

# Building your First API with ASP.NET Core

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## GETTING ACQUAINTED WITH ASP.NET CORE



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# Coming Up



**Positioning this Course**

**Course Prerequisites, Frameworks  
and Tooling**

**The Big Picture: ASP.NET Core, .NET Core  
and .NET Standard**

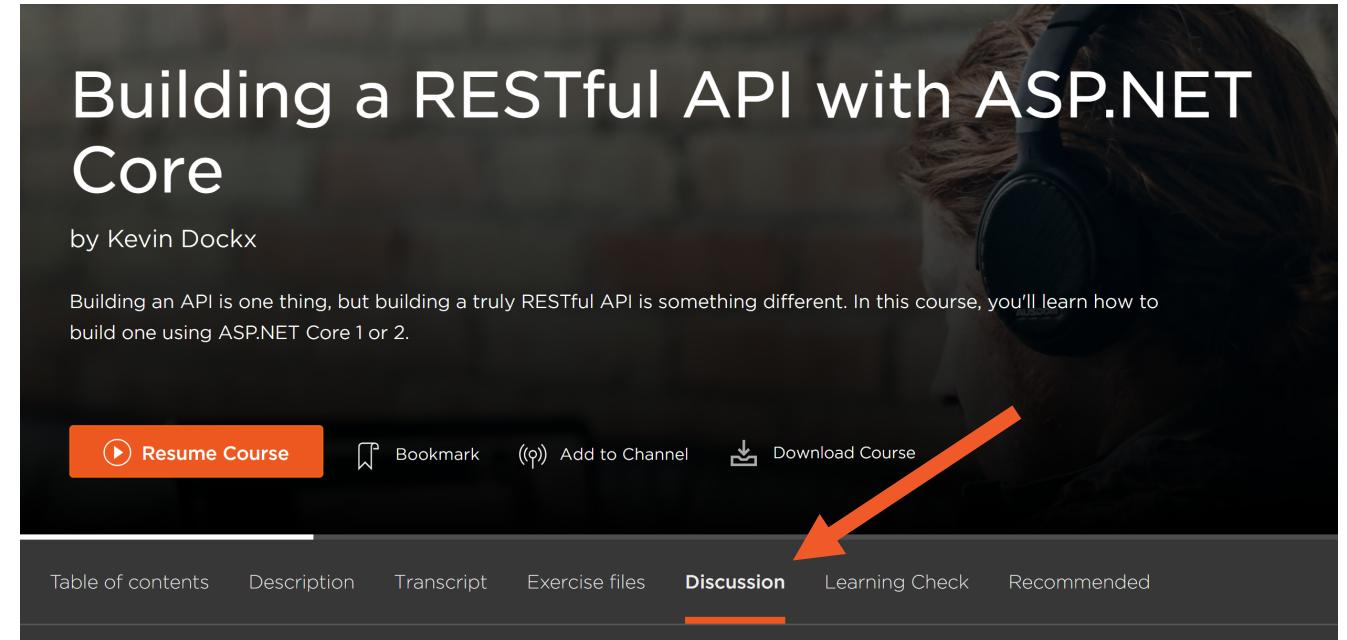
**Starting an ASP.NET Core Project**

**Request Pipeline and Middleware**



**Discussion tab on the course page**

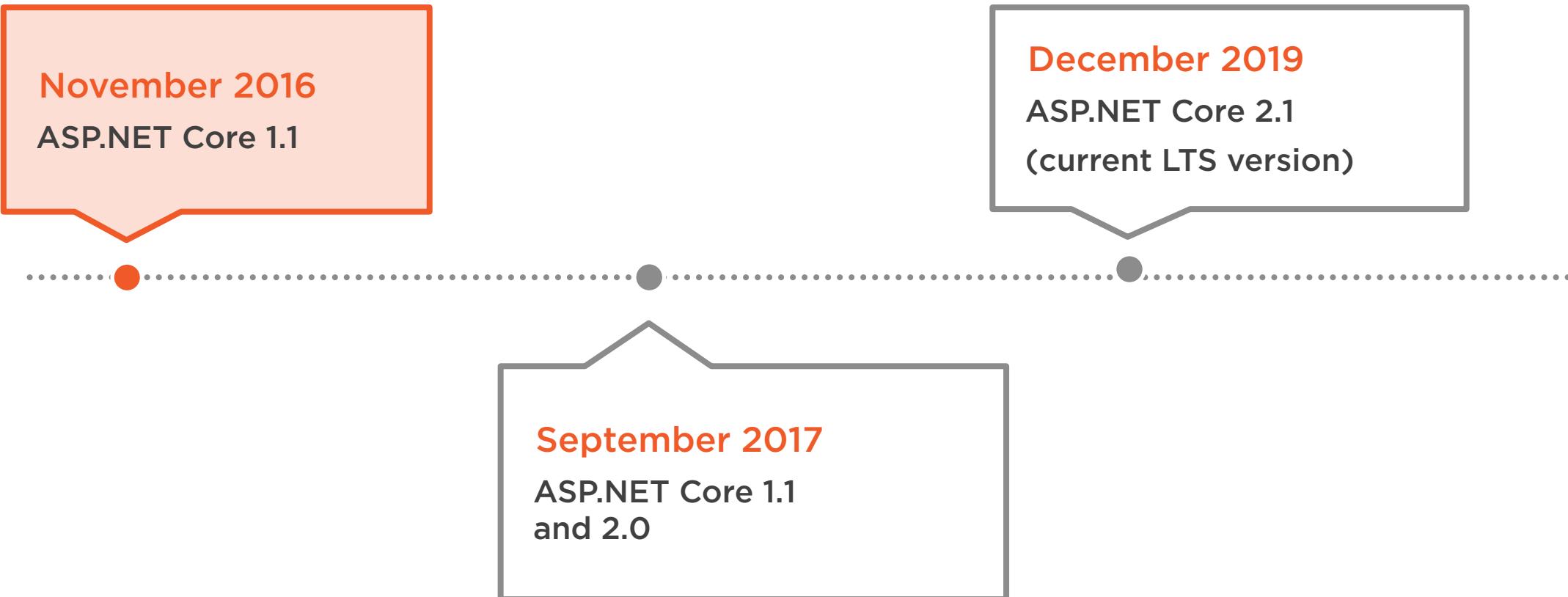
**Twitter: @KevinDockx**



**(course shown is one of my other courses, not this one)**



# Positioning this Course



# Positioning this Course

**November 2016**  
ASP.NET Core 1.1

**December 2019**  
ASP.NET Core 2.1  
(current LTS version)

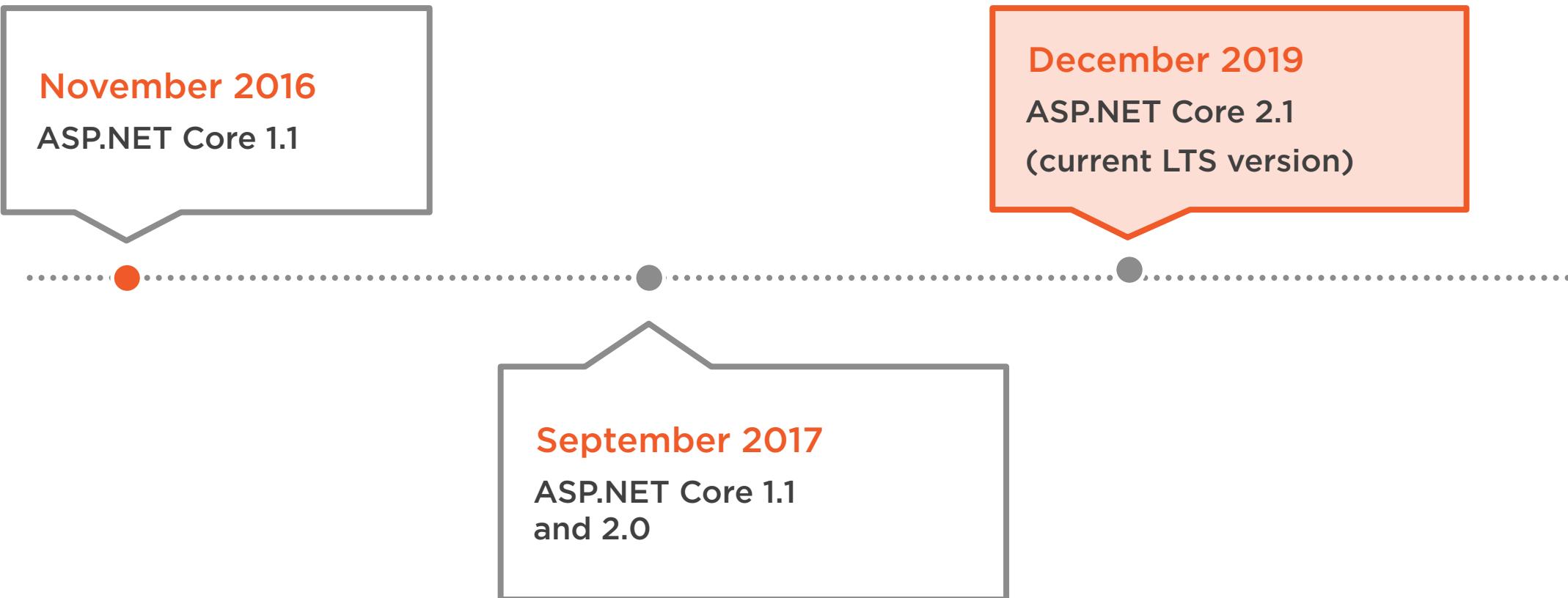


**September 2017**

ASP.NET Core 1.1  
and 2.0



# Positioning this Course





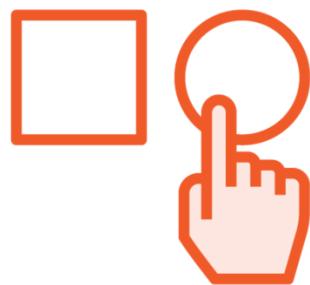
## **Building a RESTful API in ASP.NET Core 3**

- Basic concerns like CRUD, RESTful contract design, content negotiation, data validation ...

## **Implementing Advanced RESTful Concerns in ASP.NET Core 3**

- Advanced concerns like HATEOAS, media types, caching, concurrency, ...





New to building APIs  
Require LTS



**Building Your First API with  
ASP.NET Core**

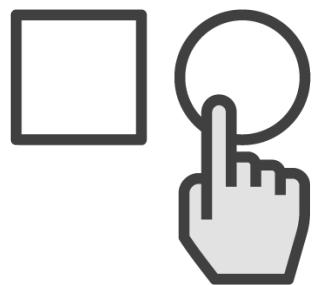
Some API experience  
Prefer the latest framework versions



**Building a RESTful API in  
ASP.NET Core 3**

**Implementing Advanced RESTful  
Concerns in ASP.NET Core 3**





New to building APIs  
Require LTS



**Building Your First API with  
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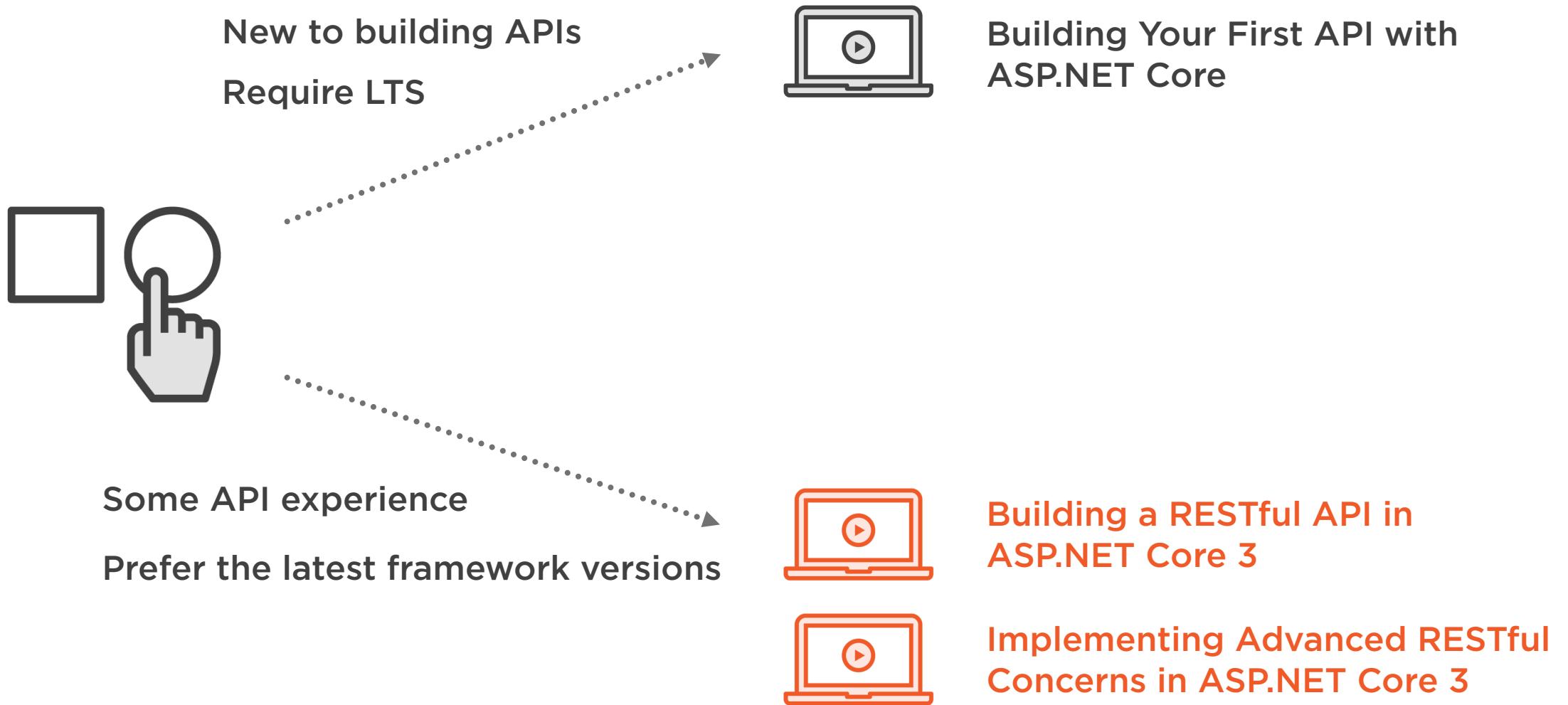
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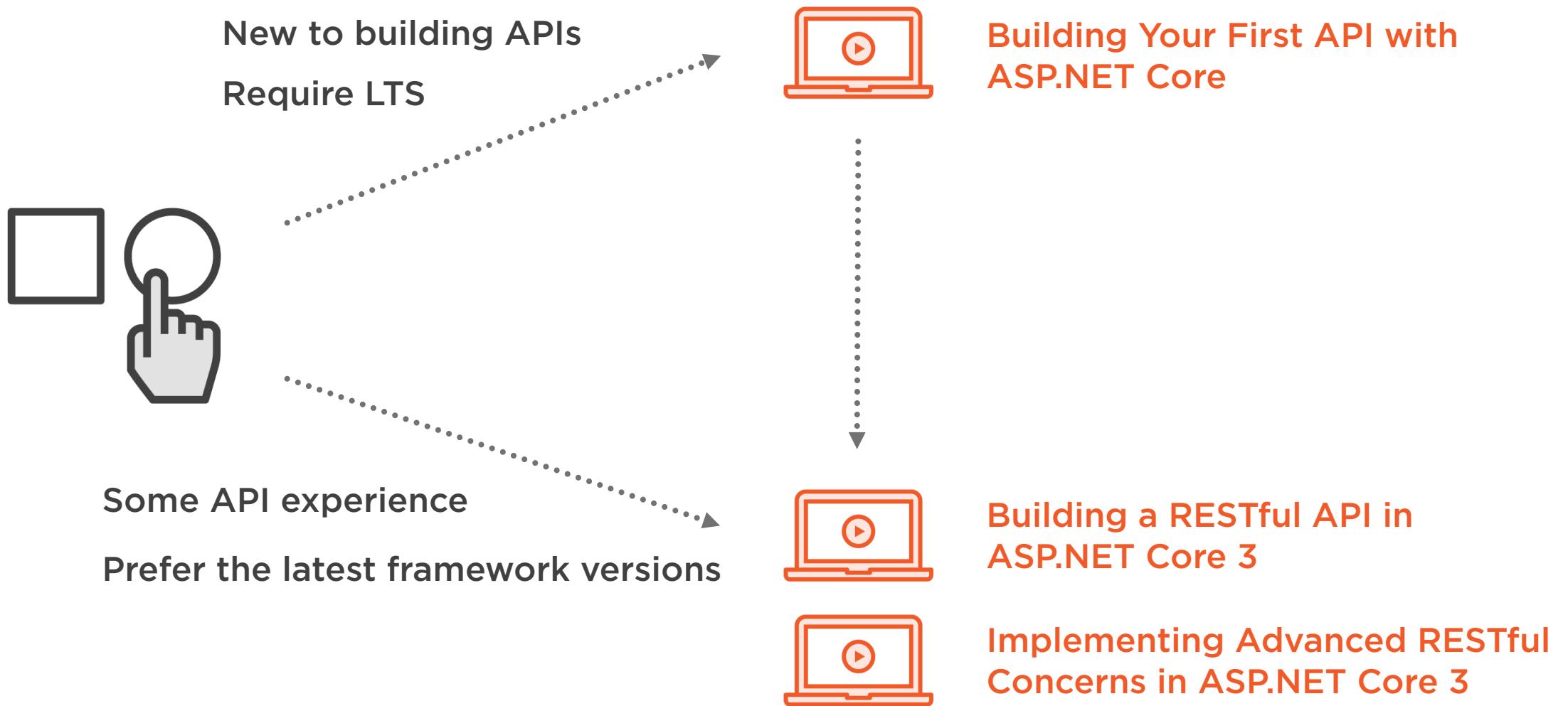


**Building a RESTful API in  
ASP.NET Core 3**

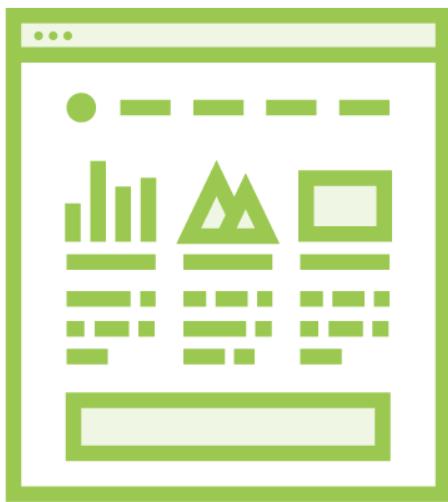
**Implementing Advanced RESTful  
Concerns in ASP.NET Core 3**



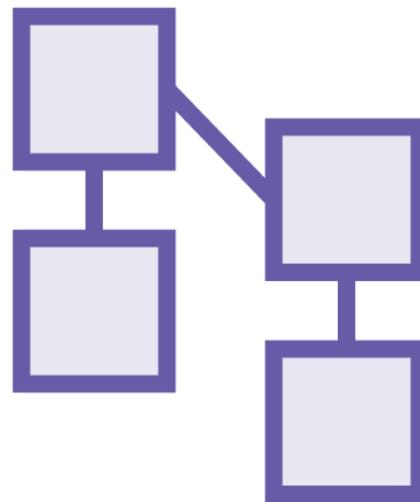




# Gradual Improvement



**From introducing  
ASP.NET Core...**



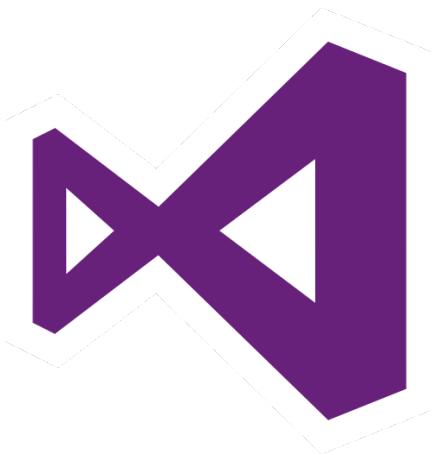
**... to building the API ...**



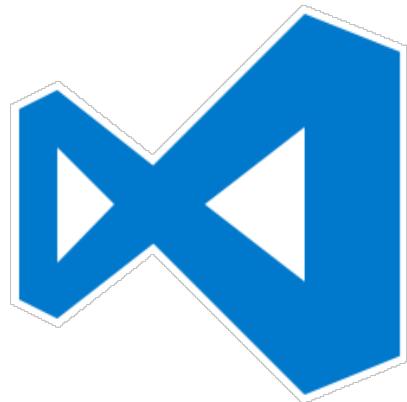
**... to using Entity  
Framework Core**



# Tooling



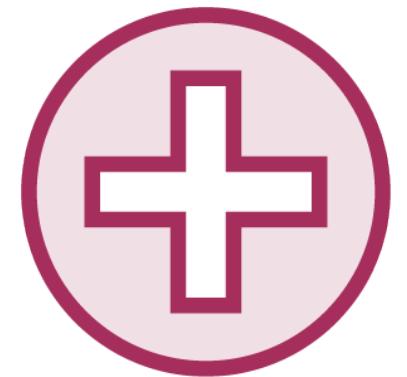
Visual Studio  
*(2017 or 2019,  
minimum version 15.3)*



Visual Studio Code



Visual Studio for Mac



JetBrains Rider,  
Sublime...



# Tooling



**Postman**

<https://www.getpostman.com/>

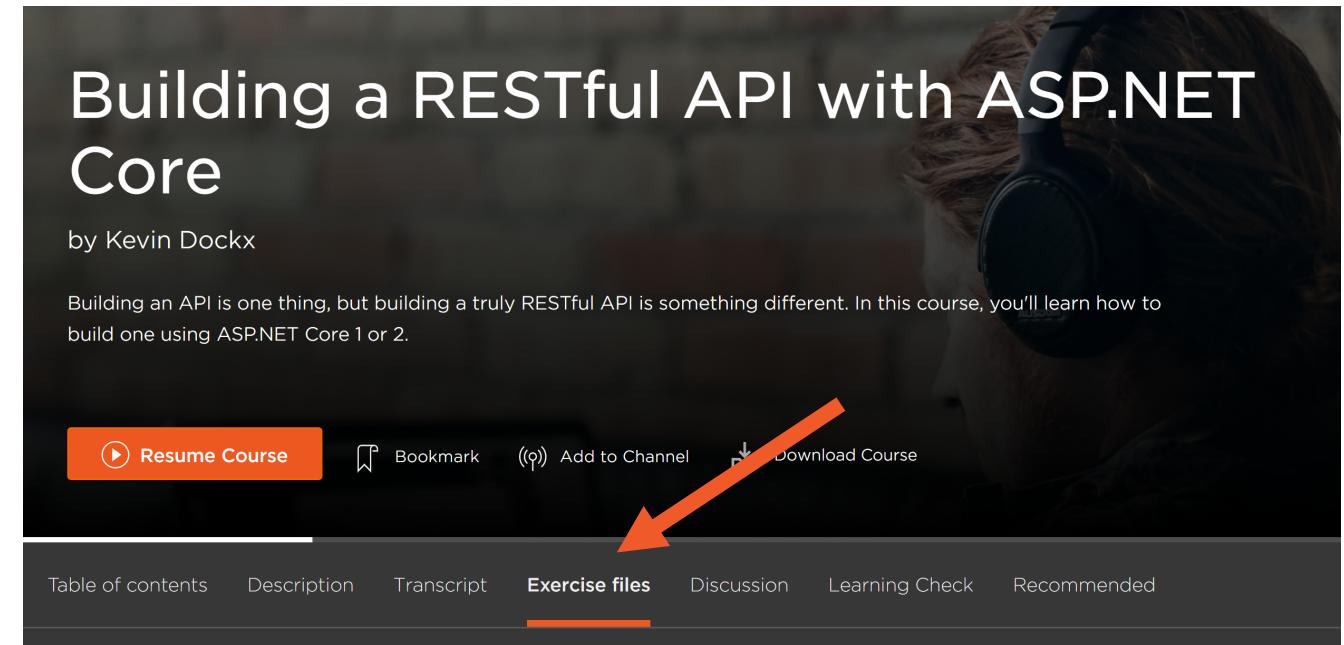


**A browser of choice**



**Exercise files tab on  
the course page**

**Postman collection**  
**ASP.NET Core API**  
**.postman\_collection**



**(course shown is one of my other courses, not this one)**



# ASP.NET Core: The Big Picture



**Framework for building modern internet connected applications**

**Open-source**

- <https://www.github.com/aspnet/>

**Cross-platform**

- Runs on Windows, Mac, Linux
- Develop on Windows, Mac, Linux



# ASP.NET Core: The Big Picture



**Rethought from the ground up**

**Granular set of NuGet packages**

**Smaller application surface area**

- Tighter security
- Reduced servicing
- Improved performance



# ASP.NET Core: The Big Picture

## Full .NET Framework

Supported as a target up until  
ASP.NET Core 2.x  
(no longer supported from 3.x onwards)

## .NET Core

Modular version of .NET framework  
Portable across platforms  
Subset of .NET Framework  
Web: Windows, Linux, Mac  
Other: desktop, devices, phone  
Implementation of .NET Standard



# ASP.NET Core: The Big Picture

## Full .NET Framework

Target all dependencies that require the full .NET framework

## .NET Core

Modularity

Small footprint

Performance improvements

Cross-platform

...

**.NET Core is the go-to choice**



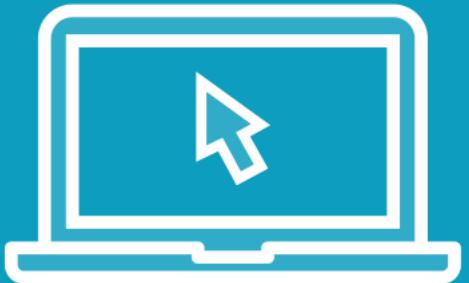
Demo



Downloading and installing .NET Core



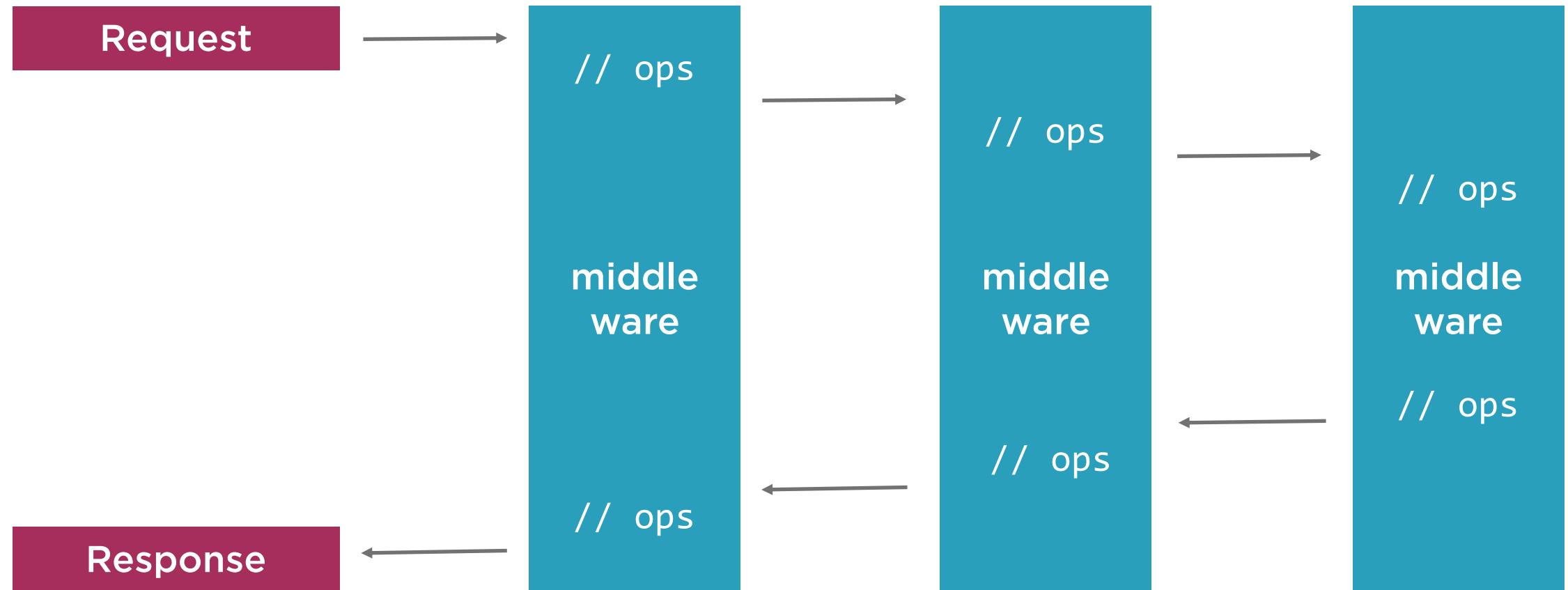
Demo



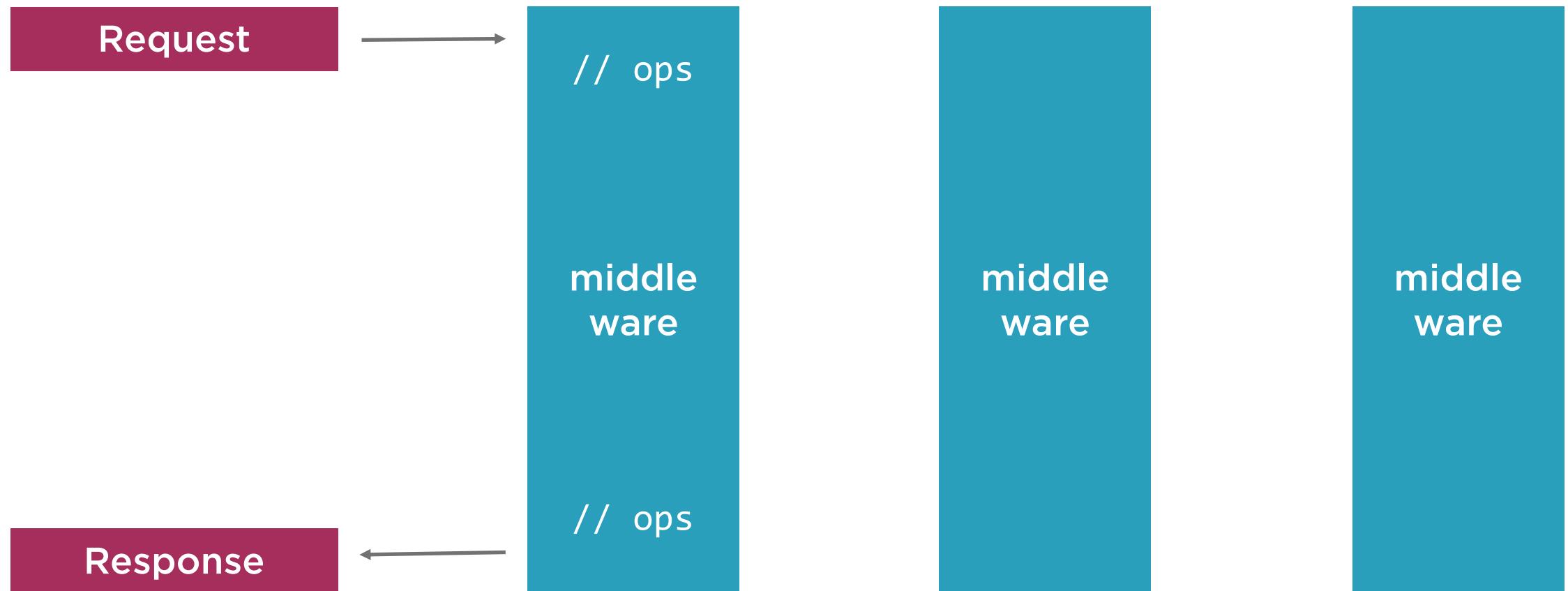
**Starting a new ASP.NET Core project**



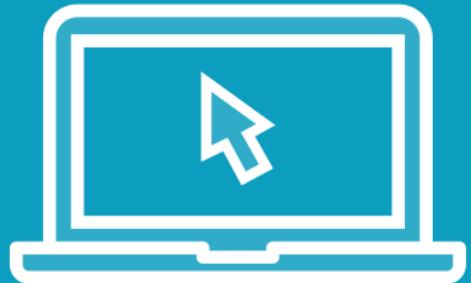
# The ASP.NET Core Request Pipeline & Middleware



# The ASP.NET Core Request Pipeline & Middleware



Demo



## Configuring the ASP.NET Core request pipeline



# Summary



## ASP.NET Core

- Rethought from the ground up
- Tighter security, small footprint, cross-platform, better performance
- Runs on full .NET or .NET Core

## Program class

- Responsible for configuring and running the application

**Startup class: entry point of our web application**



# Summary



**ConfigureServices** is used to add services to the container, and to configure those services

**Configure** is used to specify how an ASP.NET application will respond to individual HTTP requests

**Use middleware to configure the HTTP request pipeline**

**ASP.NET Core supports different environments**

