Practical Clean Architecture

WITH .NET CORE 3.1

Jason Taylor

SSW Solution Architect

Developer, Mentor, Speaker & Trainer

.NET 5 (since Preview 1.0)

.NET Core (since 1.0)

.NET Since 1.0 in 2002)

jasontaylordev   youtube.com/jasontaylordev

jasontaylor.dev   github.com/jasontaylordev

About You

Where are you from?

Your goal for the workshop?
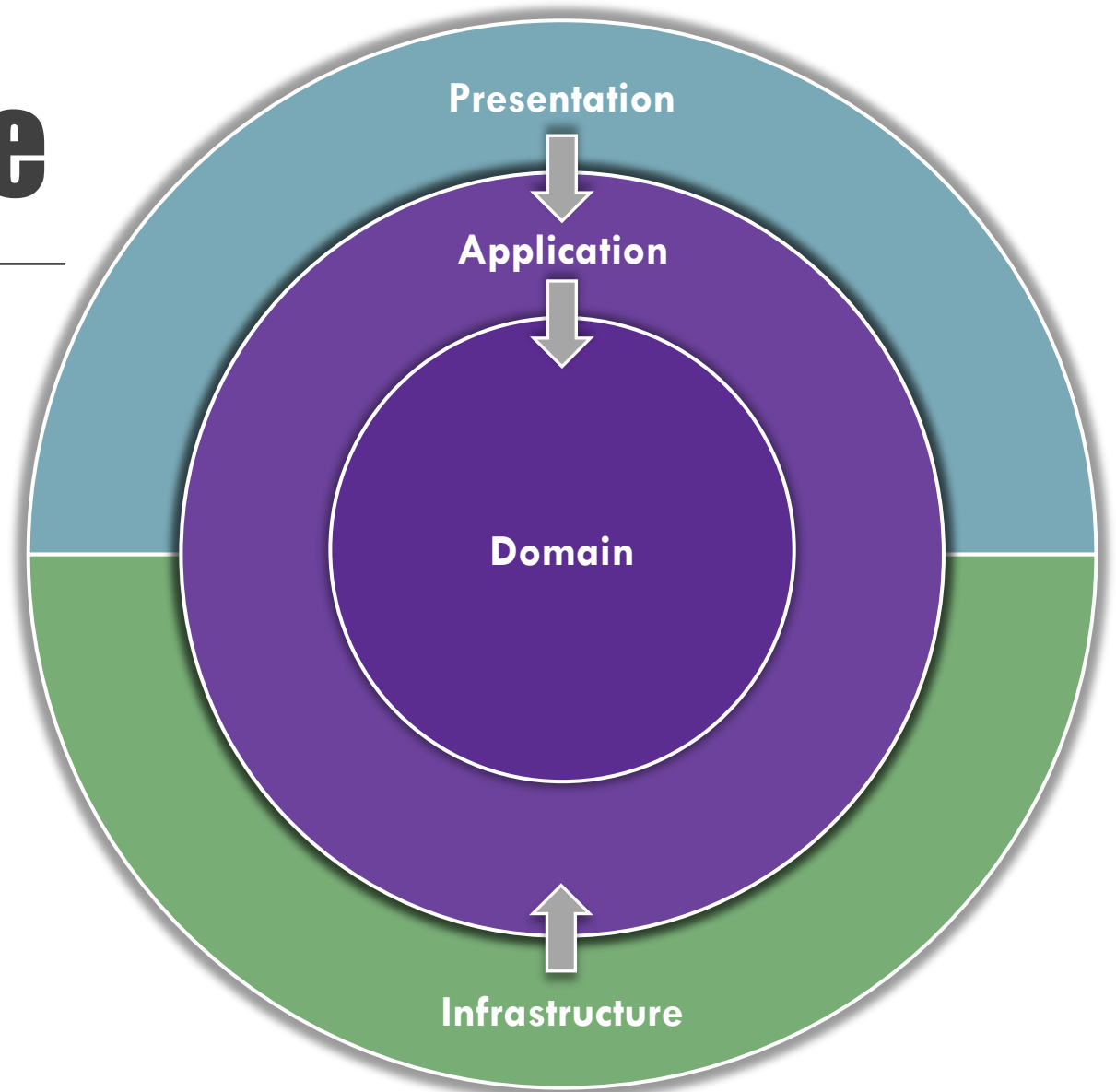
Experience with .NET?

Clean Architecture

Independent of frameworks

Testable

Independent of UI

Independent of database
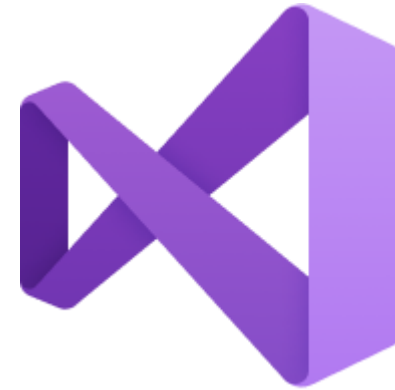
Independent anything external

Environment Setup

.NET Core SDK 3.1

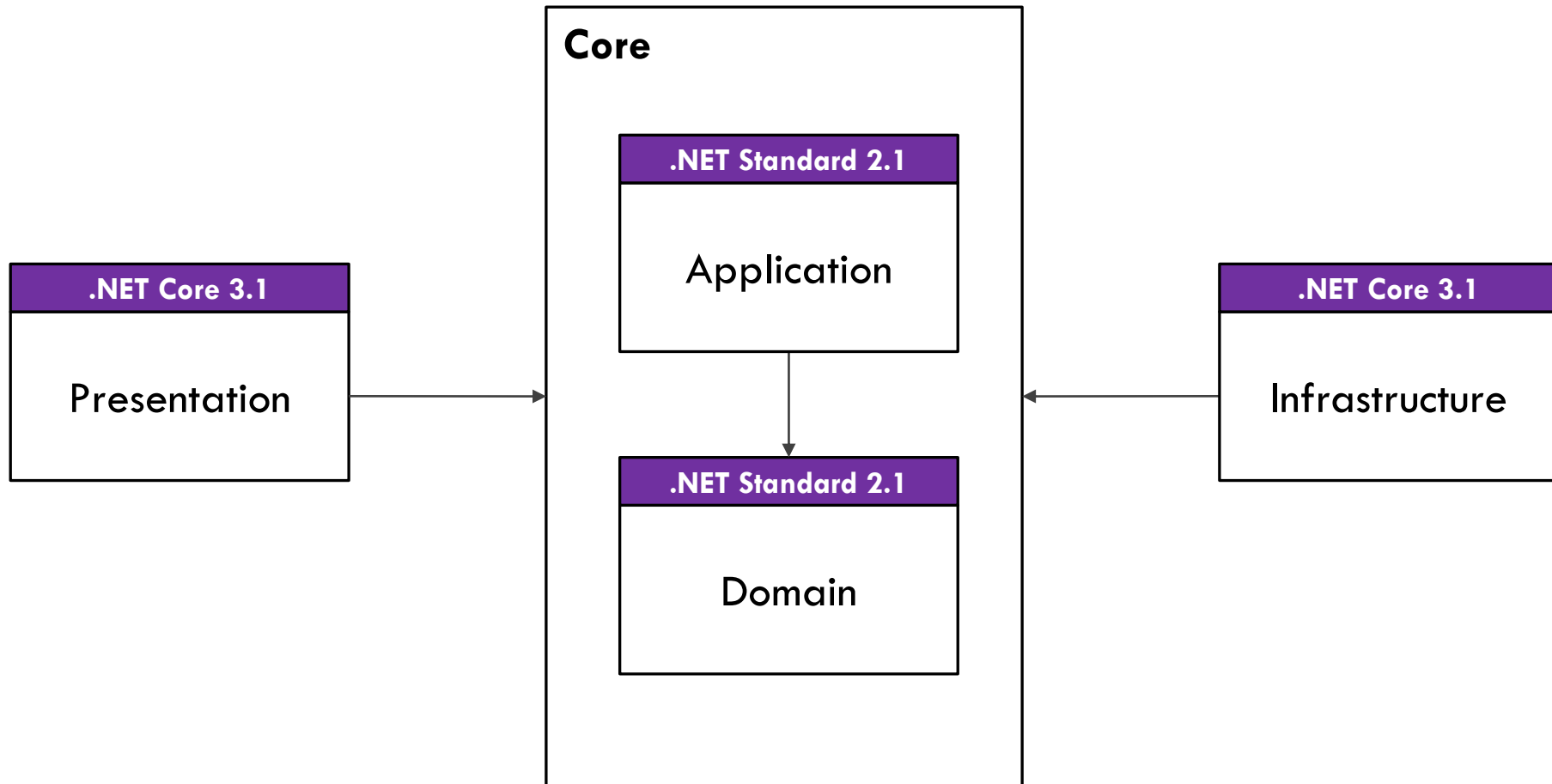Required, includes the .NET Core CLI and .NET Core Runtime

www.dot.net

Visual Studio / your preferred IDE

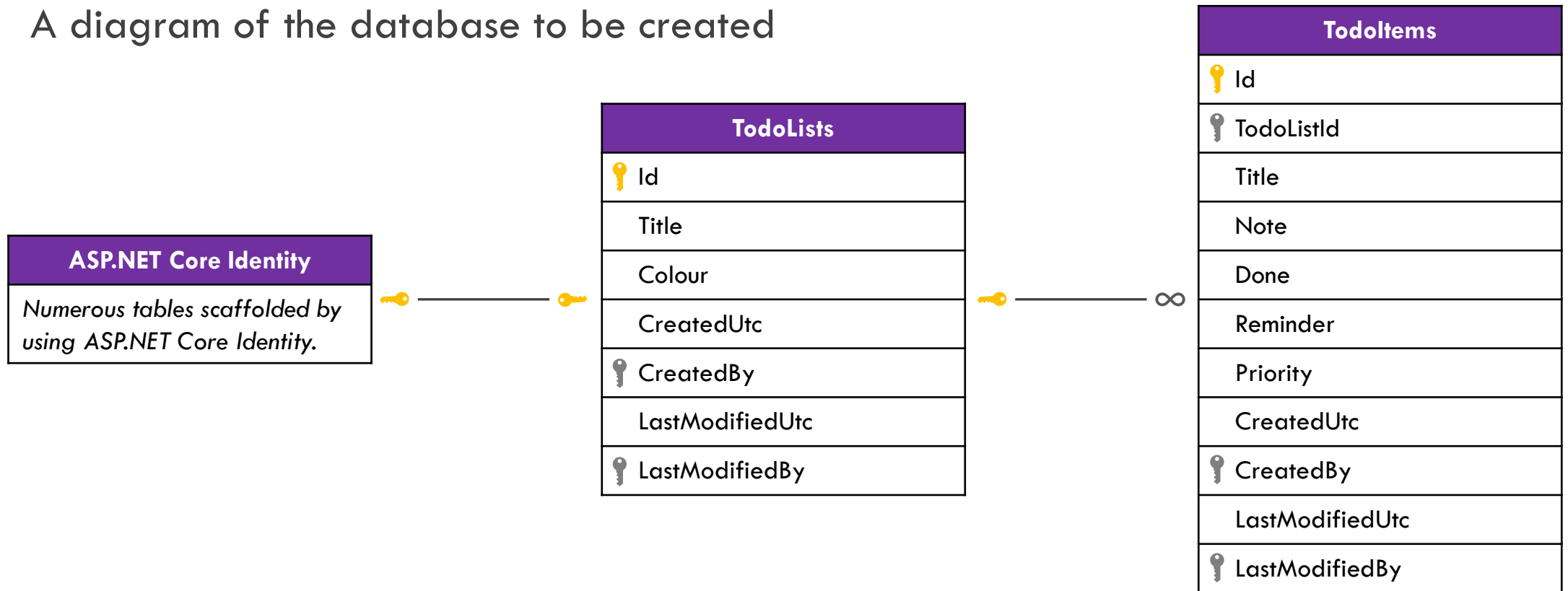VS optional, however all demos will be coded live using Visual Studio 2019

www.visualstudio.com

Project Structure

Database Schema

A diagram of the database to be created

TodoItems

🔑 Id
🔑 TodoListId
Title
Note
Done
Reminder
Priority
CreatedUtc
🔑 CreatedBy
LastModifiedUtc
🔑 LastModifiedBy

TodoLists

🔑 Id
Title
Colour
CreatedUtc
🔑 CreatedBy
LastModifiedUtc
🔑 LastModifiedBy

ASP.NET Core Identity

Numerous tables scaffolded by using ASP.NET Core Identity.

01 Getting Started

Create a New SPA with ASP.NET Core

Building a Data Model with EF Core

Creating ASP.NET Core Web API Controllers

Adding API Help Pages with OpenAPI

02 Beyond the Basics

Architecture & Design

Implementing CQRS with MediatR

Building High Performance Queries with EF Core

Simplifying Object-Object Mappings with AutoMapper

Advanced Validation with FluentValidation

Managing Unhandled Exceptions

Unit Testing Application Logic

03 Advanced Topics

Working with ASP.NET Core Identity

Improved Logging with MediatR

Automating Open API Specification and Client Generation

Health Monitoring with ASP.NET Core Health Checks

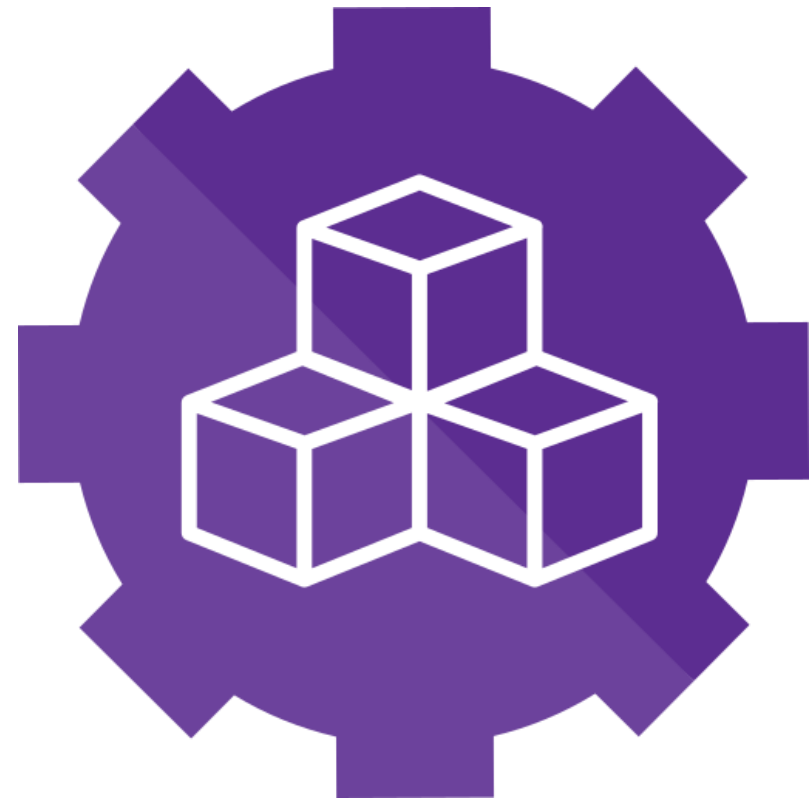# LET'S GET TO WORK!

WRAPPING UP

Solution Template

.NET Core Template Package

ASP.NET Core 3.1

Entity Framework Core 3.1

ASP.NET Core Identity 3.1

IdentityServer4
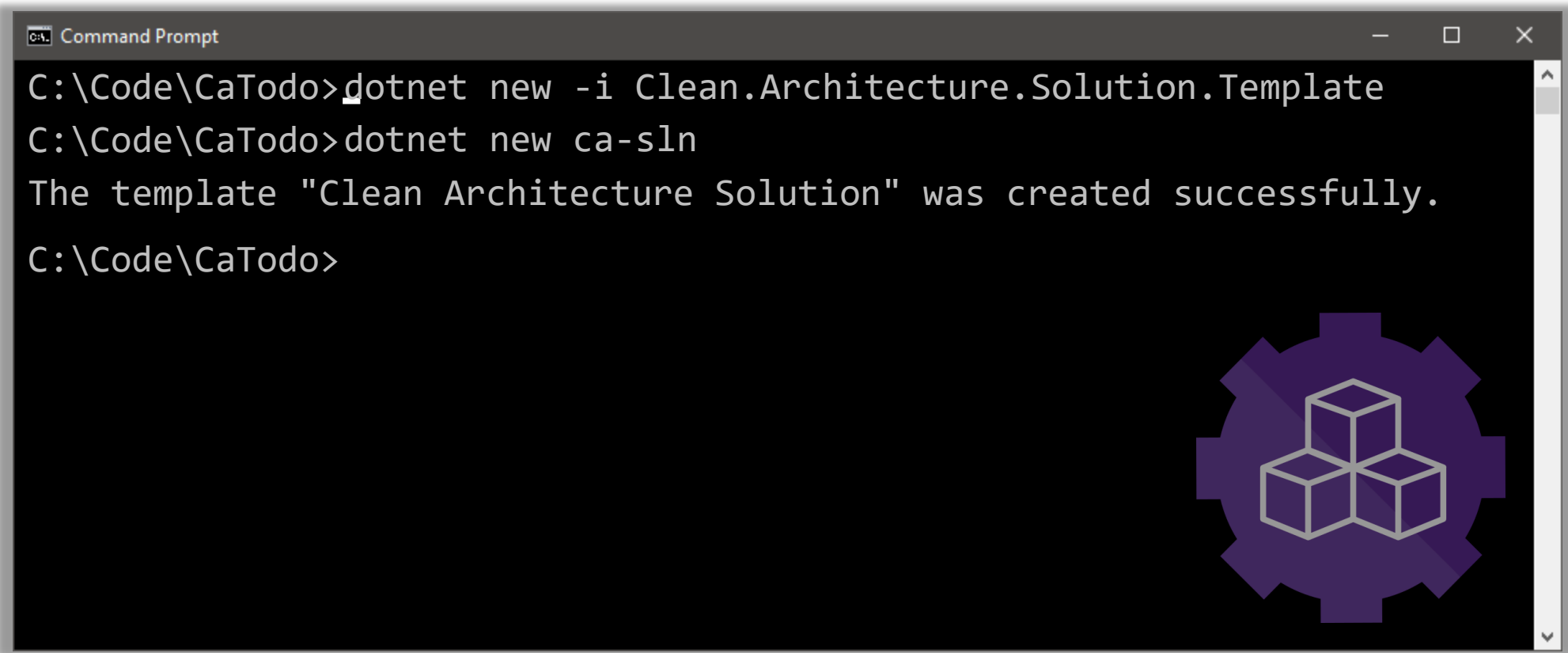
View on GitHub bit.ly/ca-sln

Using the Solution Template


```
C:\Code\CaTodo>dotnet new -i Clean.Architecture.Solution.Template
C:\Code\CaTodo>dotnet new ca-sln
The template "Clean Architecture Solution" was created successfully.

C:\Code\CaTodo>
```

Resources

Workshop

Code   github.com/jasontaylordev/ndcmelbourne2020

Samples & Templates

Northwind Traders   github.com/jasontaylordev/northwindtraders

Clean Architecture Template github.com/jasontaylordev/cleanarchitecture

THANK YOU

🐦 **jasontaylordev**