



Enterprise Software Development

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Building Single Page Applications with ASP.NET Core 2.0

Brisbane .NET User Group – September 2017

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Jason Taylor

SSW Solution Architect

Master of Information Technology

Microsoft Certified Solutions Developer

Certified Scrum Master (CSM)

 @JasonGtAu

 codingflow.net

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SignalR for ASP.NET Core 2.0

Incredibly simple real-time web for .NET

Rewrite of original SignalR

JavaScript/TypeScript Client – no more jQuery

Distributed as an npm module

Learn more; bit.ly/signalr-aspnetcore2

The image shows the front cover of the book 'Clean Architecture' by Robert C. Martin. The cover has a dark blue background with a bright, glowing nebula or galaxy structure. The title 'Clean Architecture' is prominently displayed in white, bold, sans-serif font. Above the title, the text 'Robert C. Martin Series' is visible. In the top right corner, the 'PRENTICE HALL' logo is present. At the bottom right, the author's name 'Robert C. Martin' is printed.

Robert C. Martin Series

Clean Architecture

Robert C. Martin

Clean Architecture

Independent of frameworks

Testable

Independent of UI

Independent of database

Independent of external agency

bit.ly/clean-architecture-book

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Agenda

Creating a SPA

Working with Data

Building a Web API

Automated Testing

Resources

ASP.NET Core JavaScript Services

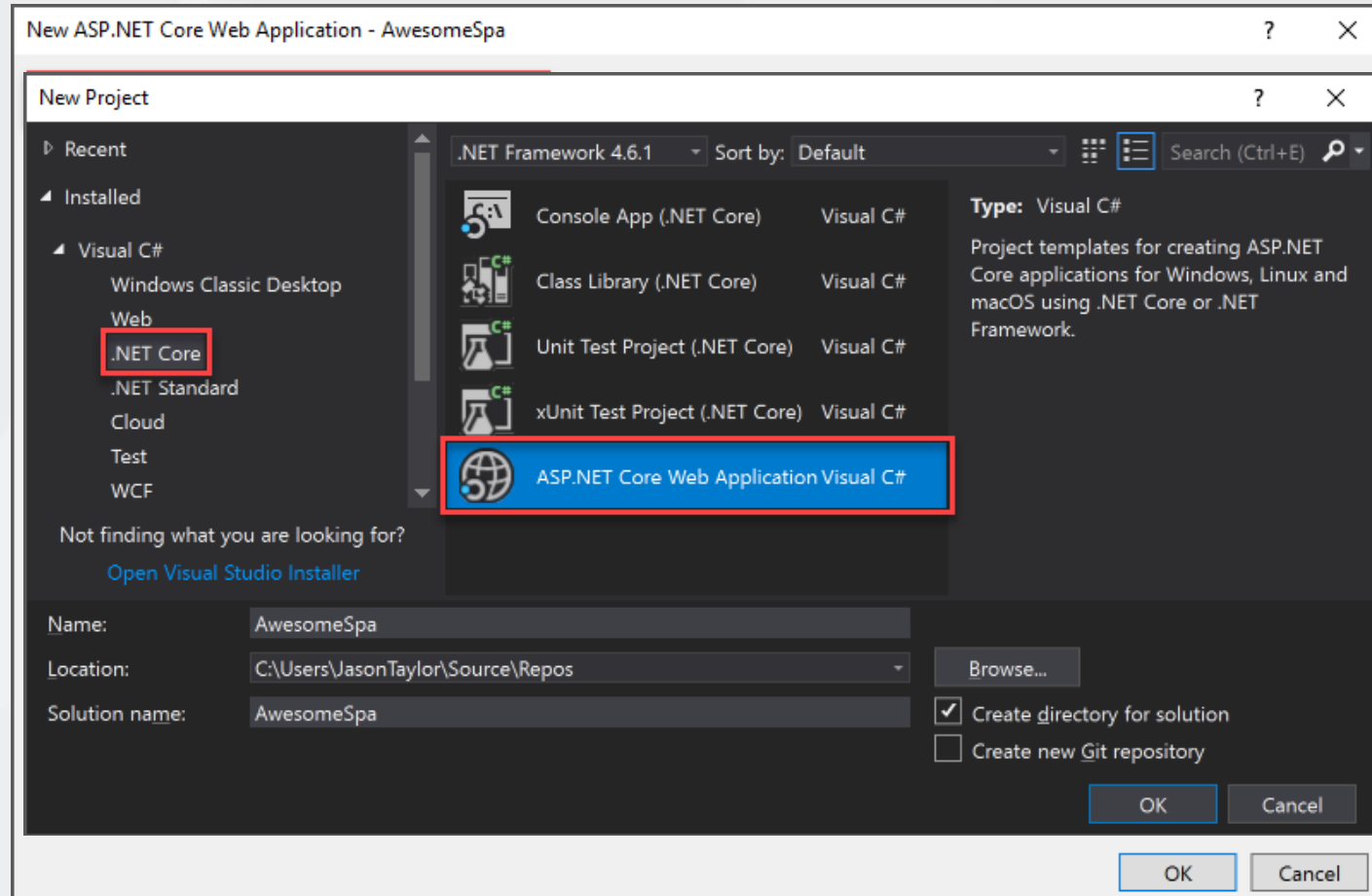
ASP.NET Core has built-in support for SPA

Supports all major client-side frameworks

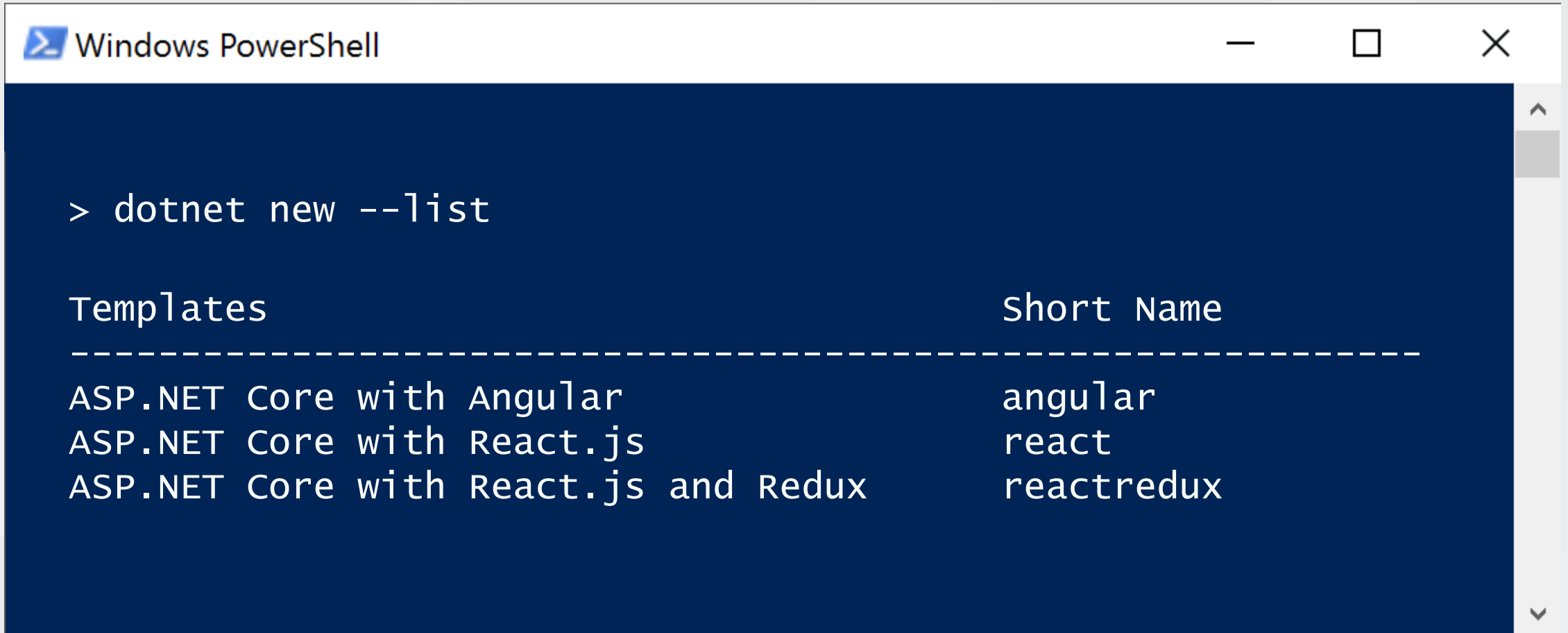
Cross-platform Windows, Mac, or Linux

Use your preferred IDE or code editor

Using Visual Studio 2017



Using .NET Core CLI

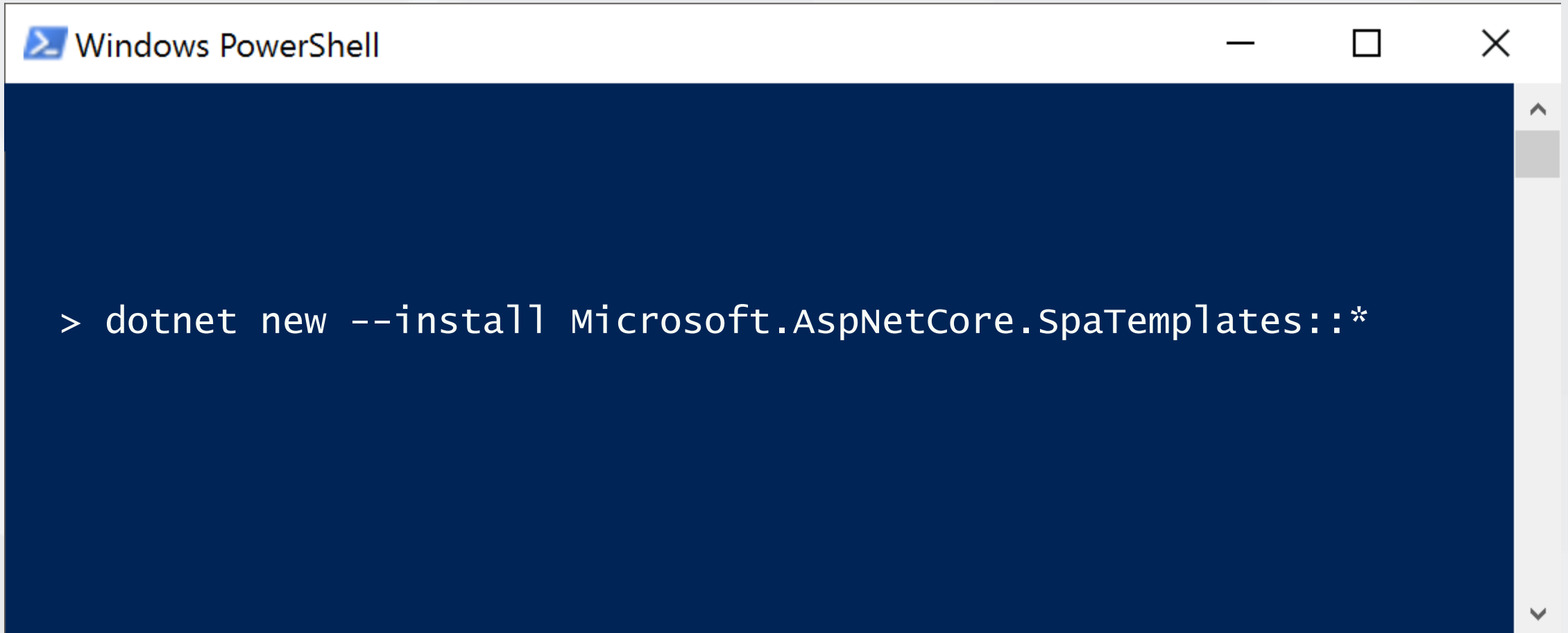


```
Windows PowerShell

> dotnet new --list

Templates                                     Short Name
-----
ASP.NET Core with Angular                    angular
ASP.NET Core with React.js                   react
ASP.NET Core with React.js and Redux         reactredux
```

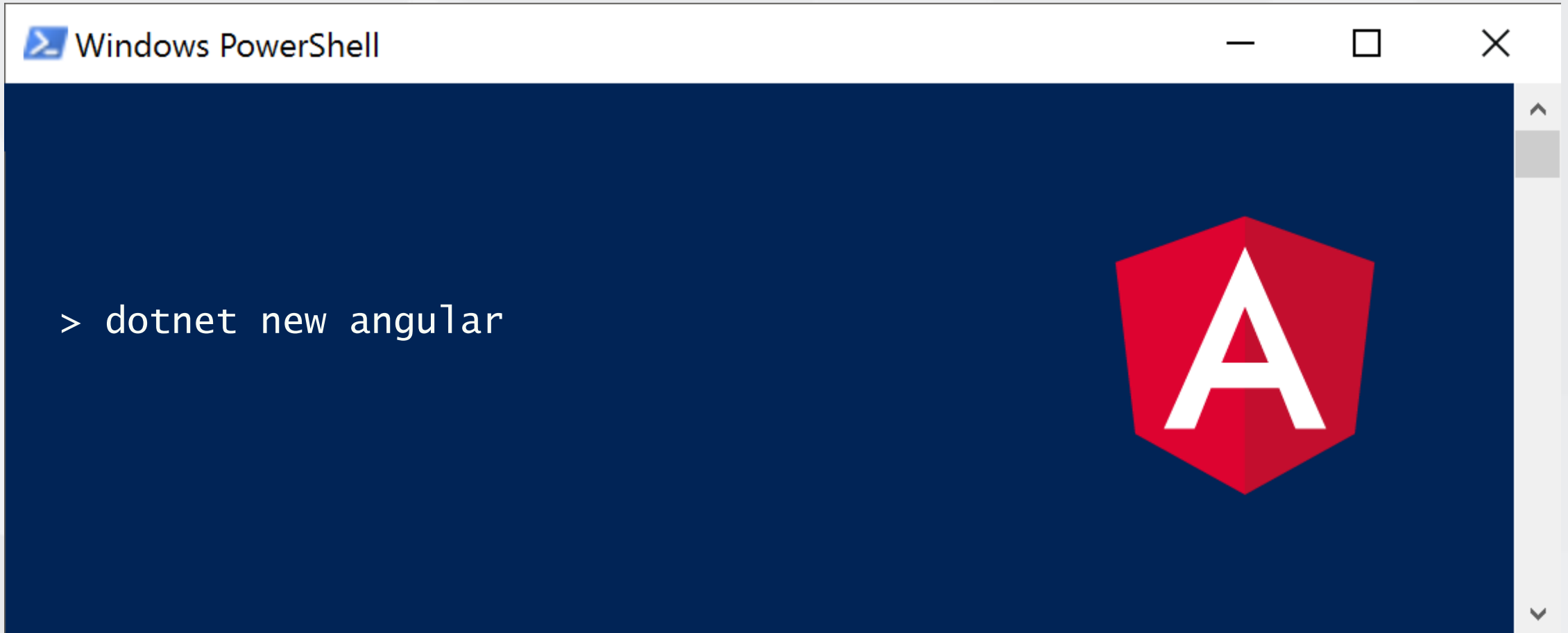
Additional Templates

A screenshot of a Windows PowerShell terminal window. The title bar at the top reads "Windows PowerShell" and includes standard window control buttons (minimize, maximize, close). The terminal has a dark blue background with white text. A single command is entered: `> dotnet new --install Microsoft.AspNetCore.SpaTemplates::*`.

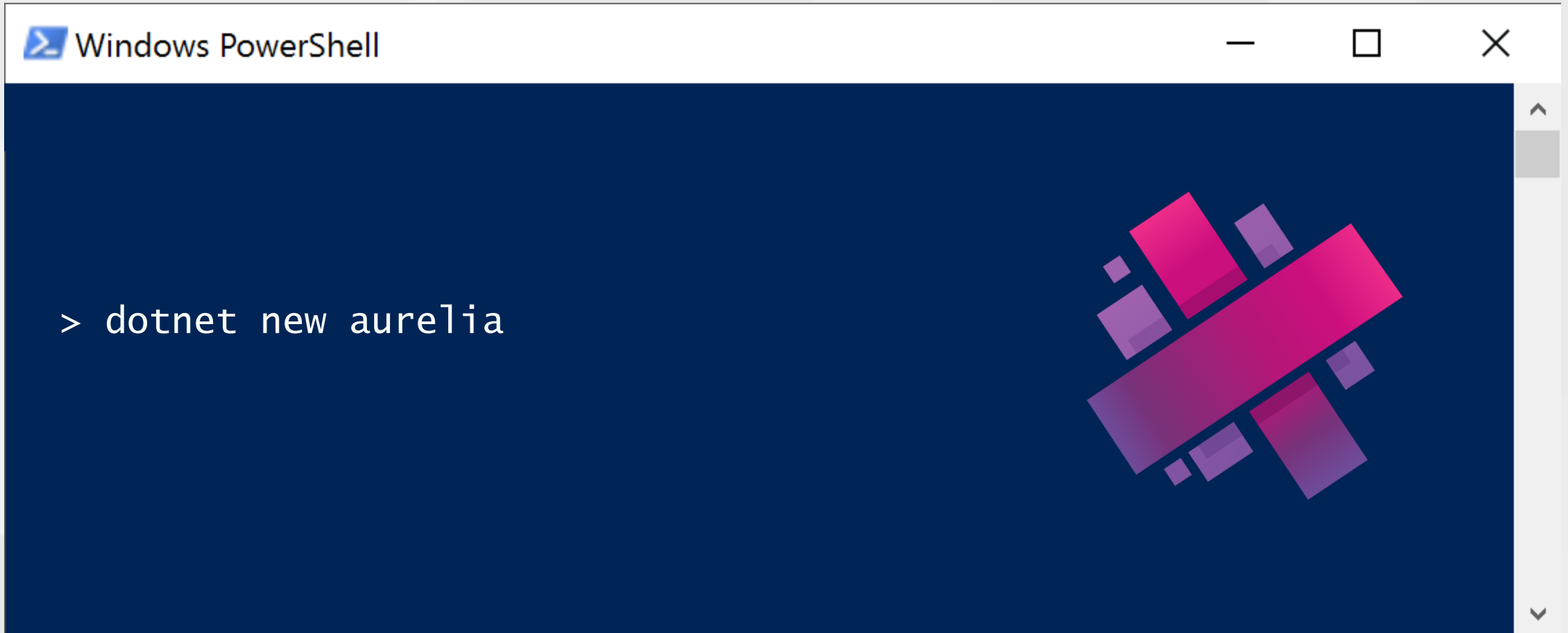
```
Windows PowerShell

> dotnet new --install Microsoft.AspNetCore.SpaTemplates::*
```

Angular + ASP.NET Core

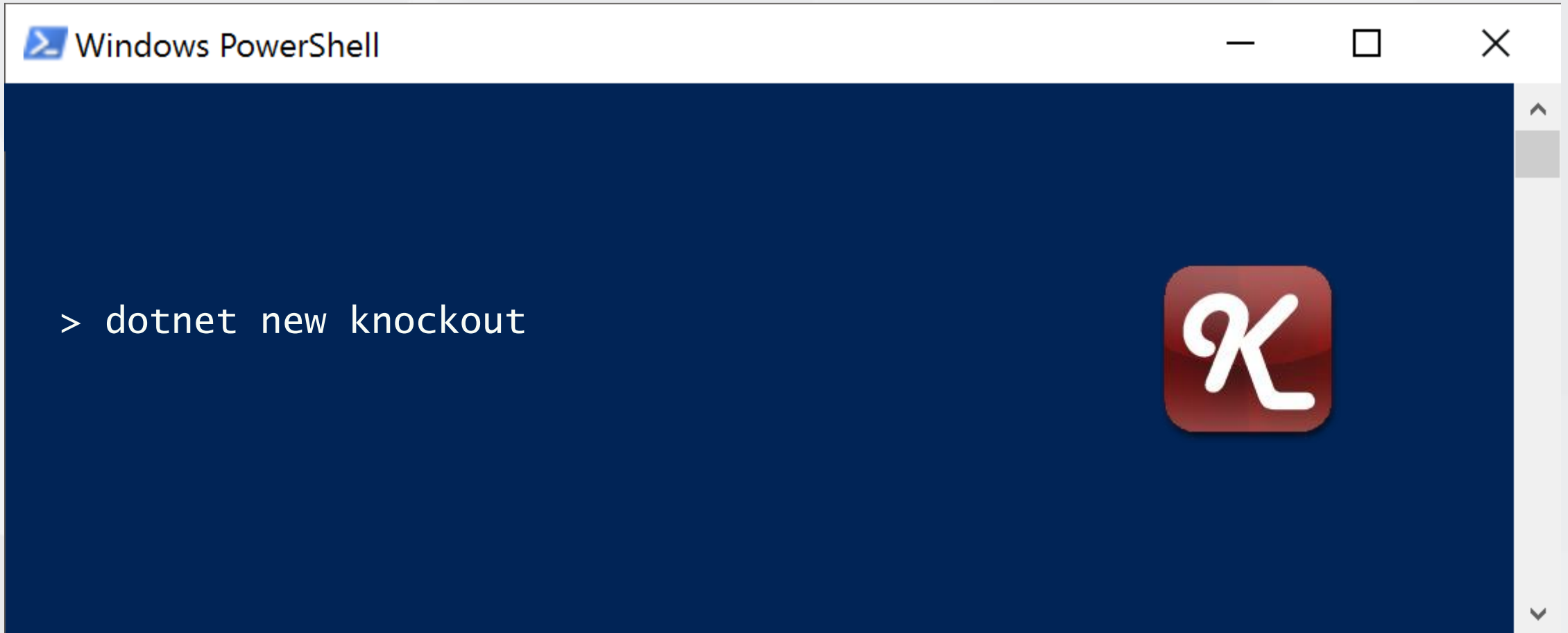


Aurelia + ASP.NET Core

A screenshot of a Windows PowerShell window. The title bar at the top says "Windows PowerShell" with a blue icon on the left and standard window controls (minimize, maximize, close) on the right. The main area has a dark blue background. On the left, the command "> dotnet new aurelia" is written in white text. On the right, there is a colorful Aurelia logo composed of several overlapping squares in shades of pink, magenta, and purple. A vertical scrollbar is visible on the right edge of the window.

```
> dotnet new aurelia
```

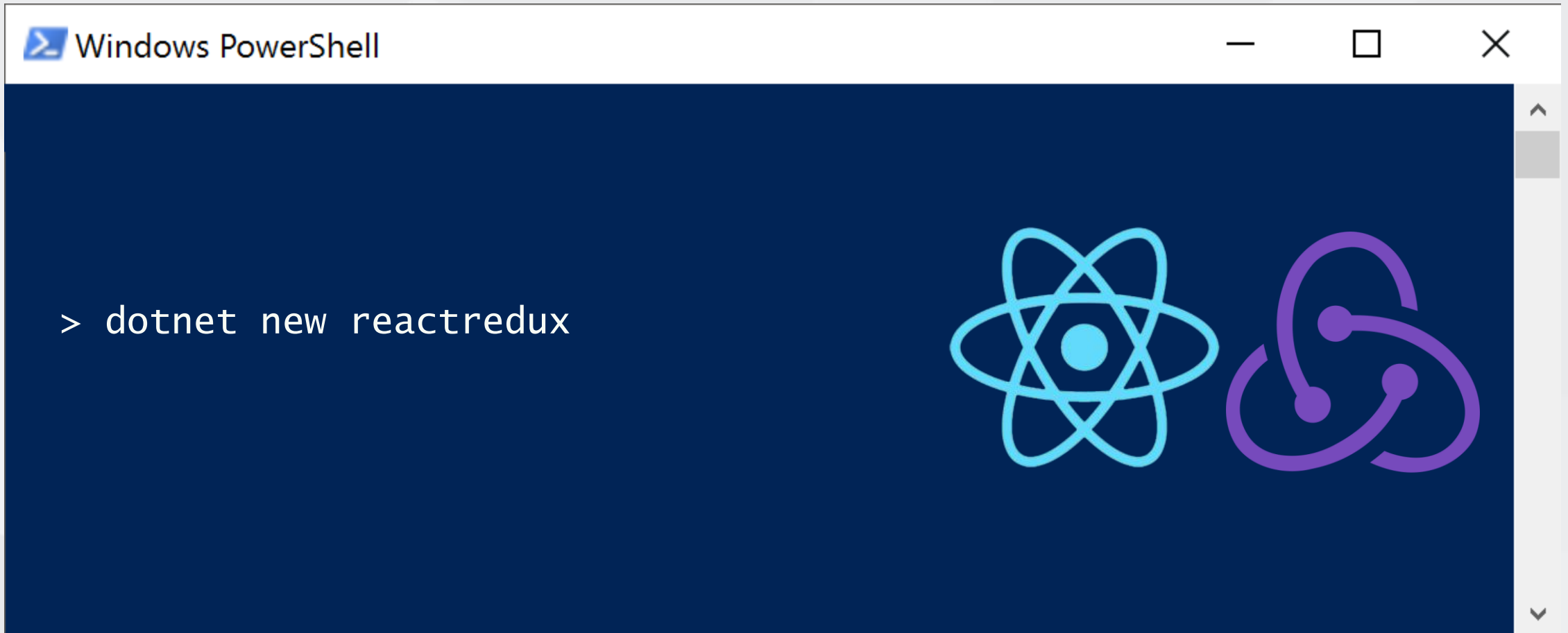
Knockout + ASP.NET Core



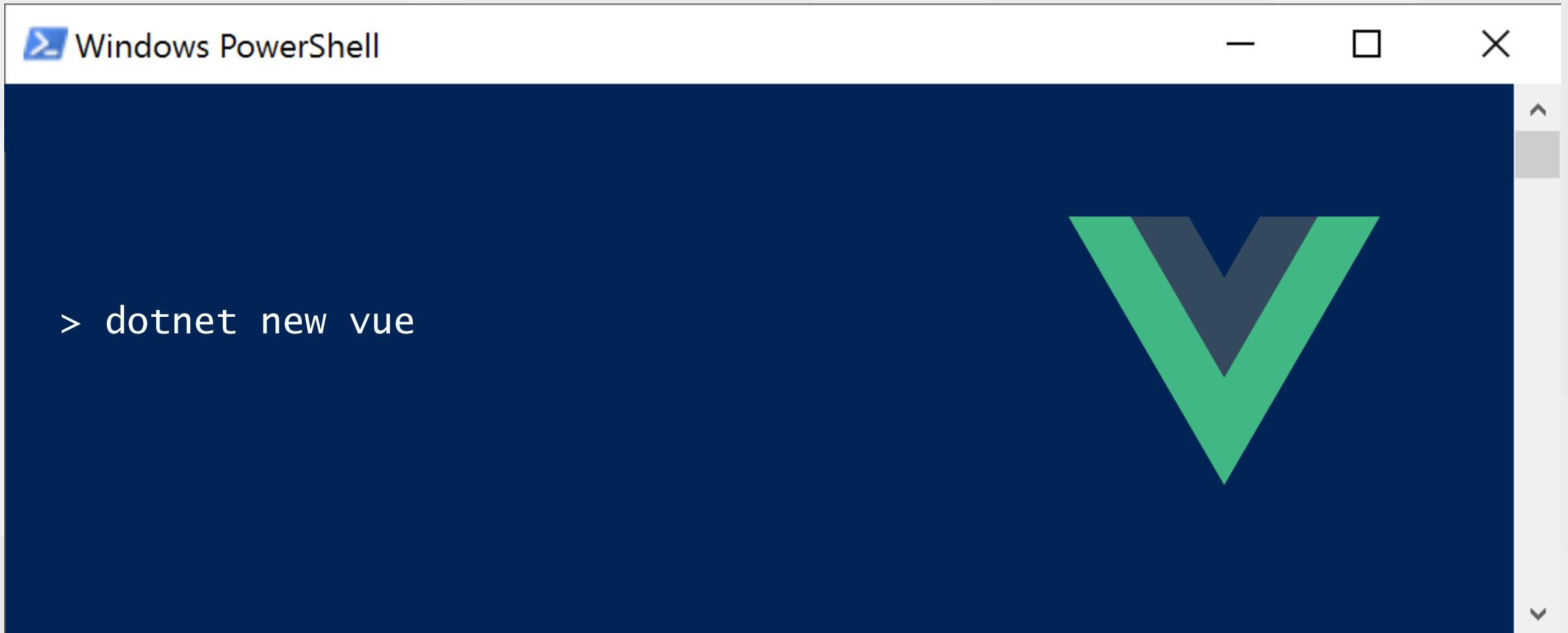
React + ASP.NET Core



React + Redux + ASP.NET Core



Vue + ASP.NET Core



Demo: Creating a SPA

Building single page applications with ASP.NET Core

Summary

Creating a SPA using .NET Core CLI

Server-side + client-side navigation

Webpack dev middleware

Hot module replacement (HMR)

.NET Core Watcher tool

Agenda

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Entity Framework Core

Lightweight, extensible, and cross-platform

Runs on .NET Core or .NET Framework

Choosing between EF6.x and EF Core (bit.ly/ef6-vs-core)

Porting from EF6.x to EF Core (bit.ly/ef6-to-core)

EF Core Roadmap (bit.ly/efcore-roadmap)

Demo: Working with Data

Create and managing databases using EF Core and .NET
Core CLI

Summary

Requirements for the EF Core / .NET Core CLI tools

Creating an initial migration

Updating the database

Seeding the database

Agenda

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Demo: Building a Web API

Creating an awesome ASP.NET Core Web API

Summary

Using CQRS to improve separation of concerns

Using filters to manage cross-cutting concerns

Documenting your API using NSwag

Generating client-side code with the NSwag CLI

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EF Core InMemory Provider

Just a database provider

Uses in-memory database

Built for testing purposes

No overhead of I/O operations

Lightweight with minimal dependencies

Demo: Unit Testing

Creating simple unit tests using the EF Core InMemory provider.

Summary

Using the EF Core InMemory provider

A simple approach for testing commands

A simple approach for testing queries

Agenda

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.NET CORE

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1 Day

PRICE


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THU, 19TH OCTOBER 2017

[Book Now](#) Microsoft Melbourne**Sydney**

FRI, 20TH OCTOBER 2017

[Book Now](#) SSW SydneyJason Taylor

Jason is a passionate solution architect with over 16 years professional experience.

He has worked with .NET since 2001, and currently specialises in teaching and developing enterprise applications utilising .NET Core, ASP.NET Core, EF Core and Angular. He achieved a Master Innovation Technology (Software Architecture) in 2011 and Microsoft Certified Solutions Developer (Web Applications) in 2016. Jason loves a challenge and is skilled at progressing from a simple proposal into a well

SSW .NET Core Dev Superpowers Tour – Melbourne – Thursday, 19th October 2017

Hosted by SSW

.NET Core is out and it's the most powerful and flexible version ever!

Much of the day to day code you write will be the same, but much of the architecture and how your project fits together has changed



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Insights

The demo code and slides for my Building Single Page Applications with ASP.NET Core presentation.

Edit

single-page-applications

asp-net-core

clean-architecture

Manage topics

11 commits

1 branch

0 releases

1 contributor

MIT

Branch: master

New pull request

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JasonGT Finished tests for application layer.

Latest commit 431dfb6 2 days ago

.vscode	Added presentation layer.	7 days ago
Northwind.Application.Tests	Finished tests for application layer.	2 days ago
Northwind.Application	Implemented CQRS	6 days ago
Northwind.Domain	Completed domain and added customers controller.	6 days ago
Northwind.Persistance	Added swashbuckle.	6 days ago
Northwind.Presentation	Changed fetchdata component to use generate sample data service and m...	2 days ago
.gitignore	Initial commit	7 days ago
LICENSE	Initial commit	7 days ago
README.md	Initial commit	7 days ago

Slides & Code - bit.ly/spa-aspnetcore2

README.md

Thank you!

@JasonGtAu

codingflow.net

info@ssw.com.au

www.ssw.com.au

Sydney | Melbourne | Brisbane

