Implementing and Securing an API with ASP.NET Core

Getting Started

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Course Overview

What is this course?

- Build a web API using ASP.NET Core
- Learn by doing
- Feel free to follow along
- You'll see it all

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Course Overview

What this course will teach you:

- ASP.NET Core and MVC 6
- Creating API Controllers
- Versioning APIs with MVC 6
- Securing and Authenticating APIs
- Implementing REST Constraints

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Course Overview

What is this course built with?

- Visual Studio 2015 w/Update 3
- ASP.NET Core 1.0
- Entity Framework Core 1.0

- http://get.asp.net

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Do You Know ASP.NET Web API?

- ASP.NET Web API (versions 1 and 2) are similar to ASP.NET Core MVC6
  - Microsoft merged the MVC and Web API stacks
  - You'll see some parts which are very familiar
  - Some parts will be very different
  - There are no plans to implement Web API like it is today

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Are you new to ASP.NET Core?

Might want to view my
Introductory Course first:

http://shawnw.me/learncore

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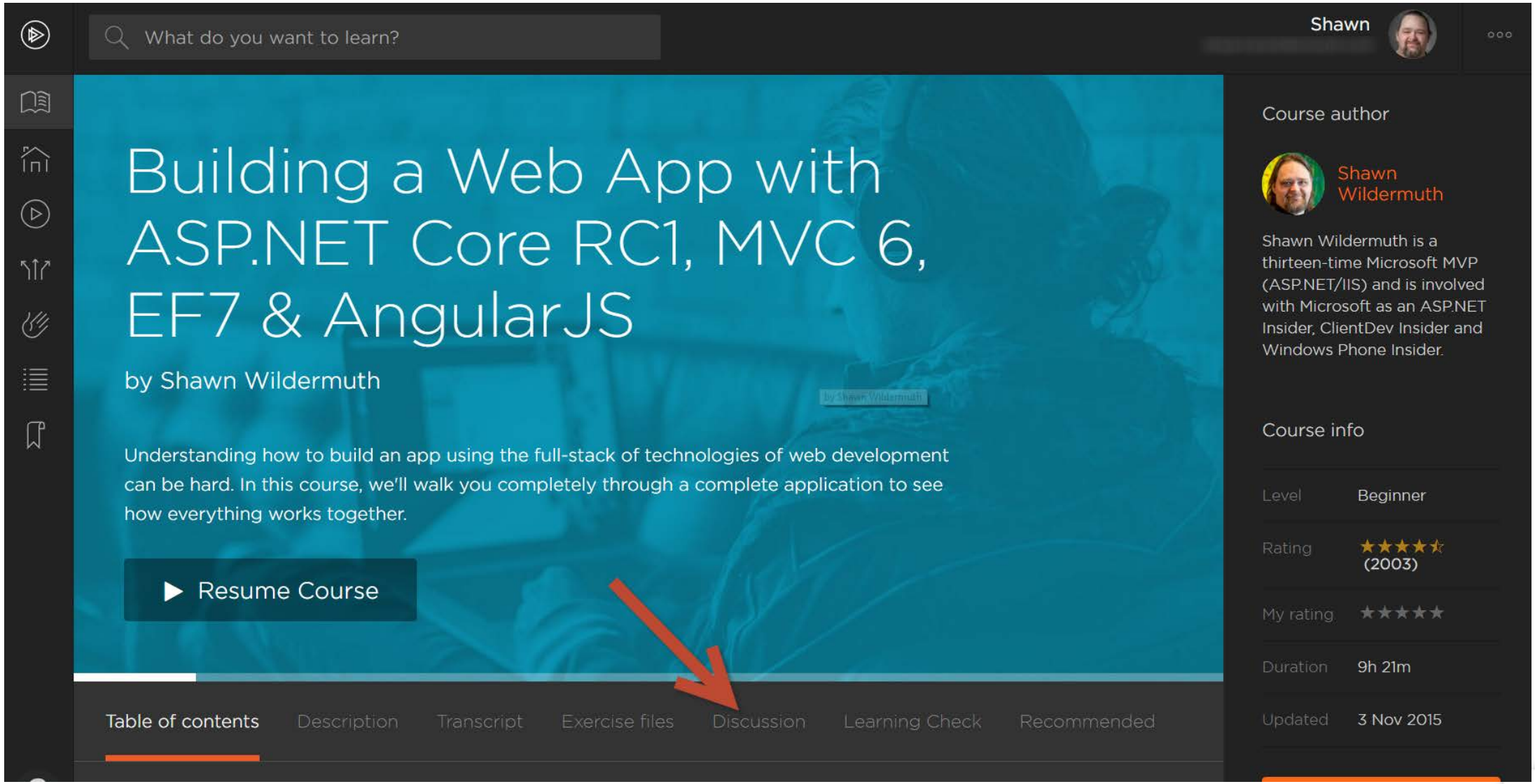
Questions During the Course?



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This Module

Getting Started

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10/100/1000Base
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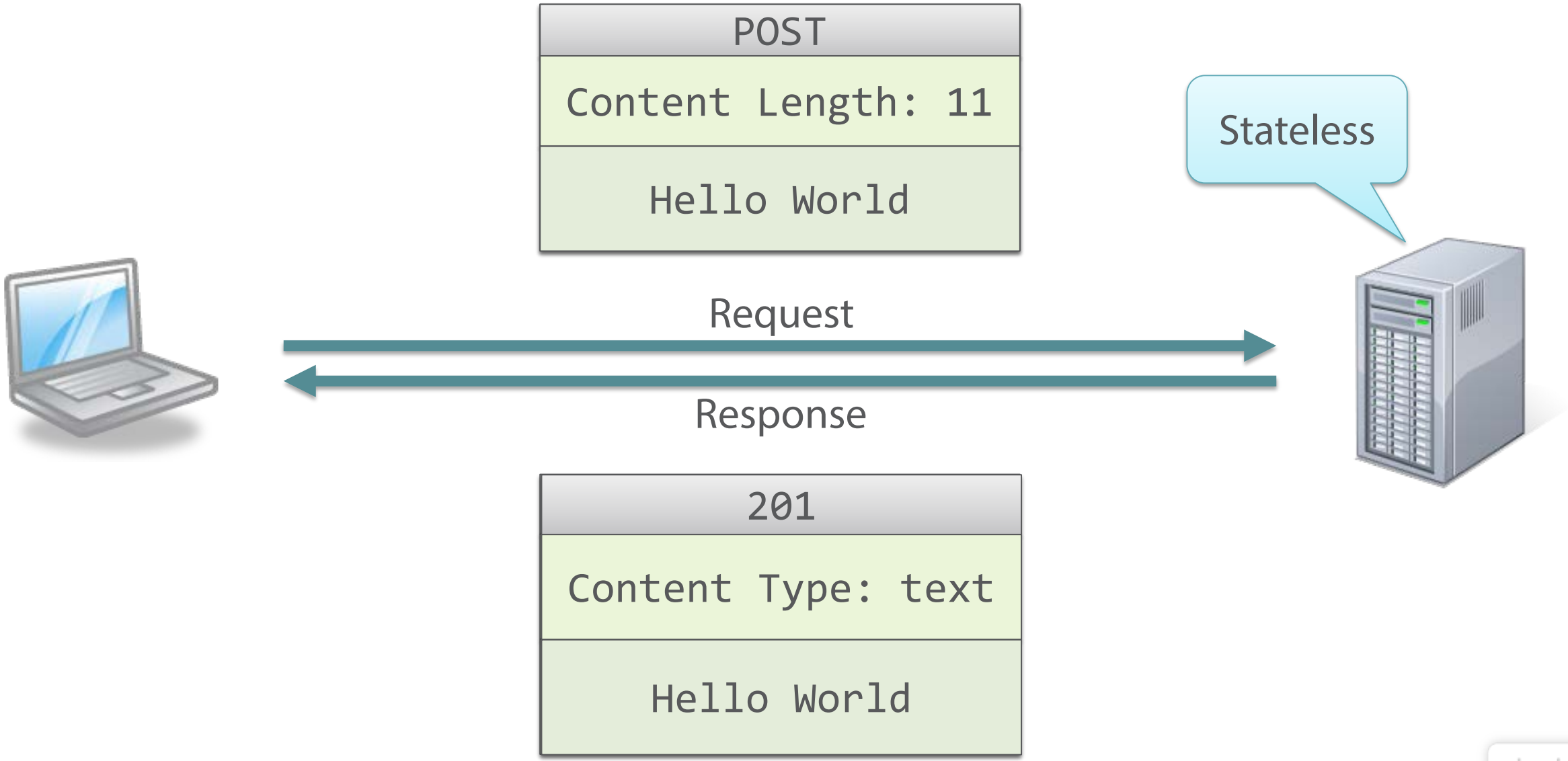
How Does HTTP Work?



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HTTP Verbs

GET	Retrieve a resource
POST	Add a new resource
PUT	Update an existing resource
PATCH	Update an existing resource with set of changes
DELETE	Remove the existing resource
…	

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Resource Based Architectures

- Resources are Representations of Real World Entities
  - E.g. People, Invoices, Payments, etc.
  - Relationships are typically nested
  - Hierarchies or Webs…not Relational Models
- URIs are Paths to Resources
  - Query Strings for non-data elements
  - E.g. format, sorting, etc.

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What is REST?

- REpresentational State Transfer*
  - Concepts include:
    - Separation of Client and Server
    - Server Requests are Stateless
    - Cacheable Requests
    - Uniform Interface

** Introduced by Roy Fielding's doctoral dissertation*

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What is REST?

- Problems
  - To become qualified "REST" tends to be difficult
  - Community is split about the dogma of REST
  - There is a lot to learn from REST-style architecture
    - But pragmatism is important too

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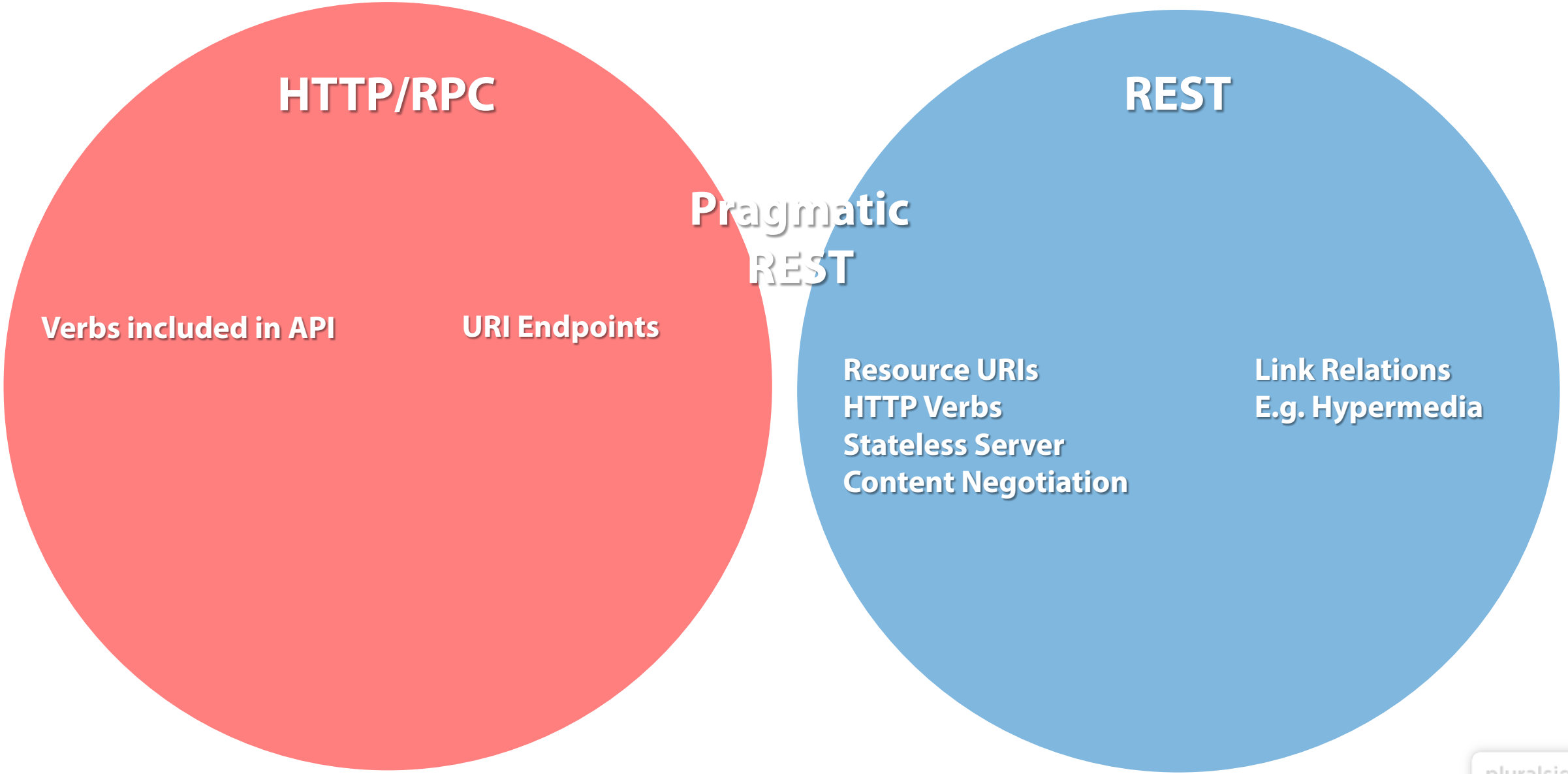
APIs on the Web



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Where We're Going…

- We're Building a Whole API
  - We're not building the database/data layer in this course
  - We're not building a website to support it
  - We're not building the client side code

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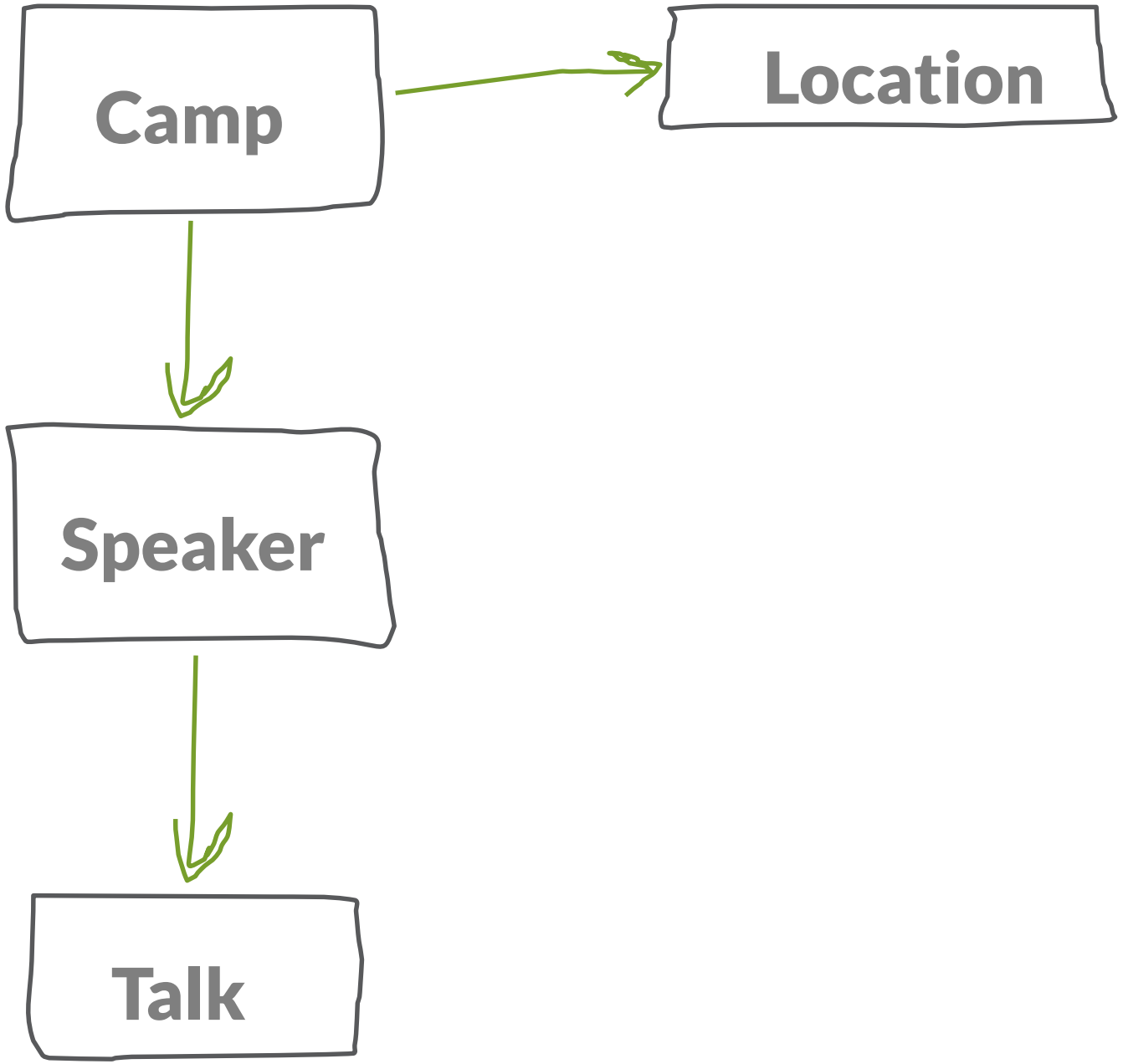

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Design the API

```
http://.../api/camps

http://.../api/camps/1

http://.../api/camps/1/speakers

http://.../api/camps/1/speakers/1

http://.../api/camps/1/speakers/1/talks

http://.../api/resetcache
```

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Demo

Starting the Project

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Demo

Using Postman

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Demo

What's in the Project

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Going Deeper

Building a Website with ASP.NET Core

shawnw.me/ learncore

ASP.NET Core 1.0 Fundamentals

www.pluralsight.com/courses/aspdotnet-core-1-0-fundamentals

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What We've Learned

Getting Started

Understanding HTTP is crucial to APIs for the Web

Using REST is important, but be pragmatic about it

We're building a simple project to learn the basics

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