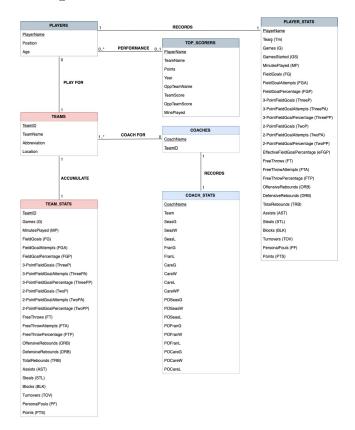# ER Diagram & Relational Schema

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Entity-Relationship Diagram: Shown below is the entity-relationship diagram for NBA Statistics during the 2017-2018 season.

Relational Schema:

Players(<u>PlayerName</u>, Position, Age)

Player_Stats(<u>PlayerName</u>, Tm, G, GS, MP, FG, FGA, FGP, ThreeP, ThreePA, ThreePP, TwoP, TwoPA, TwoPP, TwoP, TwoPA, TwoPP, eFGP, FT, FTA, FTP, ORB, DRB, TRB, AST, STL, BLK, TOV, PF, PTS)

Top_Scorers(<u>PlayerName</u>, TeamName, Points, Year, OppTeamName, TeamScore, OppTeamScore, MinsPlayed)

Teams(<u>TeamID</u>, TeamName, Abbreviation, Location)

Team_Stats(<u>TeamID</u>, G, MP, FG, FGA, FGP, ThreeP, ThreePA, ThreePP, TwoP, TwoPA, TwoPP, TwoP, TwoPA, TwoPP, eFGP, FT, FTA, FTP, ORB, DRB, TRB, AST, STL, BLK, TOV, PF, PTS)

Coaches(<u>CoachName</u>, <u>TeamID</u>)

Coach_Stats(<u>CoachName</u>, Team, SeasG, SeasW, SeasL, FranG, FranL, CareG, CareW, CareL, CareWP, POSeasG, POSeasW, POSeasL, POFranG, POFranW, POFranL, POCareG, POCareW, POCareL)

Create Table Statement: Below is the "Create Table" SQL statement used to create the *Team_Stats* table.

```
w19tdb8=> CREATE TABLE Team_Stats (
w19tdb8(> TeamId    INT
w19tdb8(> ,G        INT
w19tdb8(> ,MP       INT
w19tdb8(> ,FG       INT
w19tdb8(> ,FGA      INT
w19tdb8(> ,FGP      FLOAT
w19tdb8(> ,ThreeP   INT
w19tdb8(> ,ThreePA  INT
w19tdb8(> ,ThreePP  FLOAT
w19tdb8(> ,TwoP     INT
w19tdb8(> ,TwoPA    INT
w19tdb8(> ,TwoPP    FLOAT
w19tdb8(> ,FT       INT
w19tdb8(> ,FTA      INT
w19tdb8(> ,FTP      FLOAT
w19tdb8(> ,ORB      INT
w19tdb8(> ,DRB      INT
w19tdb8(> ,TRB      INT
w19tdb8(> ,AST      INT
w19tdb8(> ,STL      INT
w19tdb8(> ,BLK      INT
w19tdb8(> ,TOV      INT
w19tdb8(> ,PF       INT
w19tdb8(> ,PTS      INT
w19tdb8(> ,PRIMARY KEY(TeamId));
CREATE TABLE
```

Table Populated with Data: Below is the *Team_Stats* table (with data), which shows NBA team statistics for the 2017-2018 season.
The data for this table was retrieved from Basketball Reference (https://www.basketball-reference.com/) by exporting the statistics to a CSV file, editing that data to conform to our table attributes, and using the `\copy Team_Stats FROM 'csv/Team_Stats.csv' WITH CSV HEADER;` statement to copy the data to our table.

teamid	g	mp	fg	fga	fgp	threep	threepa	threepp	twop	twopa	twopp	ft	fta	ftp	orb	drb	trb	ast	stl	blk	tov	pf	pts
1	82	19730	3509	6981	0.503	926	2370	0.391	2583	4611	0.56	1360	1668	0.815	691	2877	3568	2402	656	612	1267	1607	9304
2	82	19755	3174	6906	0.46	1256	3470	0.362	1918	3436	0.558	1609	2061	0.781	739	2825	3564	1767	699	392	1135	1597	9213
3	82	19955	3500	7241	0.483	837	2312	0.362	2663	4929	0.54	1324	1716	0.772	712	2924	3636	2195	657	485	1223	1570	9161
4	82	19830	3383	7169	0.472	968	2705	0.358	2415	4464	0.541	1422	1790	0.794	800	2807	3607	1995	626	500	1095	1783	9156
5	82	19730	3311	6950	0.476	981	2636	0.372	2330	4314	0.54	1488	1909	0.779	694	2761	3455	1916	582	312	1126	1524	9091
6	82	19880	3338	7102	0.47	940	2536	0.371	2398	4566	0.525	1404	1830	0.767	902	2748	3650	2059	627	404	1227	1533	9020
7	82	19780	3349	7098	0.472	901	2445	0.369	2448	4653	0.526	1405	1868	0.752	893	2996	3889	2221	682	420	1353	1811	9004
8	82	19805	3365	7063	0.476	658	1845	0.357	2707	5218	0.519	1592	1980	0.804	848	2593	3441	1861	689	345	1021	1495	8980
9	82	19705	3302	7004	0.471	777	2196	0.354	2525	4808	0.525	1556	2095	0.743	832	2766	3598	1832	628	373	1204	1638	8937
10	82	19780	3197	7106	0.45	824	2233	0.369	2373	4873	0.487	1656	2216	0.747	827	2901	3728	1770	559	373	1041	1409	8874
11	82	19905	3338	7248	0.461	822	2384	0.345	2516	4864	0.517	1364	1910	0.714	876	2927	3803	1949	633	388	1295	1736	8862
12	82	19830	3271	7221	0.453	881	2491	0.354	2390	4730	0.505	1421	1985	0.716	1024	2671	3695	1750	743	412	1147	1653	8844
13	82	19855	3275	7018	0.467	814	2173	0.375	2461	4845	0.508	1378	1786	0.772	823	2713	3536	2065	645	353	1196	1746	8742
14	82	19855	3136	7114	0.441	1041	2924	0.356	2095	4190	0.5	1428	1850	0.772	792	2852	3644	1941	512	390	1245	1688	8741
15	82	19830	3257	6807	0.478	718	2024	0.355	2539	4783	0.531	1499	1915	0.783	688	2579	3267	1905	722	443	1134	1752	8731
16	82	19755	3222	7132	0.452	845	2308	0.366	2377	4824	0.493	1372	1715	0.8	835	2893	3728	1599	573	423	1109	1599	8661
17	82	19755	3345	7083	0.472	741	2010	0.369	2604	5073	0.513	1225	1573	0.779	788	2684	3472	1819	721	340	1089	1544	8656
18	82	19830	3334	7193	0.464	673	1914	0.352	2661	5279	0.504	1225	1557	0.787	859	2752	3611	1912	552	421	1207	1682	8566
19	82	19755	3139	6797	0.462	887	2425	0.366	2252	4372	0.515	1375	1766	0.779	740	2807	3547	1839	708	420	1205	1608	8540
20	82	19805	3141	6975	0.45	939	2492	0.377	2202	4483	0.491	1308	1697	0.771	767	2878	3645	1842	604	373	1149	1618	8529
21	82	19705	3153	7141	0.442	763	2286	0.334	2390	4855	0.492	1453	1962	0.741	842	2776	3618	1743	569	370	1289	1807	8522
22	82	19805	3208	7129	0.45	886	2373	0.373	2322	4756	0.488	1207	1621	0.745	830	2756	3586	1868	628	317	1103	1508	8509
23	82	19930	3184	6997	0.455	903	2506	0.36	2281	4491	0.508	1209	1601	0.755	763	2801	3564	1862	620	437	1179	1648	8480
24	82	19730	3182	7042	0.452	844	2405	0.351	2338	4637	0.504	1271	1678	0.757	722	2692	3414	1921	622	400	1192	1579	8479
25	82	19705	3130	7015	0.446	917	2544	0.36	2213	4471	0.495	1298	1654	0.785	743	2693	3436	1946	638	348	1276	1606	8475
26	82	19855	3170	7285	0.435	906	2549	0.355	2264	4736	0.478	1194	1574	0.759	790	2873	3663	1923	626	289	1147	1571	8440
27	82	19730	3202	6999	0.457	696	1977	0.352	2506	5022	0.499	1324	1715	0.772	849	2777	3626	1868	628	460	1078	1408	8424
28	82	19805	3128	7042	0.444	967	2688	0.36	2161	4354	0.496	1167	1530	0.763	666	2717	3383	1858	578	310	1008	1578	8390
29	82	19705	3013	6788	0.444	758	2152	0.352	2255	4636	0.486	1361	1732	0.786	779	2544	3323	1767	613	396	1227	1900	8145
30	82	19755	3179	7063	0.45	738	1967	0.375	2441	5096	0.479	1008	1371	0.735	777	2578	3355	1768	643	340	1125	1639	8104

(30 rows)

Additional *CREATE TABLE* statements and screenshots of tables populated with data can be found here: https://github.com/carissaallen/NBA-Database. Any SQL statements will be located in the *SQL* folder, and any images displaying table data will be located in the *Screenshots* folder.