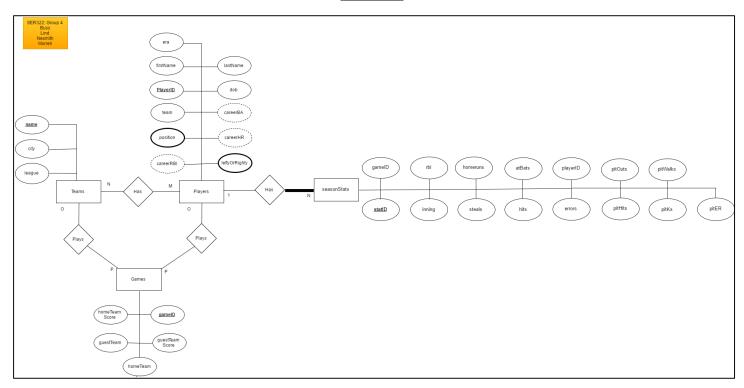
## E-R Model



## **Relational Algebra**

	teams	
name	city	league
Braves	Atlanta	National
Nationals	Washington	National
Orioles	Baltimore	American
Rays	Tampa Bay	American

		gam	es	
gameID	homeTeam	awayTeam	homeTeamScore	awayTeamScore
1	Braves	Nationals	3	4
2	Nationals	Braves	6	4
3	Orioles	Rays	6	1
4	Rays	Orioles	2	0

				play	/ers					
playerID	firstName	lastName	position	leftyOrRighty	careerRBI	careerBA	careerHR	careerERA	dob	currentTeam
1	Julio	Teheran	SP	R	10	0.133	0	3.49	01/27/91	Braves
2	AJ	Pierzynshi	С	L	891	0.282	186	0.00	12/30/76	Braves
3	Freddie	Freeman	1B	L	431	0.284	107	0.00	09/12/89	Braves
4	Daniel	Castro	2B	R	9	0.230	2	0.00	11/14/92	Braves

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5	Adonis	Garcia	3B	R	32	0.279	11	0.00	04/12/85	Braves
6	Erick	Aybar	SS	S	418	0.274	48	0.00	01/14/84	Braves
7	Kelly	Johnson	LF	L	520	0.251	145	0.00	02/22/82	Braves
8	Maliex	Smith	CF	L	7	0.188	0	0.00	05/06/93	Braves
9	Nick	Markakis	RF	L	730	0.302	144	0.00	11/17/83	Braves
10	Arodys	Vizcaino	RP	R	0	0.000	0	2.67	11/13/90	Braves
11	Max	Scherzer	SP	R	6	0.189	0	3.48	07/27/84	Nationals
12	Wilson	Ramos	С	R	249	0.259	63	0.00	08/10/87	Nationals
13	Ryan	Zimmerman	1B	R	790	0.282	201	0.00	08/15/81	Nationals
14	Daniel	Murphy	2B	L	412	0.290	64	0.00	08/02/08	Nationals
15	Anthony	Rendon	3B	R	144	0.272	33	0.00	06/06/90	Nationals
16	Danny	Espinosa	SS	S	221	0.229	69	0.00	04/25/87	Nationals
17	Jason	Werth	LF	R	710	0.271	201	0.00	05/20/79	Nationals
18	Michael	Taylor	CF	R	72	0.223	18	0.00	03/26/91	Nationals
19	Bryce	Harper	RF	L	272	0.289	106	0.00	10/16/92	Nationals
20	Jonathan	Papelbon	RP	R	0	0.000	0	2.35	11/23/80	Nationals
21				R	0		0			
	Chris	Tillman	SP			0.000		4.17	04/15/88	Orioles
22	Matt	Wieters	С	S	379	0.257	101	0.00	05/21/86	Orioles
23	Chris	Davis	1B	L	564	0.254	210	0.00	03/17/86	Orioles
24	Jonathan	Schoop	2B	R	95	0.236	35	0.00	10/16/91	Orioles
25	Manny	Machado	3B	R	231	0.284	75	0.00	07/06/92	Orioles
26	IJ	Hardy	SS	R	624	0.257	177	0.00	08/19/82	Orioles
27	Joey	Rickard	LF	R	7	0.283	2	0.00	05/21/91	Orioles
28	Adam	Jones	CF	R	665	0.277	197	0.00	08/01/85	Orioles
29	Mark	Trumbo	RF	R	427	0.253	137	0.00	01/16/86	Orioles
30	Zach	Britton	RP	L	2	0.625	1	3.66	12/22/87	Orioles
31	Chris	Archer	SP	R	0	0.000	0	3.43	09/26/88	Rays
32	Curt	Casali	С	R	26	0.194	11	0.00	01/01/70	Rays
33	Logan	Morrison	1B	L	254	0.242	70	0.00	08/25/87	Rays
34	Logan	Forsythe	2B	R	159	0.255	38	0.00	01/14/87	Rays
35	Evan	Longoria	3B	R	717	0.270	208	0.00	10/07/85	Rays
36	Brad	Miller	SS	L	123	0.243	286	0.00	10/18/89	Rays
37	Desmond	Jennings	LF	R	177	0.248	49	0.00	10/30/86	Rays
38	Kevin	Kiermaier	CF	L	81	0.262	23	0.00	04/22/90	Rays
39	Steven	Souza Jr	RF	R	53	0.228	23	0.00	04/24/89	Rays
40	Alex	Colome	RP	R	0	0.000	0	3.42	12/31/88	Rays

					Se	easonSta	ts							
statID	playerID	gameID	inning	atBats	hits	homeruns	rbi	steals	errors	pitOuts	pitKs	pitHits	pitWalks	pitER
1	1	1	1	0	0	0	0	0	0	3	1	2	1	1
2	1	1	2	0	0	0	0	0	0	3	1	0	0	0
3	1	1	3	1	0	0	0	0	0	3	0	0	1	0
4	1	1	4	0	0	0	0	0	0	3	0	2	0	1
5	1	1	5	1	0	0	0	0	0	3	1	0	0	0
6	1	1	6	0	0	0	0	0	0	3	0	1	1	0
7	2	1	2	1	0	0	0	0	0	0	0	0	0	0

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8	2	1	5	1	0	0	0	0	0	0	0	0	0	0
9	2	1	7	1	0	0	0	0	0	0	0	0	0	0
10	2	1	9	1	0	0	0	0	0	0	0	0	0	0
11	3	1	1	1	1	1	1	0	0	0	0	0	0	0
12	3	1	4	1	0	0	0	0	0	0	0	0	0	0
13	3	1	6	1	0	0	0	0	0	0	0	0	0	0
14	5	1	1	1	0	0	0	0	0	0	0	0	0	0
15	5	1	4	1	1	1	1	0	0	0	0	0	0	0
16	5	1	6	1	0	0	0	0	0	0	0	0	0	0
17	6	1	1	1	0	0	0	0	1	0	0	0	0	0
18	6	1	3	1	0	0	0	0	0	0	0	0	0	0
19	6	1	6	1	1	0	0	0	0	0	0	0	0	0
20	6	1	8	1	0	0	0	0	0	0	0	0	0	0
21	6	1	10	1	0	0	0	0	0	0	0	0	0	0
22	9	1	2	1	0	0	0	0	0	0	0	0	0	0
23	9	1	4	1	0	0	0	0	0	0	0	0	0	0
24	9	1	8	1	0	0	0	0	0	0	0	0	0	0
25	10	1	8	0	0	0	0	0	0	3	2	0	1	0
26	11	1	1	0	0	0	0	0	0	3	0	1	0	1
		1	2		0	0	0	0	0	3		0	0	0
27	11			1							2			
28	11	1	3	0	0	0	0	0	0	3	0	0	1	0
29	11	1	4	0	0	0	0	0	0	3	2	1	0	1
30	11	1	5	1	0	0	0	0	0	3	2	0	0	0
31	11	1	6	0	0	0	0	0	0	3	1	1	0	0
32	11	1	7	1	0	0	0	0	0	3	0	0	1	0
33	12	1	2	1	0	0	0	0	0	0	0	0	0	0
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35	12	1	6	1	0	0	0	0	0	0	0	0	0	0
36	12	1	9	1	1	0	0	0	0	0	0	0	0	0
37	12	1	10	1	0	0	0	0	0	0	0	0	0	0
38	13	1	3	1	0	0	0	0	0	0	0	0	0	0
39	13	1	6	1	1	0	0	0	0	0	0	0	0	0
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41	14	1	4	1	1	1	1	0	0	0	0	0	0	0
42	14	1	8	1	0	0	0	0	0	0	0	0	0	0
43	14	1	10	1	1	0	1	0	0	0	0	0	0	0
44	15	1	1	1	1	0	0	0	0	0	0	0	0	0
45	15	1	3	1	0	0	0	0	0	0	0	0	0	0
46	15	1	5	1	0	0	0	0	0	0	0	0	0	0
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48	15	1	9	1	0	0	0	0	0	0	0	0	0	0
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51	16	1	7	1	0	0	0	0	0	0	0	0	0	0
52	16	1	9	1	1	0	0	0	0	0	0	0	0	0
53	17	1	1	1	0	0	0	0	0	0	0	0	0	0

	47			,										
54	17	1	6	1	0	0	0	0	0	0	0	0	0	0
56	17	1	10	1	0	0	0	0	0	0	0	0	0	0
57	18	1	5	1	0	0	0	0	0	0	0	0	0	0
58	18	1	7	1	0	0	0	0	0	0	0	0	0	0
59	18	1	9	1	0	0	1	0	0	0	0	0	0	0
60	19	1	1	1	1	1	1	0	0	0	0	0	0	0
61	19	1	6	1	0	0	0	0	0	0	0	0	0	0
62	19	1	8	0	0	0	0	1	0	0	0	0	0	0
63	19	1	10	1	0	0	0	0	0	0	0	0	0	0
64	20	1	10	0	0	0	0	0	0	3	1	0	0	0
65	3	2	3	1	0	0	0	0	0	0	0	0	0	0
66	3	2	6	1	0	0	0	0	0	0	0	0	0	0
67	3	0	0	1	0	0	0	0	0	0	0	0	0	0
68	5	2	1	1	0	0	0	0	0	0	0	0	0	0
69	5	2	4	1	1	0	0	0	0	0	0	0	0	0
70	5	2	6	1	0	0	0	0	0	0	0	0	0	0
71	5	2	8	1	1	0	0	0	0	0	0	0	0	0
72	6	2	2	1	0	0	0	0	0	0	0	0	0	0
73	6	2	4	1	0	0	0	0	0	0	0	0	0	0
74	6	2	7	1	0	0	0	0	0	0	0	0	0	0
75	6	2	9	1	0	0	0	0	0	0	0	0	0	0
76	7	2	9	1	1	0	1	0	0	0	0	0	0	0
77	8	2	1	1	0	0	0	0	0	0	0	0	0	0
78	8	2	3	1	0	0	0	0	0	0	0	0	0	0
79	8	2	50	1	0	0	0	0	0	0	0	0	0	0
80	8	2	9	1	0	0	0	0	0	0	0	0	0	0
81	9	2	1	1	0	0	0	0	0	0	0	0	0	0
82	9	2	3	1	0		0	0	0	0	0	0	0	
83	9	2	5	1	0	0	0	0	0	0	0	0	0	0
84	10	2	8	0	0	0	0	0	0	1	0	0	0	0
85	13	2	2	1	0	0	0	0	0	0	0	0	0	0
86 87	13	2	0	0	0	0	0	0	0	0	0	0	0	0
88	13	2	6	1	0	0	0	0	0	0	0	0	0	0
89	13	2	8	1	0	0	0	0	0	0	0	0	0	0
90	14	2	2	1	1	0	0	0	0	0	0	0	0	0
91	14	2	4	1	0	0	0	0	0	0	0	0	0	0
92	14	2	7	1	1	0	0	0	0	0	0	0	0	0
93	15	2	1	1	0	0	0	0	0	0	0	0	0	0
94	15	2	3	1	0	0	0	0	0	0	0	0	0	0
95	15	2	6	1	0	0	0	0	0	0	0	0	0	0
96	16	2	2	1	0	0	0	0	1	0	0	0	0	0
97	16	2	0	0	0	0	0	0	0	0	0	0	0	0
98	16	2	7	1	0	0	0	0	0	0	0	0	0	0
99	17	2	2	1	0	0	0	0	0	0	0	0	0	0

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100	17	2	5	1	1	0	0	0	0	0	0	0	0	0
101	18	2	7	1	0	0	0	0	0	0	0	0	0	0
102	19	2	1	1	0	0	0	0	0	0	0	0	0	0
103	19	2	4	1	0	0	0	0	0	0	0	0	0	0
104	19	2	6	1	0	0	0	0	0	0	0	0	0	0
105	19	2	8	1	1	0	2	0	0	0	0	0	0	0
106	21	3	1	0	0	0	0	0	0	3	1	3	1	1
107	21	3	2	0	0	0	0	0	0	3	0	1	0	0
108	21	3	3	0	0	0	0	0	0	3	1	0	1	0
109	21	3	4	0	0	0	0	0	0	3	2	0	0	0
110	21	3	5	0	0	0	0	0	0	3	1	0	0	0
111	22	3	2	1	0	0	0	0	0	0	0	0	0	0
112	22	3	4	1	1	0	1	0	0	0	0	0	0	0
113	22	3	5	1	1	0	1	0	0	0	0	0	0	0
114	22	3	8	1	0	0	0	0	0	0	0	0	0	0
115	23	3	2	1	1	1	1	0	0	0	0	0	0	0
116	23	3	7	1	0	0	0	0	0	0	0	0	0	0
117	24	3	3	1	0	0	0	0	0	0	0	0	0	0
118	24	3	5	1	1	1	1	0	0	0	0	0	0	0
119	24	3	6	1	0	0	0	0	0	0	0	0	0	0
120	25	3	1	1	0	0	0	0	0	0	0	0	0	0
121	25	3	4	1	0	0	0	0	0	0	0	0	0	0
122	25	3	5	1	1	1	1	0	0	0	0	0	0	0
123	25	3	7	1	0	0	0	0	0	0	0	0	0	0
124	27	3	1	1	1	0	0	0	0	0	0	0	0	0
125	27	3	3	1	1	0	0	0	0	0	0	0	0	0
126	27	3	5	1	0	0	0	0	0	0	0	0	0	0
127	27	3	6	1	0	0	0	0	0	0	0	0	0	0
128	29	3	2	1	1	0	0	0	0	0	0	0	0	0
129	29	3	4	1	0	0	0	0	0	0	0	0	0	0
130	29	3	5	1	1	0	0	0	0	0	0	0	0	0
131	29	3	8	1	0	0	0	0	0	0	0	0	0	0
132	31	3	1	0	0	0	0	0	0	3	1	1	0	0
133	31	3	2	0	0	0	0	0	0	3	1	2	0	1
134	31	3	3	0	0	0	0	0	0	3	2	1	0	0
135	31	3	4	0	0	0	0	0	0	3	0	1	1	1
136	31	3	5	0	0	0	0	0	0	3	1	5	1	4
137	33	3	1	1	0	0	0	0	0	0	0	0	0	0
138	33	3	3	1	0	0	0	0	0	0	0	0	0	0
139	33	3	6	1	1	0	0	0	0	0	0	0	0	0
140	33	3	8	1	0	0	0	0	0	0	0	0	0	0
141	34	3	1	1	1	0	0	0	0	0	0	0	0	0
142	34	3	5	1	0	0	0	0	0	0	0	0	0	0
143	34	3	8	1	0	0	0	0	0	0	0	0	0	0
144	35	3	1	1	1	1	1	0	0	0	0	0	0	0
145	35	3	3	1	0	0	0	0	0	0	0	0	0	0
				·	<u>~</u>	<u>~</u>	<u>`</u>	<u>~</u>	·	·	. <u> </u>	<u>`</u> _	<u> </u>	

175     26     4     7     1     0										l .			l .		
144															
100															
150   156   15   15   15   15   15   15   1				2											
151	149	36		4	1		0		0	0		0	0	0	0
1512	150	36	3	7	1	0	0	0	0	0	0	0	0	0	0
155	151	36	3	9	1	0	0	0	0	0	0	0	0	0	0
154	152	37	3	4	1	0	0	0	0	0	0	0	0	0	0
155   38	153	38	3	2	1	0	0	0	0	0	0	0	0	0	0
1566   39	154	38	3	5	1	0	0	0	0	0	0	0	0	0	0
157   39   3   4   1   0   0   0   0   0   0   0   0   0	155	38	3	7	1	0	0	0	0	0	0	0	0	0	0
156   39   3   7   1   0   0   0   0   0   0   0   0   0	156	39	3	2	1	1	0	0	0	0	0	0	0	0	0
159   22	157	39	3	4	1	0	0	0	0	0	0	0	0	0	0
180	158	39	3	7	1	0	0	0	0	0	0	0	0	0	0
161   22   4   7   1   1   0   0   0   0   0   0   0   0	159	22	4	2	1	0	0	0	0	0	0	0	0	0	0
162   23   4   2   1   0   0   0   0   0   0   0   0   0	160	22	4	5	1	0	0	0	0	0	0	0	0	0	0
163	161	22	4	7	1	1	0	0	0	0	0	0	0	0	0
164   23	162	23	4	2	1	0	0	0	0	0	0	0	0	0	0
165	163	23	4	4	1	0	0	0	0	0	0	0	0	0	0
166     24     4     3     1     0	164	23	4	6	1	0	0	0	0	0	0	0	0	0	0
167     24     4     5     1     0	165	23	4	9	1	0	0	0	0	0	0	0	0	0	0
168	166	24	4	3	1	0	0	0	0	0	0	0	0	0	0
169	167	24	4	5	1	0	0	0	0	0	0	0	0	0	0
170     25     4     3     1     0	168	24	4	8	1	0	0	0	0	0	0	0	0	0	0
171     25     4     6     1     0	169	25	4	1	1	0	0	0	0	0	0	0	0	0	0
172     25     4     8     1     0	170	25	4	3	1	0	0	0	0	0	0	0	0	0	0
173     26     4     2     1     0	171	25	4	6	1	0	0	0	0	0	0	0	0	0	0
174     26     4     5     1     0	172	25	4	8	1	0	0	0	0	0	0	0	0	0	0
175     26     4     7     1     0	173	26	4	2	1	0	0	0	0	0	0	0	0	0	0
176     27     4     1     1     0	174	26	4	5	1	0	0	0	0	0	0	0	0	0	0
177     27     4     3     1     0	175	26	4	7	1	0	0	0	0	0	0	0	0	0	0
178     27     4     6     1     0	176	27	4	1	1	0	0	0	0	0	0	0	0	0	0
179     27     4     8     1     0	177	27	4	3	1	0	0	0	0	0	0	0	0	0	0
180     28     4     1     1     0	178	27	4	6	1	0	0	0	0	0	0	0	0	0	0
181     28     4     4     1     0	179	27	4	8	1	0	0	0	0	0	0	0	0	0	0
182     28     4     6     1     1     0	180	28	4	1	1	0	0	0	0	0	0	0	0	0	0
183 28 4 9 1 0	181	28	4	4	1	0	0	0	0	0	0	0	0	0	0
184     29     4     2     1     1     0	182	28	4	6	1	1	0	0	0	0	0	0	0	0	0
185     29     4     4     1     0	183	28	4	9	1	0	0	0	0	0	0	0	0	0	0
186 29 4 7 1 0 0 0 0 0 0 0 0 0 0	184	29	4	2	1	1	0	0	0	0	0	0	0	0	0
	185	29	4	4	1	0	0	0	0	0	0	0	0	0	0
	186	29	4	7	1	0	0	0	0	0	0	0	0	0	0
	187	29	4	9	1	0	0	0	0	0	0	0	0	0	0
188     31     4     1     0     0     0     0     0     3     2     0     0     0	188	31	4	1	0	0	0	0	0	0	3	2	0	0	0
189 31 4 2 0 0 0 0 0 0 3 3 1 0 0	189	31	4	2	0	0	0	0	0	0	3	3	1	0	0
	190		4			0	0	0	0	0			1	0	0
															0

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192	31	4	5	0	0	0	0	0	0	3	1	2	0	0
193	31	4	6	0	0	0	0	0	0	3	1	1	0	0
194	31	4	7	0	0	0	0	0	0	2	1	1	0	0
195	32	4	3	1	0	0	0	0	0	0	0	0	0	0
196	32	4	5	1	1	0	1	0	0	0	0	0	0	0
		4	1	1	0	0								
197	34						0	0	0	0	0	0	0	0
198	34	4	3	1	0	0	0	0	0	0	0	0	0	0
199	34	4	6	1	0	0	0	0	0	0	0	0	0	0
200	35	4	1	1	0	0	0	0	0	0	0	0	0	0
201	35	4	4	1	0	0	0	0	0	0	0	0	0	0
202	35	4	5	1	0	0	0	0	0	0	0	0	0	0
203	35	4	7	1	1	0	0	0	0	0	0	0	0	0
204	36	4	2	1	1	0	0	0	0	0	0	0	0	0
205	36	4	5	1	0	0	0	0	0	0	0	0	0	0
206	37	4	2	1	0	0	0	0	0	0	0	0	0	0
207	37	4	4	1	0	0	0	0	0	0	0	0	0	0
208	37	4	6	1	0	0	0	0	0	0	0	0	0	0
209	37	4	8	1	0	0	0	0	0	0	0	0	0	0
210	39	4	2	1	0	0	0	0	0	0	0	0	0	0
211	39	4	6	1	1	0	0	0	0	0	0	0	0	0
212	39	4	8	1	0	0	0	0	0	0	0	0	0	0
213	40	4	9	0	0	0	0	0	0	1	0	0	0	0