

ER Diagram

SQL

1) How many franchises are listed in the database (see `count`)?

```
Select count (*) from TeamsFranchises
```

Table 1: 1 records

count (*)
120

2) How many franchises are currently active?

```
select count(*) from TeamsFranchises where active = 'Y'
```

Table 2: 1 records

count(*)
30

3) Which teams won more than 100 games in one season between 2000 and 2015? Order result by descending number of wins. (attribute `W` of the `Teams` table contains the number of wins)

```
select * from Teams where yearID <= 2015 and yearID >= 2000 and W >100 order by W DESC
```

yearID	lgID	teamID	franchID	divID	Rank	G	Ghome	W	L	DivWin	WCWin	LgWin	WSWin
2001	AL	SEA	SEA	W	1	162	81	116	46	Y	N	N	N
2004	NL	SLN	STL	C	1	162	81	105	57	Y	N	Y	N
2002	AL	NYA	NYN	E	1	161	80	103	58	Y	N	N	N
2002	AL	OAK	OAK	W	1	162	81	103	59	Y	N	N	N
2009	AL	NYA	NYN	E	1	162	81	103	59	Y	N	Y	Y
2001	AL	OAK	OAK	W	2	162	81	102	60	N	Y	N	N
2011	NL	PHI	PHI	E	1	162	81	102	60	Y	N	N	N
2002	NL	ATL	ATL	E	1	161	81	101	59	Y	N	N	N
2003	AL	NYA	NYN	E	1	163	82	101	61	Y	N	Y	N
2003	NL	ATL	ATL	E	1	162	81	101	61	Y	N	N	N

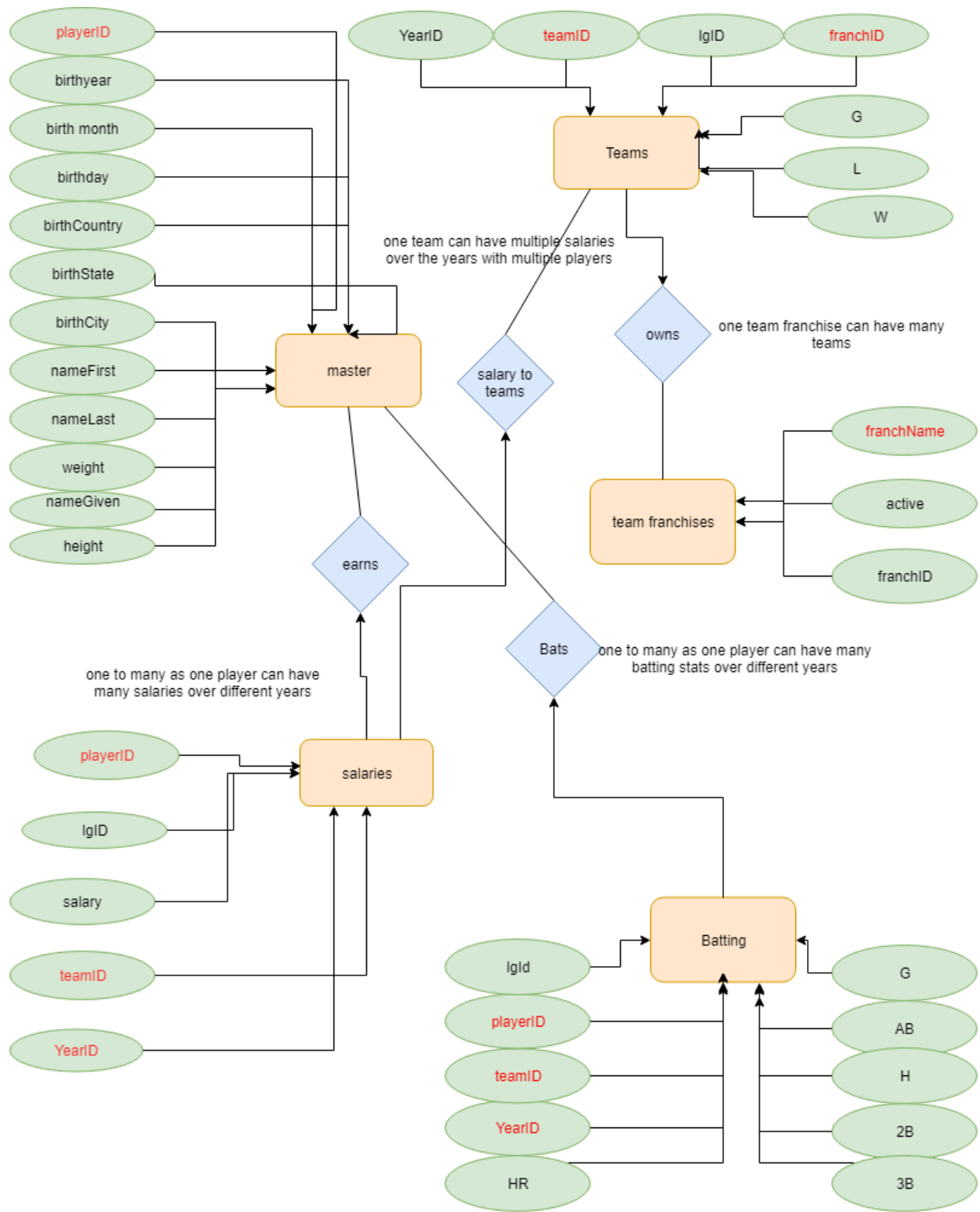
4) What is the franchise name of the team with the most total wins in the database?

```
with t1(franchName,teamID,franchID,W) as (select franchName,teamID,franchID,sum(W)
from Teams natural join TeamsFranchises group by franchID,franchName)
select franchName, W from t1 where W = (select max(W) from t1)
```

Table 4: 1 records

franchName	W
San Francisco Giants	10951

5) What is the franchise name of the team with the highest winning percentage in a season in the database?



primary keys in red

Figure 1:

(Win percentage is W/G)

```
with t1(franchName,teamID,franchID,winP) as (select franchName,teamID,franchID,(1.0 * W/G)
from Teams natural join TeamsFranchises group by franchID,teamID,franchName)
select franchName from t1 where winP = (select max(winP) from t1)
```

Table 5: 1 records

franchName
Boston Red Stockings

6) What is the franchise name of the team with the highest single-year payroll between 2000 and 2015?

```
with t1(yearID,teamID,sum) as (select yearID,teamID,Sum(salary)
from salaries where yearID <= 2015 and yearID >=2000 group by yearID,teamID)
select franchName from TeamsFranchises where franchID =
(select franchID from teams where teamID =
(select teamID from t1 where sum = (select max(sum) from t1)))
```

Table 6: 1 records

franchName
New York Yankees

7) (BONUS from MDSR book): Identify players (by first and last name) that have attained through their career either a) 500 or more HRs or b) 3000 or more hits (H) *and* have not been inducted to the Hall of Fame (see HallOfFame table).