,  
TotalMinutesPlayed DECIMAL(8, 2),  
TotalFieldGoals DECIMAL(8, 2),  
TotalFieldGoalAttempts DECIMAL(8, 2),  
TotalFieldGoalPercent DECIMAL(8, 3),  
TotalThreePointFieldGoals DECIMAL(8, 2),  
TotalThreePointFieldGoalAttempts DECIMAL(8, 2),  
TotalThreePointFieldGoalPercent DECIMAL(8, 3),  
TotalTwoPointFieldGoals DECIMAL(8, 2),  
TotalTwoPointFieldGoalAttempts DECIMAL(8, 2),  
TotalTwoPointFieldGoalPercent DECIMAL(8, 3),  
TotalEffectiveFieldGoalPercent DECIMAL(8, 3),  
TotalFreeThrows DECIMAL(8, 2),  
TotalFreeThrowAttempts DECIMAL(8, 2), TotalFreeThrowPercent  
DECIMAL(8, 3),  
TotalOffensiveRebounds DECIMAL(8, 2),  
TotalDefensiveRebounds DECIMAL(8, 2),  
TotalRebounds DECIMAL(8, 2),  
TotalAssists DECIMAL(8, 2),  
TotalSteals DECIMAL(8, 2),
```

```

TotalBlocks DECIMAL(8, 2),
TotalTurnovers DECIMAL(8, 2),
TotalPersonalFouls DECIMAL(8, 2),
TotalPoints DECIMAL(8, 2),
Team VARCHAR(255),
Position VARCHAR(255),
Player_ID INT,
PRIMARY KEY (Player_ID)
);

LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Totals.csv' INTO
TABLE totals
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;

```

Team_Index	Player	FirstName	LastName	Age	TotalGames
1	bruno fernando	bruno	fernando	25	45
1	clint capela	clint	capela	29	73
1	vit krejci	vit	krejci	23	22
1	bogdan bogdanović	bogdan	bogdanović	31	79
1	mouhamed gueye	mouhamed	gueye	21	6
1	dejounte murray	dejounte	murray	27	78
1	jalen johnson	jalen	johnson	22	56
1	garrison mathews	garrison	mathews	27	66
1	saddiq bey	saddiq	bey	24	63
1	de'andre hunter	de'andre	hunter	26	57
1	trent forrest	trent	forrest	25	38
1	onyeka okongwu	onyeka	okongwu	23	55
1	trae young	trae	young	25	54
1	aj griffin	aj	griffin	20	20
1	kobe bufkin	kobe	bufkin	20	17
1	wesley matthews	wesley	matthews	37	36

CREATED TABLE Totals


```
CREATE TABLE starting_lineups (  
    Team_Index INT,  
    Date DATE,  
    HomeAway TINYINT,  
    Opponent VARCHAR(255),  
    WinLoss TINYINT,  
    Overtime TINYINT,  
    TeamPoints INT,  
    OpponentPoints INT,  
    Wins INT,  
    Losses INT,  
    StartingLineup VARCHAR(255),  
    FirstName VARCHAR(255),  
    LastName VARCHAR(255),  
    Team VARCHAR(255),  
    Player_ID INT, Game_ID  
    INT,  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    UNIQUE KEY (Player_ID, Game_ID)  
);
```

```
LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Starting_Lineups.csv'
```

```
INTO TABLE starting_lineups
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS
```

```
(Team_Index, Date, @HomeAway, Opponent, @WinLoss, @Overtime,
TeamPoints, OpponentPoints, Wins, Losses, StartingLineup, FirstName, LastName,
Team, Player_ID, Game_ID)
```

```
SET HomeAway = (@HomeAway = 'TRUE'),
```

```
WinLoss = (@WinLoss = 'TRUE'),
```

```
Overtime = (@Overtime = 'TRUE');
```

Team_Index	Date	HomeAway	Opponent	WinLoss	Overtime
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-25	0	Charlotte Hornets	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0
1	2023-10-27	1	New York Knicks	0	0

```
CREATED TABLE Starting Lineups
```

```
CREATE TABLE game_log (  
  Team_Index INT,  
  Date DATE,  
  Opp VARCHAR(255),  
  WinLoss TINYINT,  
  Points INT,  
  OppPoints INT,  
  FieldGoals INT,  
  FieldGoalAttempts INT,  
  FieldGoalPercent DECIMAL(8, 2),  
  ThreePoints INT,  
  ThreePointAttempts INT,  
  ThreePointPercent DECIMAL(8, 2),  
  FreeThrows INT,  
  FreeThrowAttempts INT,  
  FreeThrowPercent DECIMAL(8, 2),  
  OffensiveRebounds INT,  
  TotalRebounds INT,  
  Assists INT,  
  Steals INT,  
  Blocks INT,  
  Turnovers INT,  
  PersonalFouls INT,  
  OppFieldGoals INT,  
  OppFieldGoalAttempts INT,  
  OppFieldGoalPercent DECIMAL(8, 2), OppThreePoints INT,  
  OppThreePointAttempts INT,
```

OppThreePointPercent DECIMAL(8, 2),
OppFreeThrows INT,
OppFreeThrowAttempts INT,
OppFreeThrowPercent DECIMAL(8, 2),
OppOffensiveRebounds INT,
OppTotalRebounds INT,
OppAssists INT,
OppSteals INT,
OppBlocks INT,
OppTurnovers INT,
OppPersonalFouls INT,
Opponent VARCHAR(255),
OpponentWins INT,
OpponentLosses INT,
OpponentStrength VARCHAR(255),
Team VARCHAR(255),
TeamWinLoss VARCHAR(255),
Game_ID INT,
PRIMARY KEY (Game_ID),
UNIQUE KEY (Team_Index, DATE)
);

```
LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Game_Log.csv'
```

```
INTO TABLE game_log
```

```
FIELDS TERMINATED BY ','
```







```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS
```

```
(Team_Index, Date, Opp, @WinLoss, Points, OppPoints, FieldGoals,
FieldGoalAttempts, FieldGoalPercent, ThreePoints, ThreePointAttempts,
ThreePointPercent, FreeThrows, FreeThrowAttempts, FreeThrowPercent,
OffensiveRebounds, TotalRebounds, Assists, Steals, Blocks, Turnovers,
PersonalFouls, OppFieldGoals, OppFieldGoalAttempts,
OppFieldGoalPercent, OppThreePoints, OppThreePointAttempts,
OppThreePointPercent, OppFreeThrows, OppFreeThrowAttempts,
OppFreeThrowPercent, OppOffensiveRebounds, OppTotalRebounds,
OppAssists, OppSteals, OppBlocks, OppTurnovers, OppPersonalFouls,
Opponent, OpponentWins, OpponentLosses, OpponentStrength, Team,
TeamWinLoss, Game_ID)
```

```
SET WinLoss = (@WinLoss = 'TRUE');
```

Team_Index	Date	Opp	WinLoss	Points	OppPoints
 Filter...	 Filter...	 Filter...	 Filter...	 Filter...	 Filter...
1	2023-10-25	cho	0	110	116
1	2023-10-27	nyk	0	120	126
1	2023-10-29	mil	1	127	110
1	2023-10-30	min	1	127	113
1	2023-11-01	was	1	130	121
1	2023-11-04	nop	1	123	105
1	2023-11-06	okc	0	117	126
1	2023-11-09	orl	1	120	119
1	2023-11-11	mia	0	109	117
1	2023-11-14	det	1	126	120
1	2023-11-15	nyk	0	114	116
1	2023-11-17	phi	0	116	126
1	2023-11-21	ind	0	152	157
1	2023-11-22	brk	1	147	145
1	2023-11-25	was	1	136	108
1	2023-11-26	bos	0	103	113

CONSOLE

RE-RUN QUERY

EXPORT

OPEN

1-50 of 2460

CREATED TABLE Game Log

```
CREATE TABLE results (  
  Team_Index INT,  
  Date DATE,  
  HomeAway TINYINT,  
  Opponent VARCHAR(255),  
  Winloss TINYINT,  
  Overtime TINYINT,  
  Points INT,  
  OppPoints INT,  
  OpponentWins INT,  
  OpponentLosses INT,  
  Team VARCHAR(255),  
  TeamColor VARCHAR(255),  
  Game_ID INT,  
  PRIMARY KEY (Game_ID),  
  UNIQUE KEY (Team_Index, DATE)  
);
```

```
LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Results.csv'
```

```
INTO TABLE results
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY '"'
```

```
LINES TERMINATED BY '\n'
```

```
IGNORE 1 ROWS
```

```
(Team_Index, Date, @HomeAway, Opponent, @Winloss, @Overtime,
Points, OppPoints, OpponentWins, OpponentLosses, Team, TeamColor, Game_ID)
```

```
SET HomeAway = (@HomeAway = 'TRUE'),
```

```
Winloss = (@Winloss = 'TRUE'),
```

```
Overtime = (@Overtime = 'TRUE');
```

Team_Index	Date	HomeAway	Opponent	Winloss	Overtime
1	2023-10-25	0	charlotte hornets	0	0
1	2023-10-27	1	new york knicks	0	0
1	2023-10-29	0	milwaukee bucks	1	0
1	2023-10-30	1	minnesota timberwolves	1	0
1	2023-11-01	1	washington wizards	1	0
1	2023-11-04	0	new orleans pelicans	1	0
1	2023-11-06	0	oklahoma city thunder	0	0
1	2023-11-09	0	orlando magic	1	0
1	2023-11-11	1	miami heat	0	0
1	2023-11-14	0	detroit pistons	1	0
1	2023-11-15	1	new york knicks	0	0
1	2023-11-17	1	philadelphia 76ers	0	0
1	2023-11-21	1	indiana pacers	0	0
1	2023-11-22	1	brooklyn nets	1	1
1	2023-11-25	0	washington wizards	1	0
1	2023-11-26	0	boston celtics	0	0

CREATED TABLE Results

```

CREATE TABLE team_tiers (
Team_Index INT,
TeamWins INT,
TeamLosses INT,
WinRate DECIMAL(8, 2),
TeamStrength VARCHAR(255),
Team VARCHAR(255),
PRIMARY KEY (Team_Index)
);

LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/NBA_Team_Tiers.csv'

INTO TABLE team_tiers

FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;

```

Team_Index	TeamWins	TeamLosses	WinRate	TeamStrength	Team
1	36	47	0.43	Average	ATL
2	64	18	0.78	Strong	BOS
3	32	50	0.39	Weak	BRK
4	21	61	0.26	Weak	CHA
5	40	44	0.48	Average	CHI
6	48	34	0.59	Average	CLE
7	50	32	0.61	Strong	DAL
8	57	25	0.70	Strong	DEN
9	14	68	0.17	Weak	DET
10	46	37	0.55	Average	GSW
11	41	41	0.50	Average	HOU
12	47	35	0.57	Average	IND
13	51	31	0.62	Strong	LAC
14	48	35	0.58	Average	LAL
15	27	55	0.33	Weak	MEM
16	47	37	0.56	Average	MIA

CREATED TABLE Team Tiers


```

CREATE TABLE player_performance (
Team VARCHAR(255),
Player_ID INT,
Player VARCHAR(255),
Team_Index VARCHAR(255),
Stats VARCHAR(255), Value DECIMAL(8, 2), id
INT AUTO_INCREMENT PRIMARY KEY,
UNIQUE KEY (Player_ID, Stats)
);

LOAD DATA INFILE 'C:/ProgramData/MySQL/MySQL Server
8.0/Uploads/Player_Performance_Long.csv'

INTO TABLE player_performance

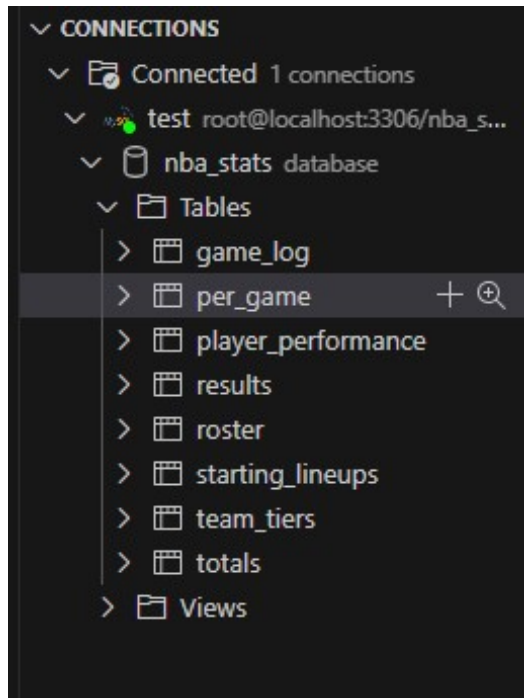
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'

IGNORE 1 ROWS

(Team, Player_ID, Player, Team_Index, Stats, Value);

```

Team	Player_ID	Player	Team_Index	Stats	Value
PHI	23002	joel embiid	23	PointsPerGame	34.70
PHI	23002	joel embiid	23	TotalReboundsPerGame	11.00
PHI	23002	joel embiid	23	AssistsPerGame	5.60
PHI	23002	joel embiid	23	StealsPerGame	1.20
PHI	23002	joel embiid	23	BlocksPerGame	1.70
DAL	7008	luka dončić	7	PointsPerGame	33.90
DAL	7008	luka dončić	7	TotalReboundsPerGame	9.20
DAL	7008	luka dončić	7	AssistsPerGame	9.80
DAL	7008	luka dončić	7	StealsPerGame	1.40
DAL	7008	luka dončić	7	BlocksPerGame	0.50
MIL	17002	giannis antetokounmpo	17	PointsPerGame	30.40
MIL	17002	giannis antetokounmpo	17	TotalReboundsPerGame	11.50
MIL	17002	giannis antetokounmpo	17	AssistsPerGame	6.50
MIL	17002	giannis antetokounmpo	17	StealsPerGame	1.20
MIL	17002	giannis antetokounmpo	17	BlocksPerGame	1.10
OKC	21003	shai gilgeous-alexander	21	PointsPerGame	30.10



Database Complete

Portfolio Project

Links to the entire Basketball Data Project ** including the Python Web Scrape Code and Tableau Dashboards can be found on my GitHub Profile. This dataset can be downloaded from my Kaggle profile. NBA Basketball Statistics and Performance Data.