StatArena Incorporation

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Background

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Users:

- UMD Soccer Coaches
- UMD Soccer Managers
- UMD Soccer Team Data Analysts
- UMD Recruiters/Trade Staff

Data Sources:

- [Maryland Men's Soccer Statistics](#)
  - 2022, 2023 and 2024 Data

Introduction

Mission Statement

StatArena Incorporation is a sports organization that requires a database to manage its teams, players, stadiums, and games. The database will help manage the logistics and records for all teams, players, stadiums, and games within the organization.
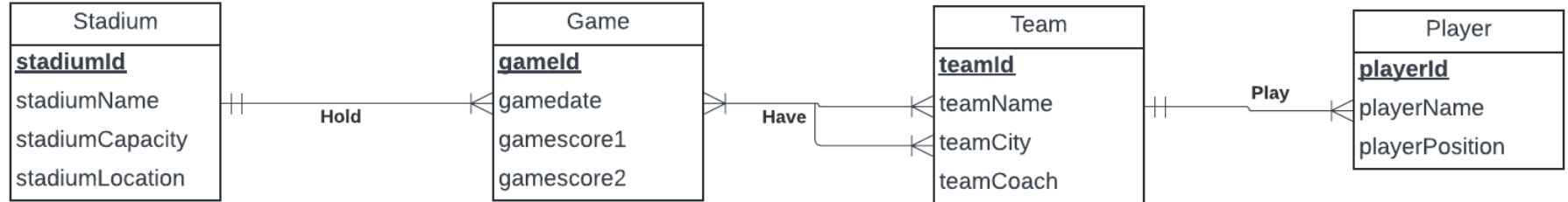
Mission Objectives

- Each team uniquely identifies and stores the team name, city, and the coach's name.

- Players are assigned unique identifiers and must have their full name, position, and date of birth recorded. Additionally, each player belongs to a specific team.

- The organization also tracks various stadiums, each having a unique identifier, name, capacity, and location.

- Games are organized with a unique game ID, and the database must store the game date, scores for both teams and which teams participated. Each game is associated with a specific stadium.

Entity-Relationship Diagram (ERD)

Logical Database Design

Relational Schema

Team (**teamId**, teamName, teamCity, teamCoach)

Player (**playerId**, playerName, playerPosition, *teamId*)

Stadium (**stadiumId**, stadiumName, stadiumCapacity, stadiumLocation)

Game (**gameId**, gameDate, gameScore1, gameScore2, *teamId1, teamId2, stadiumId*)

SQL Create Tables

```sql
DROP TABLE IF EXISTS Game;
DROP TABLE IF EXISTS Stadium;
DROP TABLE IF EXISTS Player;
DROP TABLE IF EXISTS Team;


CREATE TABLE Team (
    teamId CHAR(3) PRIMARY KEY,
    teamName VARCHAR(150),
    teamCity VARCHAR(100),
    teamCoach VARCHAR(200)
);
```

```sql
CREATE TABLE Player (
    playerId CHAR(3) PRIMARY KEY,
    playerName VARCHAR(255),
    playerPosition VARCHAR(100),
    playerDOB DATE,
    teamId CHAR(3),
    FOREIGN KEY (teamId) REFERENCES
Team(teamId) ON DELETE CASCADE ON
UPDATE CASCADE
);


CREATE TABLE Stadium (
    stadiumId CHAR(3) PRIMARY KEY,
    stadiumName VARCHAR(100),
    stadiumCapacity INT,
    stadiumCity VARCHAR(255)
```

```sql
CREATE TABLE Game (
    gameId CHAR(3) PRIMARY KEY,
    gameDate DATE,
    gameScore1 INT,
    gameScore2 INT,
    teamId1 CHAR(3),
    teamId2 CHAR(3),
    stadiumId CHAR (3),
    FOREIGN KEY (teamId1) REFERENCES
Team(teamId) ON DELETE CASCADE ON
UPDATE CASCADE,
    FOREIGN KEY (teamId2) REFERENCES
Team(teamId) ON DELETE NO ACTION ON
UPDATE NO ACTION,
    FOREIGN KEY (stadiumId) REFERENCES
Stadium(stadiumId) ON DELETE NO ACTION
ON UPDATE NO ACTION
);
```

Business Transactions

-- Who are the players on the MD soccer team?

SELECT playerId, playerName

FROM Player

WHERE teamId = 1;

	playerId	playerName
1	101	Malcolm Johnston
2	102	Stefan Copetti
3	103	Nick Richardson
4	104	Joshua Bolma
5	105	Hunter George
6	106	Griffin Dillon
7	107	Colin Griffith
8	108	Chris Rindov
9	109	German Giamm...
10	110	Justin Harris
11	111	William Kulvik
12	112	Albi Ndrenika
13	113	Alex Nitzl
14	114	Mack DeVries
15	115	Max Riley
16	116	Joe Suchecki
17	117	Luca Costabile
18	118	Isaac Ngobu
19	119	Kento Abe
20	120	Jacob Chakroun
21	121	Matias De Jesus
22	122	Dalton Hass

✅ Query executed successfully.

-- Which games took place in a specific stadium?

SELECT gameId, gameDate, teamId1, teamId2

FROM Game

WHERE stadiumId = 003;

▦ Results   🗎 Messages

	gameId	gameDate	teamId1	teamId2
1	1004	2022-09-05	1	5
2	2004	2023-09-04	1	5

✅ Query executed successfully.

-- What was the score of a particular game?

SELECT gameScore1, gameScore2

FROM Game

WHERE ~~gameId = 1001;~~

	gameScore1	gameScore2
1	2	1

✅ Query executed successfully.

-- Which teams are assigned to a specific coach?

SELECT teamName, teamCity

FROM Team

WHERE ~~teamCoachedTie@Danchanber~~

	teamName	teamCity
1	Navy	Annapolis

✅ Query executed successfully.

THANK YOU >

UNIVERSITY OF MARYLAND

FEARLESSLY FORWARD