# API Coding Challenge

For the most part, this process will follow the pattern described here:

<https://docs.microsoft.com/en-us/aspnet/core/tutorials/first-web-api?view=aspnetcore-6.0&tabs=visual-studio>

We will use .NET 6 along with either Visual Studio 2022 or Visual Studio Code to create a small web app.

Assessment:

Set up a web API project to interact with a database containing Teams and Players.

Ignore the parts about calling the API with jQuery – we will be testing your application just by hitting certain endpoints with PostMan. This is not a UI test.

Guidelines:

Create an entity framework DbContext that models Team and Player objects.

A Team should contain an ID, a Name, a Location, and a List of Players on the team.

* No two Teams should exist with the same Name and Location
* A Team should have a maximum of 8 Players
* Name and Location are required fields

A Player should contain an ID, a FirstName, and a LastName

* A Player can only be on one Team
* First Name, and Last Name are required fields

(The tutorial shows you how to set it up as an in-memory database so you don’t have to worry about using a real database.)

Create endpoints that allow us to:

* Create a Team
* Create a Player
* Add or Remove a Player from a Team
* Query for Players
  + Query by ID
  + Query All Players
  + Query All Players matching a given Last Name
  + Query for all Players on a Team
* Query for Teams
  + Query by ID
  + Query All Teams
  + Query All Teams ordered by Name or Location

For example, we should be able to:

* Send a POST request containing a Player object and create a new Player
* Send a GET request and see all teams ordered by their name (sorted alphabetically)