

Wireframing Relational Data

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Wireframes are the core of your plan when it comes to your project. This handout will show an example of wireframing a 1-Many and Many-Many relationship.

Project Idea

We would like to build a system that manages players, teams, and sponsors for varsity college sports. Joe, a fan of college basketball, can come to our website and see all of the different teams and player profiles. Joe can also see the sponsors of each team. An Admin, Christine, can update information about players, sponsors, and teams.

Relational Database

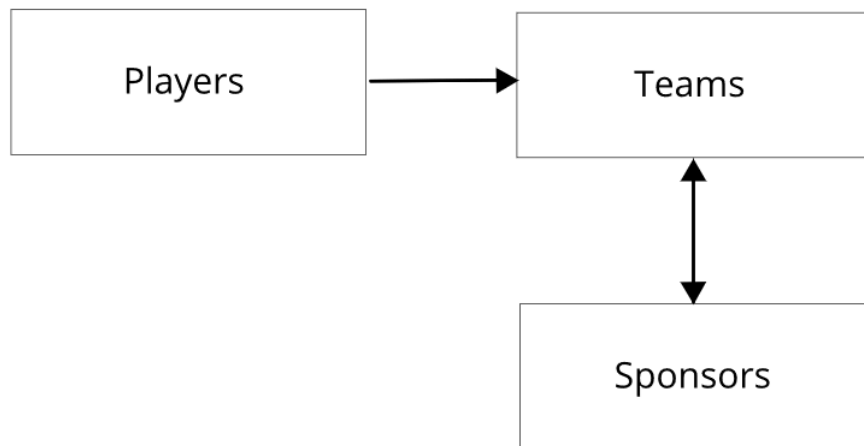


Fig 1: An entity relationship diagram for players, teams, sponsors

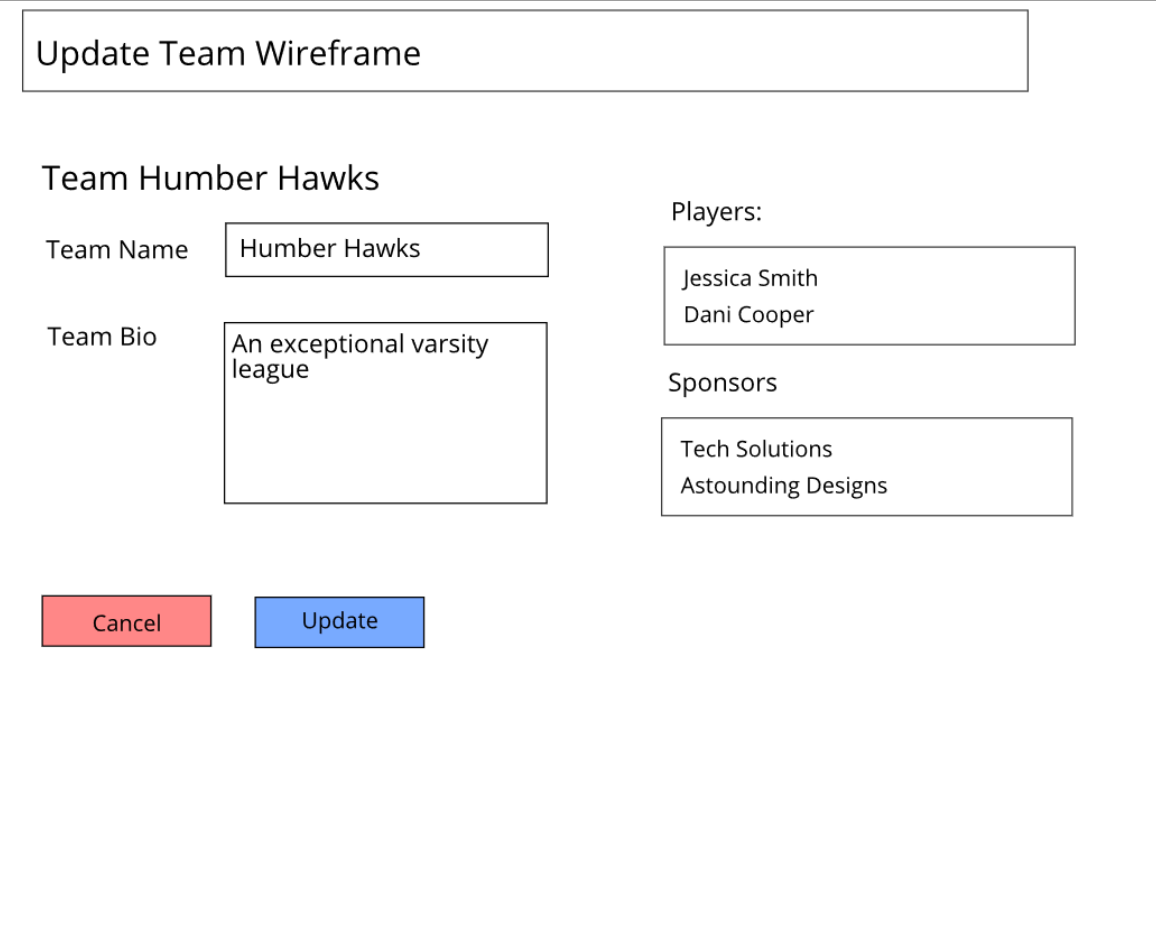
	Player Entity	Team Entity	Sponsor Entity
Player Entity	x	A team has many players.	x
Team Entity	A player belongs to one team.	x	A sponsor will fund many teams.
Sponsor Entity	x	A team will have many sponsors.	x

Fig 2: A table which verbalizes relationships between entities.

Wireframes

Creating wireframes is a way of “coding before coding”. When wireframing relational entities, focus on these aspects:

- How can I present the relationships clearly to the user
- How can I create an interface that allows a user to update the relationships



The wireframe is titled "Update Team Wireframe" in a header box. Below the title, the interface is divided into two main columns. The left column is for team information, with the heading "Team Humber Hawks". It contains two input fields: "Team Name" with the value "Humber Hawks" and "Team Bio" with the value "An exceptional varsity league". The right column displays read-only relationship data. It has a heading "Players:" followed by a box containing "Jessica Smith" and "Dani Cooper". Below that is a heading "Sponsors" followed by a box containing "Tech Solutions" and "Astounding Designs". At the bottom left, there are two buttons: a red "Cancel" button and a blue "Update" button.

Update Team Wireframe	
Team Humber Hawks	
Team Name	Humber Hawks
Team Bio	An exceptional varsity league
	Players: Jessica Smith Dani Cooper
	Sponsors Tech Solutions Astounding Designs
Cancel	Update

Fig 3: An Update Team Wireframe. The left column represents information about the base record (Humber Hawks) which can be updated, such as the team name and bio. The right column shows the relationships (Jessica and Dani play for Humber Hawks, and Tech Solutions and Astounding Designs Sponsor Humber Hawks). Notice how these relationships are read-only on the Update Team Wireframe.

Update Player

Player Jessica Smith

Player Name

Jessica Smith

Player Bio

Driven and motivated to win.

Team

Humber Hawks ▼

Cancel

Update

Fig 4: An Update Player Wireframe. Due to our ERD, Jessica can only play for one team. In the update view, we can choose which team Jessica plays for. The user can select a different team from the drop down list. This pattern is a common 1-Many interface.

Update Sponsor

Sponsor Tech Solutions

Name

Tech Solutions

Description

A company motivated by innovation.

Teams Sponsored

Humber Hawks

George Brown Huskies

Add Team :

Lakehead ThunderWolves

Add Team

Cancel

Update

An Update Sponsor Interface. On the left column, the base information about the sponsor can be changed such as the sponsor name and description. On the right column, there is an interface to add and remove relationships between the current sponsor (Tech Solutions) and various teams. Currently, Tech Solutions is sponsoring Humber Hawks and George Brown Huskies. We can sponsor a new team (Lakehead ThunderWolves) or remove an existing sponsorship (George Brown Huskies).

Final Notes on Wireframes

These wireframes are just one way to reflect the database relationships. The most important thing is that the wireframes and the database are aligned semantically. These wireframes are also describing the MVP; later on we can add more features and stylized content.

One way to drive the functionality on the above wireframes could be implementing the following API methods (MVP)

GET ListPlayers	GET ListTeams	GET ListSponsors
GET FindPlayer	GET FindTeam	GET FindSponsor
POST AddPlayer	POST AddTeam	POST AddSponsor
DELETE DeletePlayer	DELETE DeleteTeam	DELETE DeleteSponsor
PUT UpdatePlayer	PUT UpdateTeam	PUT UpdateSponsor
GET ListPlayersForTeam	GET ListTeamsForSponsor	GET ListSponsorsForTeam
		POST AddSponsorToTeam
		DELETE RemoveSponsorFromTeam

Some examples of extra features:

- Player Profile Picture Add / Remove
- Sponsor Logo Add / Remove
- Connecting to an external API
- "Sport" entity (One Sport Many Teams)
- Sponsor "Level" Bronze/Silver/Gold
- "Match" Entity (One Team Many Matches, One Match two Teams)
- Search for Teams, Players, Sponsors
- Video Upload to see clips
- A homepage showcasing the featured players