

# CPSC 304 Project Cover Page

Milestone #: 4

Date: April 5<sup>th</sup>, 2023

Group Number: 199

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

## **Description:**

This project is an NBA database application designed to store essential information about players, teams, stats, games, and standings. The aim of this project is to provide users with a comprehensive platform that offers search and query functionalities, as well as data comparison and update capabilities.

The application is built using PHP as the primary platform, with a technology stack that includes Oracle, JDBC, and PHP. The system is designed to incorporate appropriate security measures to safeguard user data and protect against potential threats. The project also includes comprehensive testing to ensure functionality, scalability, and optimal performance.

Ultimately, this NBA database application enables users to access the most current and up-to-date information about the league, teams, and players. Whether a fan, journalist, or coach, this platform will provide users with a reliable source of data to analyze and make informed decisions.

## **Schemas:**

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Teams(tid: INTEGER PRIMARY KEY, tname: CHAR(20), division: CHAR(20), city: CHAR(20))

Playoffs\_Standings(sid: INTEGER, ranking: INTEGER, wins: INTEGER, losses: INTEGER, seeds: INTEGER, round: INTEGER, tid: INTEGER NOT NULL, PRIMARY KEY(sid, tid), FOREIGN KEY(tid) REFERENCES Teams)

Season\_Standings(sid: INTEGER, ranking: INTEGER, wins: INTEGER, losses: INTEGER, conference\_records: INTEGER, tid: INTEGER NOT NULL, PRIMARY KEY(sid, tid), FOREIGN KEY(tid) REFERENCES Teams)

Play(tid: INTEGER, gid: INTEGER, PRIMARY KEY(tid, gid), FOREIGN KEY(tid) REFERENCES Teams, FOREIGN KEY(gid) REFERENCES Games\_Play\_In\_Stadium)

Games\_Play\_In\_Stadium(gid: INTEGER, score: INTEGER, date: CHAR(20), time: CHAR(20), home\_team: CHAR(20), away\_team: CHAR(20), sname: CHAR(20), PRIMARY KEY(gid), CANDIDATE KEY(date, home\_team, away\_team), FOREIGN KEY(sname) REFERENCES Stadium)

Stadium(sname: CHAR(20) PRIMARY KEY, tid: INTEGER UNIQUE, capacity: INTEGER, FOREIGN KEY(tid) REFERENCES Teams)

Coaches(cid: INTEGER PRIMARY KEY, experience: CHAR(20), cname: CHAR(20), salary: INTEGER, tid: INTEGER UNIQUE, FOREIGN KEY(tid) REFERENCES Teams)

Players\_Play\_For(pid: INTEGER, salary: INTEGER, pname: CHAR(20), number: INTEGER, height: CHAR(4), position: CHAR(20), tid: INTEGER, PRIMARY KEY (pid), FOREIGN KEY (tid) REFERENCES Teams)

Regular\_Season\_Statistics(statid: INTEGER PRIMARY KEY, season\_points: INTEGER, pid: INTEGER UNIQUE, FOREIGN KEY (pid) REFERENCES Players\_Play\_For)

Playoffs\_Statistics(statid: INTEGER PRIMARY KEY, playoff\_points: INTEGER, pid: INTEGER UNIQUE, FOREIGN KEY (pid) REFERENCES Players\_Play\_For)

## **Creation of Tables and Tuple Insertions:**

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```
1  DROP TABLE Teams_City;
2  DROP TABLE Playoffs_Standings;
3  DROP TABLE Season_Standings;
4  DROP TABLE Regular_Season_Statistics;
5  DROP TABLE Playoffs_Statistics;
6  DROP TABLE Play;
7  DROP TABLE Games_Play_In_Stadium;
8  DROP TABLE Stadium;
9  DROP TABLE Coaches;
10 DROP TABLE Players_Play_For;
11 DROP TABLE Teams;
12
13 CREATE TABLE Teams (
14     tid INTEGER PRIMARY KEY,
15     tname CHAR(20) UNIQUE NOT NULL,
16     division CHAR(20) NOT NULL
17 );
18
19 grant select on Teams to public;
20
21 CREATE TABLE Teams_City (
22     cname CHAR(20) NOT NULL,
23     tid INTEGER PRIMARY KEY,
24     FOREIGN KEY (tid) REFERENCES Teams(tid) ON DELETE CASCADE
25 );
26
27 grant select on Teams_City to public;
28
```

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```
29  CREATE TABLE Playoffs_Standings (
30      sid INTEGER NOT NULL,
31      ranking INTEGER,
32      wins INTEGER,
33      losses INTEGER,
34      seeds INTEGER,
35      round INTEGER,
36      tid INTEGER NOT NULL,
37      PRIMARY KEY(sid, tid),
38      FOREIGN KEY(tid) REFERENCES Teams(tid) ON DELETE CASCADE
39  );
40
41  grant select on Playoffs_Standings to public;
42
43  CREATE TABLE Season_Standings (
44      sid INTEGER,
45      ranking INTEGER,
46      wins INTEGER,
47      losses INTEGER,
48      conference_records INTEGER,
49      tid INTEGER NOT NULL,
50      PRIMARY KEY(sid, tid),
51      FOREIGN KEY(tid) REFERENCES Teams(tid) ON DELETE CASCADE
52  );
53
54  grant select on Season_Standings to public;
55
56  CREATE TABLE Stadium (
57      sname CHAR(30) PRIMARY KEY,
58      tid INTEGER UNIQUE,
59      capacity INTEGER,
60      FOREIGN KEY(tid) REFERENCES Teams(tid) ON DELETE CASCADE
61  );
62
63  grant select on Stadium to public;
--
```

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```
64
65 CREATE TABLE Games_Play_In_Stadium (
66     gid INTEGER,
67     score CHAR(20),
68     g_date date,
69     g_time CHAR(20),
70     home_team CHAR(20),
71     away_team CHAR(20),
72     sname CHAR(30),
73     PRIMARY KEY(gid),
74     CONSTRAINT date_home_team_away_team UNIQUE (g_date, home_team, away_team),
75     FOREIGN KEY(sname) REFERENCES Stadium(sname) ON DELETE CASCADE
76 );
77
78 grant select on Games_Play_In_Stadium to public;
79
80 CREATE TABLE Play (
81     tid INTEGER,
82     gid INTEGER,
83     PRIMARY KEY(tid, gid),
84     FOREIGN KEY(tid) REFERENCES Teams(tid) ON DELETE CASCADE,
85     FOREIGN KEY(gid) REFERENCES Games_Play_In_Stadium(gid) ON DELETE CASCADE
86 );
87
88 grant select on Play to public;
89
90 CREATE TABLE Coaches
91 (
92     cid      INTEGER PRIMARY KEY,
93     experience CHAR(20),
94     cname    CHAR(20),
95     salary    INTEGER,
96     tid      INTEGER UNIQUE,
97     FOREIGN KEY (tid) REFERENCES Teams (tid) ON DELETE CASCADE
```

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```
98 );
99
100 grant select on Coaches to public;
101
102 CREATE TABLE Players_Play_For
103 (
104     pid      INTEGER PRIMARY KEY,
105     salary   INTEGER,
106     pname    CHAR(20),
107     pnumber  INTEGER,
108     height   CHAR(7),
109     position  CHAR(20),
110     tid      INTEGER,
111     FOREIGN KEY (tid) REFERENCES Teams (tid) ON DELETE CASCADE
112 );
113
114 grant select on Players_Play_For to public;
115
116 CREATE TABLE Regular_Season_Statistics (
117     statid INTEGER PRIMARY KEY,
118     season_points INTEGER,
119     pid INTEGER UNIQUE,
120     FOREIGN KEY (pid) REFERENCES Players_Play_For(pid) ON DELETE CASCADE
121 );
122
123 grant select on Regular_Season_Statistics to public;
124
125 CREATE TABLE Playoffs_Statistics (
126     statid INTEGER PRIMARY KEY,
127     playoff_points INTEGER,
128     pid INTEGER UNIQUE,
129     FOREIGN KEY (pid) REFERENCES Players_Play_For(pid) ON DELETE CASCADE
130 );
131
132 grant select on Playoffs_Statistics to public;
```

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```
133
134 -- Insert data into Teams table
135 INSERT INTO Teams (tid, tname, division)
136 VALUES (1, 'Lakers', 'Pacific');
137
138 INSERT INTO Teams (tid, tname, division)
139 VALUES (2, 'Celtics', 'Atlantic');
140
141 INSERT INTO Teams (tid, tname, division)
142 VALUES (3, 'Rockets', 'Southwest');
143
144 INSERT INTO Teams (tid, tname, division)
145 VALUES (4, 'Heat', 'Southeast');
146
147 INSERT INTO Teams (tid, tname, division)
148 VALUES (5, 'Warriors', 'Pacific');
149
150 -- Insert data into Teams_City table
151 INSERT INTO Teams_City (tid, cname)
152 VALUES (1, 'Los Angeles');
153
154 INSERT INTO Teams_City (tid, cname)
155 VALUES (2, 'Boston');
156
157 INSERT INTO Teams_City (tid, cname)
158 VALUES (3, 'Houston');
159
160 INSERT INTO Teams_City (tid, cname)
161 VALUES (4, 'Miami');
162
163 INSERT INTO Teams_City (tid, cname)
164 VALUES (5, 'San Francisco');
165
```

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```
166 -- Insert data into Playoffs_Standings table
167 INSERT INTO Playoffs_Standings (sid, ranking, wins, losses, seeds, round, tid)
168 VALUES (1, 1, 16, 5, 1, 4, 1);
169
170 INSERT INTO Playoffs_Standings (sid, ranking, wins, losses, seeds, round, tid)
171 VALUES (1, 2, 14, 6, 2, 4, 2);
172
173 INSERT INTO Playoffs_Standings (sid, ranking, wins, losses, seeds, round, tid)
174 VALUES (1, 3, 12, 7, 3, 3, 3);
175
176 INSERT INTO Playoffs_Standings (sid, ranking, wins, losses, seeds, round, tid)
177 VALUES (1, 4, 11, 8, 4, 3, 4);
178
179 INSERT INTO Playoffs_Standings (sid, ranking, wins, losses, seeds, round, tid)
180 VALUES (1, 5, 10, 9, 5, 2, 5);
181
182 -- Insert data into Season_Standings table
183 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
184 VALUES (1, 1, 52, 20, 32, 1);
185
186 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
187 VALUES (1, 2, 48, 24, 31, 2);
188
189 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
190 VALUES (1, 3, 46, 26, 27, 3);
191
192 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
193 VALUES (1, 4, 44, 28, 25, 4);
194
195 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
196 VALUES (1, 5, 39, 33, 22, 5);
197
198 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
199 VALUES (2, 1, 55, 17, 35, 3);
200
```

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```
201 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
202 VALUES (2, 2, 50, 22, 31, 1);
203
204 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
205 VALUES (2, 3, 48, 24, 28, 2);
206
207 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
208 VALUES (2, 4, 45, 27, 27, 5);
209
210 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
211 VALUES (2, 5, 41, 31, 23, 4);
212
213 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
214 VALUES (3, 1, 54, 18, 36, 2);
215
216 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
217 VALUES (3, 2, 49, 23, 31, 1);
218
219 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
220 VALUES (3, 3, 47, 25, 29, 4);
221
222 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
223 VALUES (3, 4, 44, 28, 27, 5);
224
225 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
226 VALUES (3, 5, 40, 32, 25, 3);
227
228 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
229 VALUES (4, 1, 57, 13, 38, 1);
230
231 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
232 VALUES (4, 2, 53, 17, 33, 2);
233
234 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
235 VALUES (4, 3, 49, 21, 30, 4);
236
```

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```
237 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
238 VALUES (4, 4, 46, 24, 28, 5);
239
240 INSERT INTO Season_Standings (sid, ranking, wins, losses, conference_records, tid)
241 VALUES (4, 5, 42, 28, 26, 3);
242
243 INSERT INTO Stadium (sname, tid, capacity) VALUES ('Staples Center', 1, 19060);
244 INSERT INTO Stadium (sname, tid, capacity) VALUES ('TD Garden', 2, 19580);
245 INSERT INTO Stadium (sname, tid, capacity) VALUES ('Toyota Center', 3, 18055);
246 INSERT INTO Stadium (sname, tid, capacity) VALUES ('American Airlines Arena', 4, 19600);
247 INSERT INTO Stadium (sname, tid, capacity) VALUES ('Chase Center', 5, 18064);
248
249 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
250 VALUES (1, '105-99', TO_DATE('2022-10-19', 'YYYY-MM-DD'), TO_DATE('19:30:00', 'HH24:MI:SS'), 'Lakers', 'Clippers', 'Staples Center');
251 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
252 VALUES (2, '120-112', TO_DATE('2022-10-19', 'YYYY-MM-DD'), TO_DATE('19:30:00', 'HH24:MI:SS'), 'Celtics', 'Nets', 'TD Garden');
253 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
254 VALUES (3, '128-120', TO_DATE('2022-10-20', 'YYYY-MM-DD'), TO_DATE('19:30:00', 'HH24:MI:SS'), 'Lakers', 'Warriors', 'Staples Center');
255 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
256 VALUES (4, '118-109', TO_DATE('2022-10-20', 'YYYY-MM-DD'), TO_DATE('20:00:00', 'HH24:MI:SS'), 'Celtics', 'Bucks', 'TD Garden');
257 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
258 VALUES (5, '115-108', TO_DATE('2022-10-21', 'YYYY-MM-DD'), TO_DATE('19:00:00', 'HH24:MI:SS'), 'Rockets', 'Spurs', 'Toyota Center');
259 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
260 VALUES (6, '100-92', TO_DATE('2022-10-22', 'YYYY-MM-DD'), TO_DATE('19:00:00', 'HH24:MI:SS'), 'Heat', 'Celtics', 'American Airlines Arena');
261 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
262 VALUES (7, '110-105', TO_DATE('2022-10-23', 'YYYY-MM-DD'), TO_DATE('20:00:00', 'HH24:MI:SS'), 'Rockets', 'Jazz', 'Toyota Center');
263 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
264 VALUES (8, '95-89', TO_DATE('2022-10-24', 'YYYY-MM-DD'), TO_DATE('19:00:00', 'HH24:MI:SS'), 'Heat', 'Bulls', 'American Airlines Arena');
265 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
266 VALUES (9, '115-110', TO_DATE('2022-10-25', 'YYYY-MM-DD'), TO_DATE('19:30:00', 'HH24:MI:SS'), 'Warriors', 'Suns', 'Chase Center');
267 INSERT INTO Games_Play_In_Stadium (gid, score, g_date, g_time, home_team, away_team, sname)
268 VALUES (10, '105-100', TO_DATE('2022-10-25', 'YYYY-MM-DD'), TO_DATE('20:00:00', 'HH24:MI:SS'), 'Heat', 'Knicks', 'American Airlines Arena');
269
```

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```
270 INSERT INTO Coaches (cid, experience, cname, salary, tid) VALUES (1, '10 years', 'Frank Vogel', 5000000, 1);
271 INSERT INTO Coaches (cid, experience, cname, salary, tid) VALUES (2, '5 years', 'Brad Stevens', 7000000, 2);
272 INSERT INTO Coaches (cid, experience, cname, salary, tid) VALUES (3, '8 years', 'Stephen Silas', 4000000, 3);
273 INSERT INTO Coaches (cid, experience, cname, salary, tid) VALUES (4, '3 years', 'Erik Spoelstra', 6500000, 4);
274 INSERT INTO Coaches (cid, experience, cname, salary, tid) VALUES (5, '6 years', 'Steve Kerr', 10000000, 5);
275
276 -- Insert data into Players_Play_For table
277 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
278 VALUES (1, 2000000, 'LeBron James', 23, '6''9"', 'SF', 1);
279
280 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
281 VALUES (2, 1500000, 'Anthony Davis', 3, '6''10"', 'PF', 1);
282
283 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
284 VALUES (3, 1200000, 'Russell Westbrook', 0, '6''3"', 'PG', 1);
285
286 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
287 VALUES (4, 800000, 'Dennis Schroder', 17, '6''1"', 'PG', 1);
288
289 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
290 VALUES (5, 2000000, 'Jayson Tatum', 0, '6''8"', 'SF', 2);
291
292 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
293 VALUES (6, 1800000, 'Jaylen Brown', 7, '6''6"', 'SG', 2);
294
295 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
296 VALUES (7, 1000000, 'Marcus Smart', 36, '6''3"', 'PG', 2);
297
298 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
299 VALUES (8, 800000, 'Grant Williams', 12, '6''6"', 'PF', 2);
300
301 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
302 VALUES (9, 1000000, 'Christian Wood', 35, '6''10"', 'PF', 3);
303
```

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```
304 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
305 VALUES (10, 800000, 'Eric Gordon', 10, '6''3"', 'SG', 3);
306
307 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
308 VALUES (11, 1500000, 'Jimmy Butler', 22, '6''7"', 'SF', 4);
309
310 INSERT INTO Players_Play_For (pid, salary, pname, pnumber, height, position, tid)
311 VALUES (12, 900000, 'Bam Adebayo', 25, '6''8"', 'SG', 4);
312
313 -- Insert data into Play table
314 INSERT INTO Play (tid, gid) VALUES (1, 1);
315 INSERT INTO Play (tid, gid) VALUES (1, 3);
316 INSERT INTO Play (tid, gid) VALUES (2, 2);
317 INSERT INTO Play (tid, gid) VALUES (2, 4);
318 INSERT INTO Play (tid, gid) VALUES (3, 5);
319 INSERT INTO Play (tid, gid) VALUES (3, 7);
320 INSERT INTO Play (tid, gid) VALUES (4, 6);
321 INSERT INTO Play (tid, gid) VALUES (4, 8);
322 INSERT INTO Play (tid, gid) VALUES (5, 9);
323 INSERT INTO Play (tid, gid) VALUES (5, 10);
324
325 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
326 VALUES (1, 2000, 1);
327 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
328 VALUES (2, 1500, 2);
329 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
330 VALUES (3, 1200, 3);
331 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
332 VALUES (4, 800, 4);
333 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
334 VALUES (5, 2000, 5);
335 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
336 VALUES (6, 1800, 6);
337 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
338 VALUES (7, 1000, 7);
339 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
```

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```
340 VALUES (8, 800, 8);
341 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
342 VALUES (9, 1000, 9);
343 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
344 VALUES (10, 800, 10);
345 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
346 VALUES (11, 1500, 11);
347 INSERT INTO Regular_Season_Statistics (statid, season_points, pid)
348 VALUES (12, 900, 12);
349
350 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
351 VALUES (1, 500, 1);
352 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
353 VALUES (2, 400, 2);
354 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
355 VALUES (3, 300, 3);
356 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
357 VALUES (4, 200, 4);
358 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
359 VALUES (5, 500, 5);
360 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
361 VALUES (6, 400, 6);
362 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
363 VALUES (7, 300, 7);
364 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
365 VALUES (8, 200, 8);
366 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
367 VALUES (9, 300, 9);
368 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
369 VALUES (10, 200, 10);
370 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
371 VALUES (11, 400, 11);
372 INSERT INTO Playoffs_Statistics (statid, playoff_points, pid)
373 VALUES (12, 250, 12);
```

---

## SQL Queries:

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```
SELECT
    pname,
    salary
FROM
    Players_Play_For
WHERE
    salary >= 1200000;

-- Update
UPDATE COACHES SET EXPERIENCE = :experience, CNAME = :name, SALARY = :salary, TID = :tid WHERE CID = :cid;

-- Join
-- find the team name, stadium name, and stadium capacity for teams where the stadium capacity is greater than a specified value (eg.19000)
SELECT
    T.tname AS team_name,
    S.sname AS stadium_name,
    S.capacity AS stadium_capacity
FROM
    Teams T
        INNER JOIN
    Stadium S ON T.tid = S.tid
WHERE
    S.capacity > 19000;

-- Aggregation with GROUP BY
-- find the average salary of players for each team
SELECT
    T.tname AS team_name,
    AVG(P.salary) AS average_salary
FROM
    Teams T
        INNER JOIN
    Players_Play_For P ON T.tid = P.tid
GROUP BY
    T.tid, T.tname;

-- Aggregation with HAVING
-- finds the team names and their total number of wins in the Season_Standings table, where the total number of wins is greater than a specified value (eg. 45)
SELECT
    T.tname AS team_name,
    SUM(R.wins)
FROM
    Teams T
        INNER JOIN
    Season_Standings R ON T.tid = R.tid
GROUP BY
    T.tid, T.tname
HAVING
    SUM(R.wins) > 45;
```

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```
53 -- Nested Aggregation with GROUP BY
54 -- find Teams and the corresponding average number of wins those are above the average number of wins among all teams
55
56 SELECT T.name, AVG(SS.wins)
57 FROM
58     Teams T
59     | INNER JOIN
60     Season_Standings SS ON T.tid = SS.tid
61 GROUP BY
62     T.id
63 HAVING
64     AVG(SS.wins) > (
65     SELECT
66         | AVG(wins) AS overall_average_wins
67     FROM
68         Season_Standings
69 );
70
71
72 -- Division
73 -- finds the team name with at least one players in every position
74 SELECT T.tname
75     | FROM Teams T
76     | WHERE NOT EXISTS (
77         |     (SELECT DISTINCT P.position
78             |         FROM Players_Play_For P)
79         |     MINUS
80         |     (SELECT DISTINCT P2.position
81             |         FROM Players_Play_For P2
82             |         WHERE P2.tid = T.tid)
83     );
84
```

---

## Screenshots of Functionality Demonstration:

### **—INSERTION—**

#### Before (Teams)

| Team ID | Team Name | Division  |
|---------|-----------|-----------|
| 7       | Raptors   | Atlantic  |
| 8       | abc       | def       |
| 25      | NewTeam   | XX        |
| 1       | Lakers    | Pacific   |
| 2       | Celtics   | Atlantic  |
| 3       | Rockets   | Southwest |
| 4       | Heat      | Southeast |
| 5       | Warriors  | Pacific   |
| 20      | TeamUBC   | NA        |

#### During

Team ID:

Team Name:

Division:

#### After (Teams)

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| <a href="#">Teams</a>   | <a href="#">Teams_City</a>    | <a href="#">Playoffs_Standings</a>     | <a href="#">Season_Standings</a> | <a href="#">Stadium</a> | <a href="#">Games_Play_In_Stadium</a> | <a href="#">Play</a> | <a href="#">Coaches</a> | <a href="#">Players_Play_For</a> | <a href="#">Regular_Season_Statistics</a> | <a href="#">Playoffs_Statistics</a> | <a href="#">TeamInsert</a> |  |
|-------------------------|-------------------------------|--|----------------------------------|-------------------------|---------------------------------------|----------------------|-------------------------|----------------------------------|---|-------------------------------------|----------------------------|--|
| <a href="#">Delete</a>  | <a href="#">CoachesUpdate</a> | <a href="#">SelectTeamFromDivision</a> |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| <a href="#">Team ID</a> | <a href="#">Team Name</a>     | <a href="#">Division</a>               |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 7                       | Raptors                       | Atlantic                               |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 8                       | abc                           | def                                    |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 25                      | NewTeam                       | XX                                     |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 10                      | NBA Team                      | Unknown                                |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 1                       | Lakers                        | Pacific                                |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 2                       | Celtics                       | Atlantic                               |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 3                       | Rockets                       | Southwest                              |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 4                       | Heat                          | Southeast                              |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 5                       | Warriors                      | Pacific                                |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |
| 20                      | TeamUBC                       | NA                                     |                                  |                         |                                       |                      |                         |                                  |   |                                     |                            |  |

### —UPDATE—

Before (Coaches)

| <a href="#">Coach ID</a> | <a href="#">Experience</a> | <a href="#">Name</a> | <a href="#">Salary</a> | <a href="#">Team ID</a> |
|--------------------------|----------------------------|----------------------|------------------------|-------------------------|
| 1                        | 10 years                   | Frank Vogel          | 5000000                | 1                       |
| 2                        | 5 years                    | Brad Stevens         | 7000000                | 2                       |
| 3                        | 8 years                    | Stephen Silas        | 4000000                | 3                       |
| 4                        | 3 years                    | Erik Spoelstra       | 6500000                | 4                       |
| 5                        | 6 years                    | Steve Kerr           | 10000000               | 5                       |

During

CID:  Experience:  Name:  Salary:  TID:

After

| <a href="#">Coach ID</a> | <a href="#">Experience</a> | <a href="#">Name</a> | <a href="#">Salary</a> | <a href="#">Team ID</a> |
|--------------------------|----------------------------|----------------------|------------------------|-------------------------|
| 2                        | 5                          | Brad Stevens         | 1                      | 2                       |
| 3                        | 8 years                    | Stephen Silas        | 4000000                | 3                       |
| 4                        | 3 years                    | Erik Spoelstra       | 6500000                | 4                       |
| 5                        | 6 years                    | Steve Kerr           | 10000000               | 5                       |

### —SELECTION&PROJECTION—

Before (Players\_Play\_For)

| <a href="#">Player ID</a> | <a href="#">Salary</a>        | <a href="#">Name</a>                 | <a href="#">Number</a> | <a href="#">Height</a> | <a href="#">Position</a> | <a href="#">Team ID</a> |
|---------------------------|-------------------------------|--------------------------------------|------------------------|------------------------|--------------------------|-------------------------|
| <a href="#">Delete</a>    | <a href="#">CoachesUpdate</a> | <a href="#">SelectPlayerBySalary</a> |                        |                        |                          |                         |
| 1                         | 2000000                       | LeBron James                         | 23                     | 6'9"                   | SF                       | 1                       |
| 2                         | 1500000                       | Anthony Davis                        | 3                      | 6'10"                  | PF                       | 1                       |
| 3                         | 1200000                       | Russell Westbrook                    | 0                      | 6'3"                   | PG                       | 1                       |
| 4                         | 800000                        | Dennis Schroder                      | 17                     | 6'1"                   | PG                       | 1                       |
| 5                         | 2000000                       | Jayson Tatum                         | 0                      | 6'8"                   | SF                       | 2                       |
| 6                         | 1800000                       | Jaylen Brown                         | 7                      | 6'6"                   | SG                       | 2                       |
| 7                         | 1000000                       | Marcus Smart                         | 36                     | 6'3"                   | PG                       | 2                       |
| 8                         | 800000                        | Grant Williams                       | 12                     | 6'6"                   | PF                       | 2                       |
| 9                         | 1000000                       | Christian Wood                       | 35                     | 6'10"                  | PF                       | 3                       |
| 10                        | 800000                        | Eric Gordon                          | 10                     | 6'3"                   | SG                       | 3                       |
| 11                        | 1500000                       | Jimmy Butler                         | 22                     | 6'7"                   | SF                       | 4                       |
| 12                        | 900000                        | Bam Adebayo                          | 25                     | 6'8"                   | SG                       | 4                       |

During

# University of British Columbia, Vancouver

## Department of Computer Science

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### Select Players by Salary

Salary Larger Than:

#### After

### Select Players by Salary

Salary Larger Than:

#### Players with Salary Higher than 1200000

| Player Name       | Salary  |
|-------------------|---------|
| LeBron James      | 2000000 |
| Anthony Davis     | 1500000 |
| Russell Westbrook | 1200000 |
| Jayson Tatum      | 2000000 |
| Jaylen Brown      | 1800000 |
| Jimmy Butler      | 1500000 |

#### —JOIN—

### Before (Stadium & Teams)

| Teams                   | Teams_City    | Playoffs_Standings   | Season_Standings            | Stadium              | Games_Play_In_Stadium | Play | Coaches | Players_Play_For | Regular_Season_Statistics | Playoffs_Statistics | TeamInsert |
|-------------------------|---------------|----------------------|-----------------------------|----------------------|-----------------------|------|---------|------------------|---------------------------|---------------------|------------|
| Delete                  | CoachesUpdate | SelectPlayerBySalary | SelectTeamByStadiumCapacity | NumOfWinsGreaterThan |                       |      |         |                  |                           |                     |            |
| Stadium                 | Team ID       | Capacity             |                             |                      |                       |      |         |                  |                           |                     |            |
| Staples Center          | 1             | 19060                |                             |                      |                       |      |         |                  |                           |                     |            |
| TD Garden               | 2             | 19580                |                             |                      |                       |      |         |                  |                           |                     |            |
| Toyota Center           | 3             | 18055                |                             |                      |                       |      |         |                  |                           |                     |            |
| American Airlines Arena | 4             | 19600                |                             |                      |                       |      |         |                  |                           |                     |            |
| Chase Center            | 5             | 18064                |                             |                      |                       |      |         |                  |                           |                     |            |

| Teams   | Teams_City    | Playoffs_Standings   | Season_Standings            | Stadium              | Games_Play_In_Stadium | Play | Coaches | Players_Play_For | Regular_Season_Statistics | Playoffs_Statistics | TeamInsert |
|---------|---------------|----------------------|-----------------------------|----------------------|-----------------------|------|---------|------------------|---------------------------|---------------------|------------|
| Delete  | CoachesUpdate | SelectPlayerBySalary | SelectTeamByStadiumCapacity | NumOfWinsGreaterThan |                       |      |         |                  |                           |                     |            |
| Team ID | Team Name     | Division             |                             |                      |                       |      |         |                  |                           |                     |            |
| 7       | Raptors       | Atlantic             |                             |                      |                       |      |         |                  |                           |                     |            |
| 8       | abc           | def                  |                             |                      |                       |      |         |                  |                           |                     |            |
| 25      | NewTeam       | XX                   |                             |                      |                       |      |         |                  |                           |                     |            |
| 10      | NBA Team      | Unknown              |                             |                      |                       |      |         |                  |                           |                     |            |
| 1       | Lakers        | Pacific              |                             |                      |                       |      |         |                  |                           |                     |            |
| 2       | Celtics       | Atlantic             |                             |                      |                       |      |         |                  |                           |                     |            |
| 3       | Rockets       | Southwest            |                             |                      |                       |      |         |                  |                           |                     |            |
| 4       | Heat          | Southeast            |                             |                      |                       |      |         |                  |                           |                     |            |
| 5       | Warriors      | Pacific              |                             |                      |                       |      |         |                  |                           |                     |            |
| 20      | TeamUBC       | NA                   |                             |                      |                       |      |         |                  |                           |                     |            |

#### During

### Select Teams by Stadium Capacity

Capacity Larger Than:

#### After

## Select Teams by Stadium Capacity

Capacity Larger Than:

### Teams with Stadium Capacity Greater than 19000

| Team Name | Stadium Name            | Stadium Capacity |
|-----------|-------------------------|------------------|
| Lakers    | Staples Center          | 19060            |
| Celtics   | TD Garden               | 19580            |
| Heat      | American Airlines Arena | 19600            |

## —Aggregation with HAVING—

Before

| Teams   | Teams_City    | Playoffs_Standings   | Season_Standings            | Stadium              | Games_Play_In_Stadium   | Play             | Coaches | Players_Play_For | Regular_Season_Statistics | Playoffs_Statistics | TeamInsert |
|---------|---------------|----------------------|-----------------------------|----------------------|-------------------------|------------------|---------|------------------|---------------------------|---------------------|------------|
| Delete  | CoachesUpdate | SelectPlayerBySalary | SelectTeamByStadiumCapacity | NumOfWinsGreaterThan | PlayerBetterThanAverage | FindCompleteTeam |         |                  |                           |                     |            |
| Team ID | Team Name     | Division             |                             |                      |                         |                  |         |                  |                           |                     |            |
| 1       | Lakers        | Pacific              |                             |                      |                         |                  |         |                  |                           |                     |            |
| 2       | Celtics       | Atlantic             |                             |                      |                         |                  |         |                  |                           |                     |            |
| 3       | Rockets       | Southwest            |                             |                      |                         |                  |         |                  |                           |                     |            |
| 4       | Heat          | Southeast            |                             |                      |                         |                  |         |                  |                           |                     |            |
| 5       | Warriors      | Pacific              |                             |                      |                         |                  |         |                  |                           |                     |            |

| Teams  | Teams_City    | Playoffs_Standings   | Season_Standings            | Stadium              | Games_Play_In_Stadium   | Play             | Coaches | Players_Play_For | Regular_Season_Statistics | Playoffs_Statistics | TeamInsert |
|--------|---------------|----------------------|-----------------------------|----------------------|-------------------------|------------------|---------|------------------|---------------------------|---------------------|------------|
| Delete | CoachesUpdate | SelectPlayerBySalary | SelectTeamByStadiumCapacity | NumOfWinsGreaterThan | PlayerBetterThanAverage | FindCompleteTeam |         |                  |                           |                     |            |
| Season | Ranking       | Wins                 | Losses                      | Conference Records   | Team ID                 |                  |         |                  |                           |                     |            |
| 1      | 1             | 52                   | 20                          | 32                   | 1                       |                  |         |                  |                           |                     |            |
| 1      | 2             | 48                   | 24                          | 31                   | 2                       |                  |         |                  |                           |                     |            |
| 1      | 3             | 46                   | 26                          | 27                   | 3                       |                  |         |                  |                           |                     |            |
| 1      | 4             | 44                   | 28                          | 25                   | 4                       |                  |         |                  |                           |                     |            |
| 1      | 5             | 39                   | 33                          | 22                   | 5                       |                  |         |                  |                           |                     |            |
| 2      | 1             | 55                   | 17                          | 35                   | 3                       |                  |         |                  |                           |                     |            |
| 2      | 2             | 50                   | 22                          | 31                   | 1                       |                  |         |                  |                           |                     |            |
| 2      | 3             | 48                   | 24                          | 28                   | 2                       |                  |         |                  |                           |                     |            |
| 2      | 4             | 45                   | 27                          | 27                   | 5                       |                  |         |                  |                           |                     |            |
| 2      | 5             | 41                   | 31                          | 23                   | 4                       |                  |         |                  |                           |                     |            |
| 3      | 1             | 54                   | 18                          | 36                   | 2                       |                  |         |                  |                           |                     |            |
| 3      | 2             | 49                   | 23                          | 31                   | 1                       |                  |         |                  |                           |                     |            |
| 3      | 3             | 47                   | 25                          | 29                   | 4                       |                  |         |                  |                           |                     |            |
| 3      | 4             | 44                   | 28                          | 27                   | 5                       |                  |         |                  |                           |                     |            |
| 3      | 5             | 40                   | 32                          | 25                   | 3                       |                  |         |                  |                           |                     |            |
| 4      | 1             | 57                   | 13                          | 38                   | 1                       |                  |         |                  |                           |                     |            |
| 4      | 2             | 53                   | 17                          | 33                   | 2                       |                  |         |                  |                           |                     |            |
| 4      | 3             | 49                   | 21                          | 30                   | 4                       |                  |         |                  |                           |                     |            |
| 4      | 4             | 46                   | 24                          | 28                   | 5                       |                  |         |                  |                           |                     |            |
| 4      | 5             | 42                   | 28                          | 26                   | 3                       |                  |         |                  |                           |                     |            |

During

## Number of Wins Greater Than

Minimum Number of Wins:

After

## Number of Wins Greater Than

Minimum Number of Wins:

### Teams with Total Wins Greater than 200

| Team Name | Total Wins |
|-----------|------------|
| Celtics   | 203        |
| Lakers    | 208        |

### —Aggregation with GROUP BY—

Before (Teams & Players\_Play\_For)

| Player ID |         |                   |    |       |    |   | Salary | Name | Number | Height | Position | Team ID |
|-----------|---------|-------------------|----|-------|----|---|--------|------|--------|--------|----------|---------|
| 1         | 2000000 | LeBron James      | 23 | 6'9"  | SF | 1 |        |      |        |        |          |         |
| 2         | 1500000 | Anthony Davis     | 3  | 6'10" | PF | 1 |        |      |        |        |          |         |
| 3         | 1200000 | Russell Westbrook | 0  | 6'3"  | PG | 1 |        |      |        |        |          |         |
| 4         | 800000  | Dennis Schroder   | 17 | 6'1"  | PG | 1 |        |      |        |        |          |         |
| 5         | 2000000 | Jayson Tatum      | 0  | 6'8"  | SF | 2 |        |      |        |        |          |         |
| 6         | 1800000 | Jaylen Brown      | 7  | 6'6"  | SG | 2 |        |      |        |        |          |         |
| 7         | 1000000 | Marcus Smart      | 36 | 6'3"  | PG | 2 |        |      |        |        |          |         |
| 8         | 800000  | Grant Williams    | 12 | 6'6"  | PF | 2 |        |      |        |        |          |         |
| 9         | 1000000 | Christian Wood    | 35 | 6'10" | PF | 3 |        |      |        |        |          |         |
| 10        | 800000  | Eric Gordon       | 10 | 6'3"  | SG | 3 |        |      |        |        |          |         |
| 11        | 1500000 | Jimmy Butler      | 22 | 6'7"  | SF | 4 |        |      |        |        |          |         |
| 12        | 900000  | Bam Adebayo       | 25 | 6'8"  | SG | 4 |        |      |        |        |          |         |

| Team ID |          |           | Team Name | Division |
|---------|----------|-----------|-----------|----------|
| 1       | Lakers   | Pacific   |           |          |
| 2       | Celtics  | Atlantic  |           |          |
| 3       | Rockets  | Southwest |           |          |
| 4       | Heat     | Southeast |           |          |
| 5       | Warriors | Pacific   |           |          |

During

## Salary Finder

Select a salary statistic:

After

## Salary Finder

Select a salary statistic:

### Average Salary of Players for Each Team

| Team Name | Average Salary |
|-----------|----------------|
| Celtics   | 1400000        |
| Lakers    | 1375000        |
| Heat      | 1200000        |
| Rockets   | 900000         |

### —Nested Aggregation with GROUP BY—

#### Before (Teams& Season\_Standings)

[Teams](#) [Teams\\_City](#) [Playoffs\\_Standings](#) [Season\\_Standings](#) [Stadium](#) [Games\\_Play\\_In\\_Stadium](#) [Play](#) [Coaches](#) [Players\\_Play\\_For](#) [Regular\\_Season\\_Statistics](#) [Playoffs\\_Statistics](#) [TeamInsert](#)  
[Delete](#) [CoachesUpdate](#) [SelectPlayerBySalary](#) [SelectTeamByStadiumCapacity](#) [SalaryFinder](#) [NumOfWinsGreaterThan](#) [TeamsBetterThanAverage](#) [FindCompleteTeam](#)

| Season | Ranking | Wins | Losses | Conference | Records | Team ID |
|--------|---------|------|--------|------------|---------|---------|
| 1      | 1       | 52   | 20     | 32         |         | 1       |
| 1      | 2       | 48   | 24     | 31         |         | 2       |
| 1      | 3       | 46   | 26     | 27         |         | 3       |
| 1      | 4       | 44   | 28     | 25         |         | 4       |
| 1      | 5       | 39   | 33     | 22         |         | 5       |
| 2      | 1       | 55   | 17     | 35         |         | 3       |
| 2      | 2       | 50   | 22     | 31         |         | 1       |
| 2      | 3       | 48   | 24     | 28         |         | 2       |
| 2      | 4       | 45   | 27     | 27         |         | 5       |
| 2      | 5       | 41   | 31     | 23         |         | 4       |
| 3      | 1       | 54   | 18     | 36         |         | 2       |
| 3      | 2       | 49   | 23     | 31         |         | 1       |
| 3      | 3       | 47   | 25     | 29         |         | 4       |
| 3      | 4       | 44   | 28     | 27         |         | 5       |
| 3      | 5       | 40   | 32     | 25         |         | 3       |
| 4      | 1       | 57   | 13     | 38         |         | 1       |
| 4      | 2       | 53   | 17     | 33         |         | 2       |
| 4      | 3       | 49   | 21     | 30         |         | 4       |
| 4      | 4       | 46   | 24     | 28         |         | 5       |
| 4      | 5       | 42   | 28     | 26         |         | 3       |

| Team ID | Team Name | Division  |
|---------|-----------|-----------|
| 1       | Lakers    | Pacific   |
| 2       | Celtics   | Atlantic  |
| 3       | Rockets   | Southwest |
| 4       | Heat      | Southeast |
| 5       | Warriors  | Pacific   |

### During

#### Number of Wins Greater Than

Number of Regular Season Wins Greater Than:

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# University of British Columbia, Vancouver

## Department of Computer Science

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### After

#### Number of Wins Greater Than

Number of Regular Season Wins Greater Than:

#### Teams with Regular Season Wins Greater than 50

| Team Name | Total Wins |
|-----------|------------|
| Celtics   | 203        |
| Lakers    | 208        |
| Warriors  | 174        |
| Heat      | 181        |
| Rockets   | 183        |

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### —DIVISION—

#### Before (Players\_Play\_For & Teams)

[Teams](#) [Teams\\_City](#) [Playoffs\\_Standings](#) [Season\\_Standings](#) [Stadium](#) [Games\\_Play\\_In\\_Stadium](#) [Play](#) [Coaches](#) [Players\\_Play\\_For](#) [Regular\\_Season\\_Statistics](#) [Playoffs\\_Statistics](#) [TeamInsert](#)  
[Delete](#) [CoachesUpdate](#) [SelectPlayerBySalary](#) [SelectTeamByStadiumCapacity](#) [SalaryFinder](#) [NumOfWinsGreaterThan](#) [PlayerBetterThanAverage](#) [FindCompleteTeam](#)

| Player ID | Salary  | Name              | Number | Height | Position | Team ID |
|-----------|---------|-------------------|--------|--------|----------|---------|
| 1         | 2000000 | LeBron James      | 23     | 6'9"   | SF       | 1       |
| 2         | 1500000 | Anthony Davis     | 3      | 6'10"  | PF       | 1       |
| 3         | 1200000 | Russell Westbrook | 0      | 6'3"   | PG       | 1       |
| 4         | 800000  | Dennis Schroder   | 17     | 6'1"   | PG       | 1       |
| 5         | 2000000 | Jayson Tatum      | 0      | 6'8"   | SF       | 2       |
| 6         | 1800000 | Jaylen Brown      | 7      | 6'6"   | SG       | 2       |
| 7         | 1000000 | Marcus Smart      | 36     | 6'3"   | PG       | 2       |
| 8         | 800000  | Grant Williams    | 12     | 6'6"   | PF       | 2       |
| 9         | 1000000 | Christian Wood    | 35     | 6'10"  | PF       | 3       |
| 10        | 800000  | Eric Gordon       | 10     | 6'3"   | SG       | 3       |
| 11        | 1500000 | Jimmy Butler      | 22     | 6'7"   | SF       | 4       |
| 12        | 900000  | Bam Adebayo       | 25     | 6'8"   | SG       | 4       |

[Teams](#) [Teams\\_City](#) [Playoffs\\_Standings](#) [Season\\_Standings](#) [Stadium](#) [Games\\_Play\\_In\\_Stadium](#) [Play](#) [Coaches](#) [Players\\_Play\\_For](#) [Regular\\_Season\\_Statistics](#) [Playoffs\\_Statistics](#) [TeamInsert](#)  
[Delete](#) [CoachesUpdate](#) [SelectPlayerBySalary](#) [SelectTeamByStadiumCapacity](#) [SalaryFinder](#) [NumOfWinsGreaterThan](#) [PlayerBetterThanAverage](#) [FindCompleteTeam](#)

| Team ID | Team Name | Division  |
|---------|-----------|-----------|
| 1       | Lakers    | Pacific   |
| 2       | Celtics   | Atlantic  |
| 3       | Rockets   | Southwest |
| 4       | Heat      | Southeast |
| 5       | Warriors  | Pacific   |

### During & After

#### Find Complete Team

Teams with at least one player in every position

| Team Name |
|-----------|
| Celtics   |