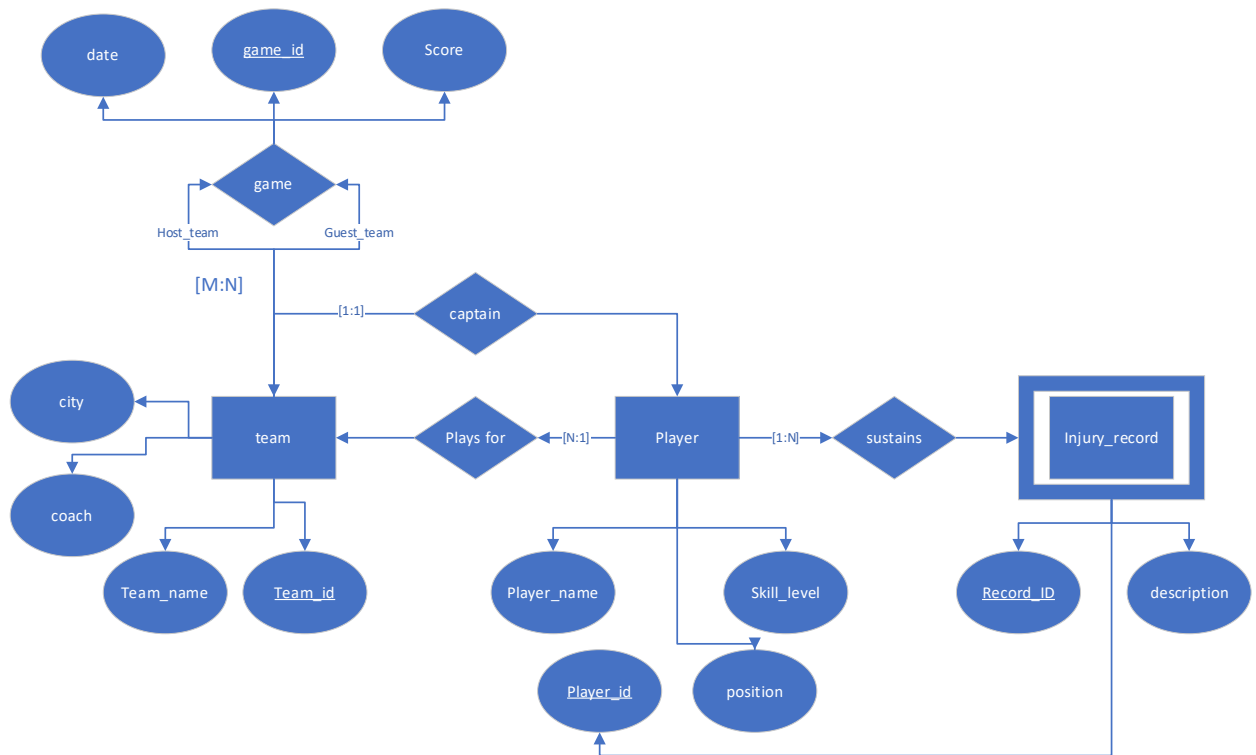


1.



Cardinality:

- Team to captain: One to one (there is only one captain per team)
- Team to player: One to many (there are multiple players per team)
- Player to Injury Record: one to many (one player can have multiple injuries)
- Team to game: Many to many (multiple teams play multiple games)

Participation:

- Team to captain: total, every team has a captain.
- Team to player: Total, every team has players
- Player to injury record: Partial, since some players do not sustain injury
- Team to game: total, since all teams play games

2.

- **Player**(player\_id, player\_name, position, skill\_level);
  - o Player\_id is the primary key
- **Team**(team\_id, team\_name, coach, city, captain);
  - o captain is the foreign key referencing Player(player\_name)
  - o team\_id is the primary key
- **injury\_record**(record\_id, description, player\_id);
  - o player\_id is the foreign key referencing Player(player\_id)
  - o record\_id is the primary key
- **game**(game\_id, host\_team, guest\_team, date, score);

- game\_id is the primary key
- host\_team is foreign key references **team**(team\_name)
- guest\_team is foreign key references **team**(team\_name)

3.

```
DROP TABLE IF EXISTS Game;
```

```
DROP TABLE IF EXISTS Injury_Record;
```

```
DROP TABLE IF EXISTS Team;
```

```
DROP TABLE IF EXISTS Player;
```

```
CREATE TABLE Player (
```

```
    player_id INT PRIMARY KEY AUTO_INCREMENT,
```

```
    player_name VARCHAR(255) NOT NULL,
```

```
    skill_level INT NOT NULL,
```

```
    position VARCHAR(255) NOT NULL,
```

```
    UNIQUE INDEX idx_player_name (player_name)
```

```
);
```

```
CREATE TABLE Team (
```

```
    team_id INT PRIMARY KEY AUTO_INCREMENT,
```

```
    team_name VARCHAR(255) NOT NULL,
```

```
    coach VARCHAR(255) NOT NULL,
```

```
    city VARCHAR(255) NOT NULL,
```

```
    captain VARCHAR(255),
```

```
    FOREIGN KEY (captain) REFERENCES Player(player_name)
```

```
);
```

```
CREATE TABLE Injury_Record (
```

```
    record_id INT PRIMARY KEY AUTO_INCREMENT,
```

```
    description VARCHAR(255) NOT NULL
```

```
);
```

```
CREATE TABLE Game (
```

```
    game_id INT PRIMARY KEY AUTO_INCREMENT,
```

```
    host_team INT NOT NULL,
```

```
    guest_team INT NOT NULL,
```

```
    date DATE NOT NULL,
```

```
    score VARCHAR(10) NOT NULL,
```

```
    FOREIGN KEY (host_team) REFERENCES Team(team_id),
```

```
    FOREIGN KEY (guest_team) REFERENCES Team(team_id)
```

```
);
```

```
INSERT INTO Player (player_name, skill_level, position)
```

```
VALUES
```

```
( 'Chris Kreider', 0, 'Position details'),
( 'Tony DeAngelo', 0, 'Position details'),
( 'Oliver Ekman-Larsson', 0, 'Position details'),
( 'Lawson Crouse', 0, 'Position details');
```

```
INSERT INTO Team (team_name, coach, city, captain)
VALUES
( 'New York Rangers', 'David Quinn', 'New York', 'Chris Kreider'),
( 'Arizona Coyotes', 'Rick Tocchet', 'Arizona', 'Oliver Ekman-Larsson');
```

```
INSERT INTO Injury_Record (description)
VALUES ( 'Pulled hamstring on 10/22/2020. Cannot play for two weeks.');
```

```
INSERT INTO Game (host_team, guest_team, date, score)
VALUES
( 1, 2, '2019-03-04', '4-2'),
( 2, 1, '2020-10-22', '3-4');
```

```
-- select * from team
```

```
SELECT
  p1.player_name AS Host,
  p2.player_name AS Guest,
  g.date AS Date,
  g.score AS Score
FROM
  Game g
  INNER JOIN Team tH ON g.host_team = tH.team_id
  INNER JOIN Team tG ON g.guest_team = tG.team_id
  INNER JOIN Player p1 ON tH.captain = p1.player_name
  INNER JOIN Player p2 ON tG.captain = p2.player_name
WHERE
  g.date = '2019-03-04';
```

#### RESULTS:

	Host	Guest	Date	Score
▶	Chris Kreider	Oliver Ekman-Larsson	2019-03-04	4-2