Youth Soccer League Database Design Document

Version 1.0 Revision 1

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Purpose

The purpose of this Database Design Documentation (DBDD) is to aid the soccer league administrator and interested stakeholders track information related to teams, players, coaches, matches, fields, vendors, referees, and sponsors. This would aid in reports of match scores, player performance, team roster, sponsorships, coach, vendor, and referee assignments. This DDBD is intended to help its stakeholders efficiently manage and query the soccer league's data.

Narrative

The soccer league administrator wants to create a database to track teams, players, coaches, matches, fields, vendors, referees, and sponsors.

Reports include: match scores and results, player stats, referee assignments, team rosters, field and team sponsors, vendor types and field assignments, and coach assignments.

The soccer league consists of teams. Teams have one or more sponsors whose names appear on the team uniforms. Sponsors can support more than one team, and a team may have more than one sponsor at a time. Sponsorships are tracked by season.

Each team consists of players. No player belongs to more than one team during a single season. Each player is assigned a unique Player ID when they join the league. The league records each player's name and address, parent contact name, player phone number and parent phone number, and parent email. In order to verify players ages, the league also records each player's date of birth. Each team has a designated captain from among the players. Players are registered for the league followed by a draft to receive their team assignments. Players can play for one team one season and then play for a different team the next season.

Teams play in matches. Each match is given a unique Match ID number and is scheduled for a specific date. The league records the goals scored by each team and the win or loss result.

Player performance in each match is recorded for minutes played, goals scored, and penalties assessed. It is possible for a player to not participate in a match.

The league assigns three referees to each match, based on position (one head (H) and two linesmen (L)). Referees are assigned a unique Referee ID number when they first register with the league. The league records each referee's name (first name and last name), address and phone number, and contact email. Each new referee is assigned to one experienced referee as a mentor. Not all of the experienced referees serve as mentors, but those that do can mentor more than one new referee.

Matches take place at soccer fields. Sponsors can support fields by placing banners. Sponsors can support more than one field, and fields can have more than one banner. The league records the name and address (street, city, state, and zip) of all the fields where it stages matches. Each match, occurs at a single field at a time. The fields host multiple matches throughout the season. Some fields are closed when undergoing renovations with no matches scheduled during that period.

Vendors sell items at specific fields. Each field has several vendors. The league tracks the vendor assignments by season. In addition to the vendor's name, the league records the vendor phone number and the vendor type. Some vendors offer multiple types of services, for example: food, beverage, clothing, soccer suppliers, and other items.

The league also tracks coaches. A coach can be assigned to more than one team, but only as one role per assignment. Coaching roles are head (HC), assistant (AC), volunteer (VC). Each team

can have multiple coaches, but only one role at a time may be assigned to a single coach. Coach assignments are based upon season.

Actors/Roles

Teams: Teams consist of players who play in matches and have sponsorships.

Players: Players receive team assignments per season and their performance is tracked per match: minutes played, goals scored, and penalties assessed.

Parent: These are dependent entities representing the player's parents.

Coaches: Coaches are assigned to teams per season.

Matches: Teams play in matches which take place in soccer fields.

Fields: Fields are where the matches take place.

Vendors: Vendors sell items in specific soccer fields.

Referees: Referees are assigned to matches.

Sponsors: Sponsors support teams and are tracked by season.

Entities

- Teams
- Players
- Parent
- Coaches
- Matches
- Fields
- Vendors
- Referees
- Sponsors

Entities (w/Nested Attributes)

- Teams
  - Team ID
  - Team Name
  - Designated Captain
- Players
  - Player ID
  - Player Name (First Name, Last Name)
  - Address
  - Phone No.
  - DOB
  - [Age]
- Parent
  - Parent Name (First Name, Last Name)
  - Parent Phone No.
  - Parent Email
- Coaches
  - Coach ID
  - Name (First Name, Last Name)
  - Coaching Role (HC, AC, VC)
- Matches
  - Match ID
  - Date
  - Goals Scored by Team 1
  - Goals Scored by Team 2
  - Win/ Loss Result
- Fields
  - Field ID
  - Field Name
  - Address (street, city, state, zip)
  - Closed For Renovations (binary)
- Vendors
  - Vendor ID
  - Type
  - Phone No.
  - {Services}
- Referees
  - Referee ID
  - Name (First Name, Last Name)
  - Address (street, city, state, zip)
  - Phone No.
  - Email
  - Position

- Sponsors
    - Sponsor ID
    - Sponsor Name
    - Sponsor Season

Business Rules

Teams: Teams have at least one or more sponsors.

Players: Players belong exclusively to one team during a season. Players may participate in none, or many matches.

Parent: One parent's information is recorded.

Coaches: A coach can be assigned to one or many teams, but can only have one role per assignment.

Matches: One match would take place in exclusively one soccer field.

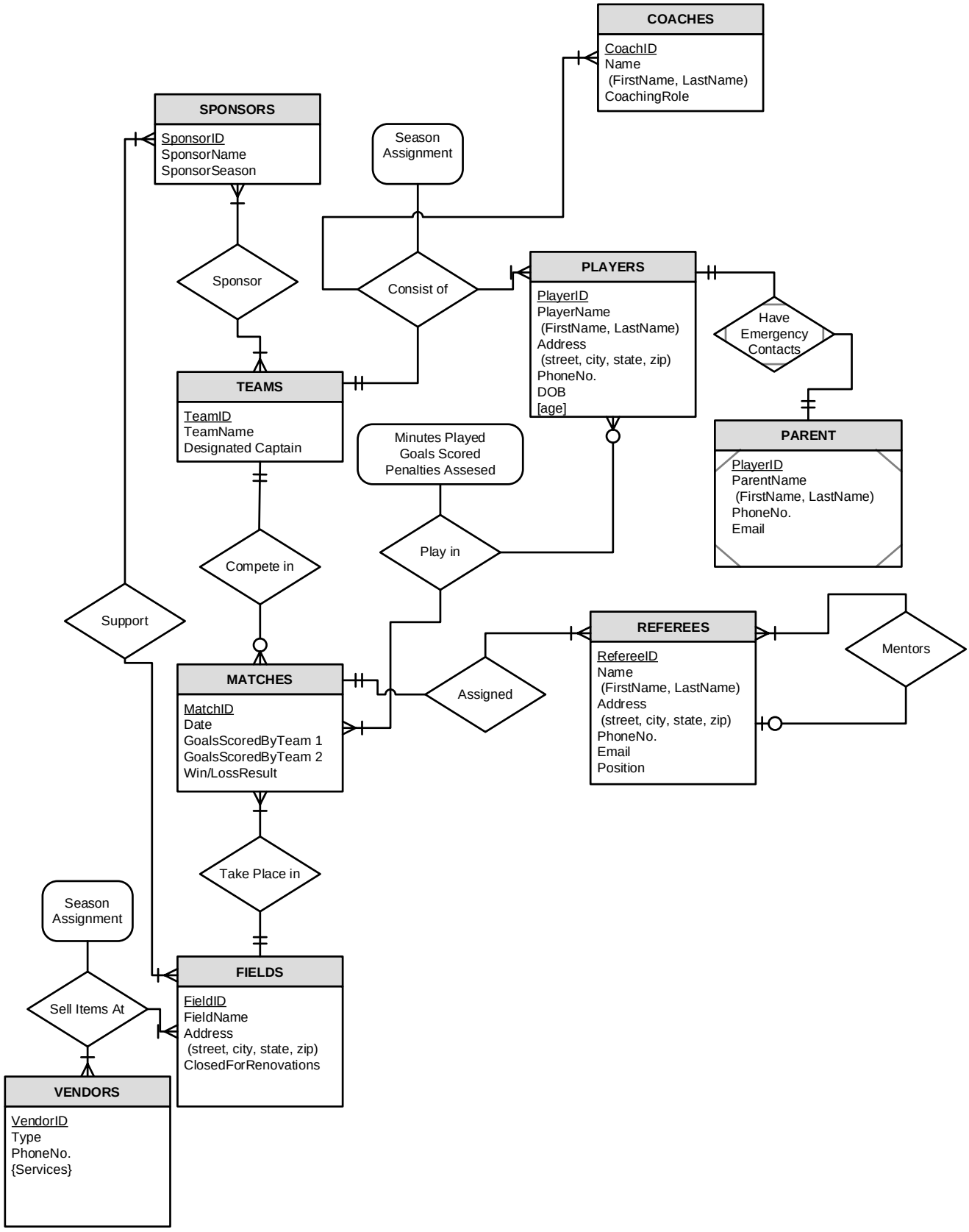
Fields: Supply stores are where the salon purchases their supplies from, with the orders coming directly from the supplier.

Vendors: One or many vendors can sell items at specific fields.

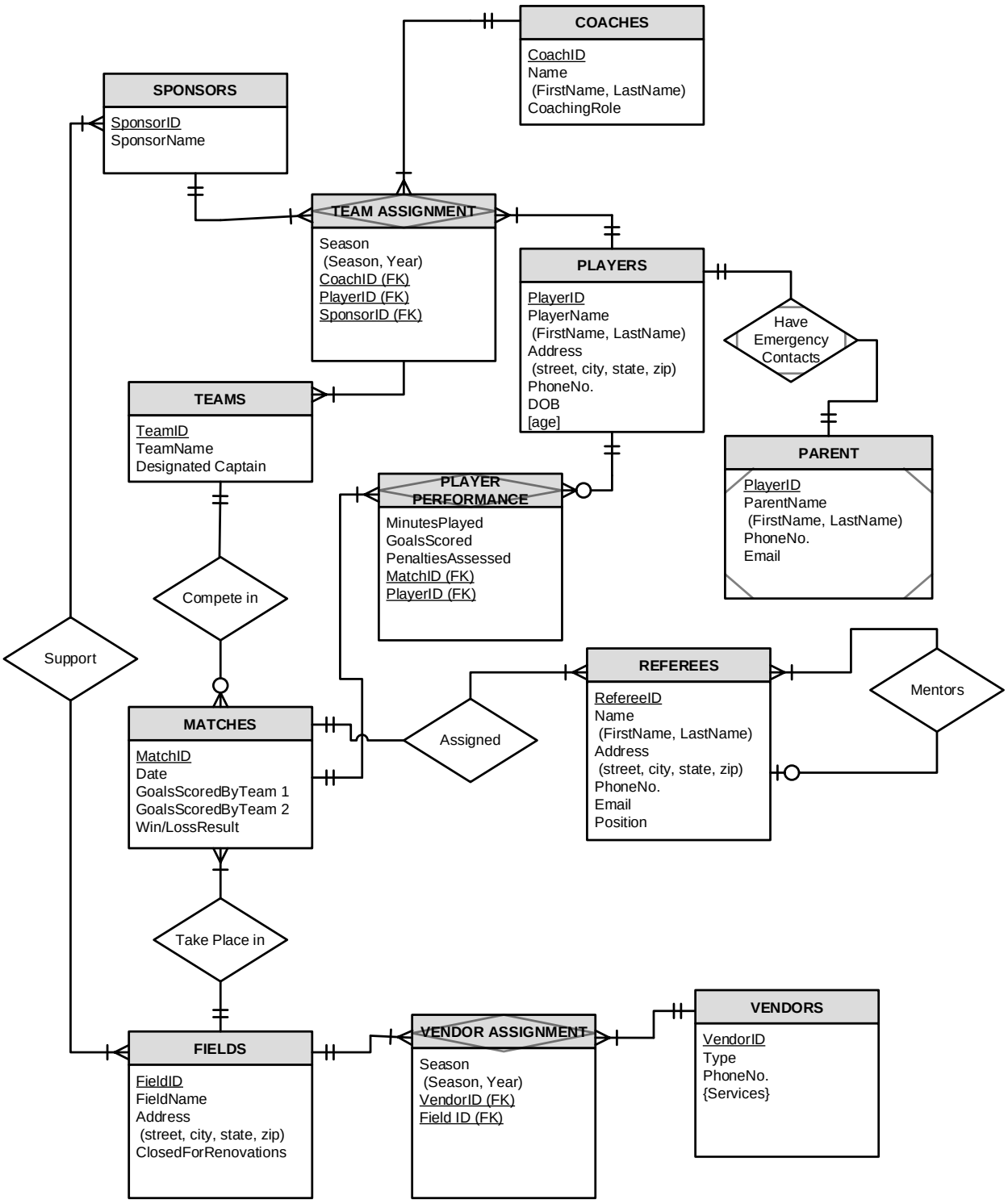
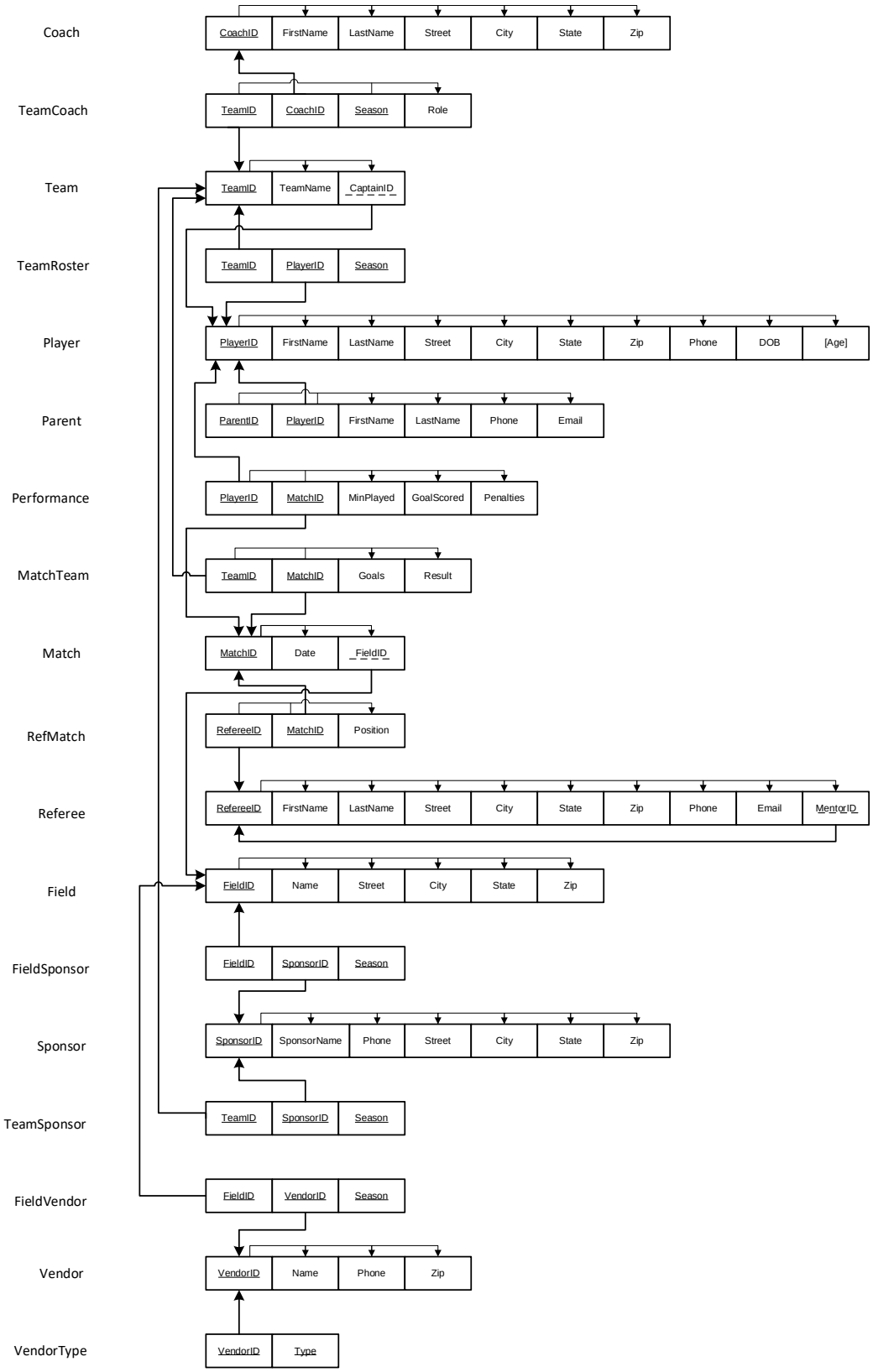
Referees: One experienced referee may mentor none or many new referees. Three referees are assigned per match.

Sponsors: Sponsors support one or many teams.

ERD


COACHES
CoachID
Name
(FirstName, LastName)
CoachingRole
SPONSORS
SponsorID
SponsorName
SponsorSeason
Season Assignment
Sponsor
Consist of
PLAYERS
PlayerID
PlayerName
(FirstName, LastName)
Address
(street, city, state, zip)
PhoneNo.
DOB
[age]
Have Emergency Contacts
TEAMS
TeamID
TeamName
Designated Captain
Minutes Played
Goals Scored
Penalties Assesed
PARENT
PlayerID
ParentName
(FirstName, LastName)
PhoneNo.
Email
Compete in
Play in
Support
REFEREES
RefereeID
Name
(FirstName, LastName)
Address
(street, city, state, zip)
PhoneNo.
Email
Position
Mentors
MATCHES
MatchID
Date
GoalsScoredByTeam 1
GoalsScoredByTeam 2
Win/LossResult
Assigned
Take Place in
Season Assignment
FIELDS
FieldID
FieldName
Address
(street, city, state, zip)
ClosedForRenovations
Sell Items At
VENDORS
VendorID
Type
PhoneNo.
{Services}

EERD


COACHES
CoachID
Name
(FirstName, LastName)
CoachingRole
SPONSORS
SponsorID
SponsorName
TEAM ASSIGNMENT
Season
(Season, Year)
CoachID (FK)
PlayerID (FK)
SponsorID (FK)
PLAYERS
PlayerID
PlayerName
(FirstName, LastName)
Address
(street, city, state, zip)
PhoneNo.
DOB
[age]
Have Emergency Contacts
TEAMS
TeamID
TeamName
Designated Captain
PARENT
PlayerID
ParentName
(FirstName, LastName)
PhoneNo.
Email
PLAYER PERFORMANCE
MinutesPlayed
GoalsScored
PenaltiesAssessed
MatchID (FK)
PlayerID (FK)
Compete in
Support
REFEREES
RefereeID
Name
(FirstName, LastName)
Address
(street, city, state, zip)
PhoneNo.
Email
Position
Mentors
MATCHES
MatchID
Date
GoalsScoredByTeam 1
GoalsScoredByTeam 2
Win/LossResult
Assigned
Take Place in
FIELDS
FieldID
FieldName
Address
(street, city, state, zip)
ClosedForRenovations
VENDOR ASSIGNMENT
Season
(Season, Year)
VendorID (FK)
Field ID (FK)
VENDORS
VendorID
Type
PhoneNo.
{Services}

Relational Schema