

SYED AWASE KHIRNI


## Example 11: ASP.NET Core Reusable Middleware Demo


### Learning Outcomes:

1. Learning Outcome 1
2. Learning Outcome 2

# Create a new project

Recent project templates


 ASP.NET Core Web Application C#


 Console App (.NET Core) C#


All languages


All platforms


All project types

 Console App (.NET Core)  
A project for creating a command-line application that can run on .NET Core on Windows, Linux and MacOS.  
C# Linux macOS Windows Console

 Console App (.NET Core)  
A project for creating a command-line application that can run on .NET Core on Windows, Linux and MacOS.  
Visual Basic Linux macOS Windows Console

 ASP.NET Core Web Application  
Project templates for creating ASP.NET Core web apps and web APIs for Windows, Linux and MacOS using .NET Core or .NET Framework. Create web apps with Razor Pages, MVC, or Single Page Apps (SPA) using Angular, React, or React + Redux.  
C# Linux macOS Windows Cloud Service Web

 Blazor App  
Project templates for creating Blazor apps that run on the server in an ASP.NET Core app or in the browser on WebAssembly (wasm). These templates can be used to build web apps with rich dynamic user interfaces (UIs).  
C# Linux macOS Windows Cloud Web

 ASP.NET Web Application (.NET Framework)

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Next

Updated on May 2020  
<https://github.com/awasekhirni/.NetCORE/tree/master/.NETCORE3.x>

9/3/2020

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## Configure your new project

ASP.NET Core Web Application

C#

Linux

macOS

Windows

Cloud

Service

Web

Project name

ex1aspnetcoremiddlewareprj

Location

D:\awase-harddisk\CT\Csharp2017\aspnetcore3x\codeplay\ex1aspnetcoremiddleware\

...

Solution name 

ex1aspnetcoremiddlewareprj

☒ Place solution and project in the same directory


Back


Create


## Create a new ASP.NET Core web application


.NET Core


ASP.NET Core 3.1


**Empty**  
An empty project template for creating an ASP.NET Core application. This template does not have any content in it.

**API**  
A project template for creating an ASP.NET Core application with an example Controller for a RESTful HTTP service. This template can also be used for ASP.NET Core MVC Views and Controllers.

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**Angular**  
A project template for creating an ASP.NET Core application with Angular

**React.js**

[Get additional project templates](#)

**Authentication**  
No Authentication  
[Change](#)

**Advanced**  
☒ Configure for HTTPS  
☐ Enable Docker Support  
(Requires [Docker Desktop](#))  

Linux

  
☐ Enable Razor runtime compilation

Author: Microsoft  
Source: Templates 3.1.8

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Create

Solution 'ex11aspnetcoremiddlewareprj' (1 of 1)

- ex11aspnetcoremiddlewareprj
  - Connected Services
  - Dependencies
  - Properties
  - wwwroot
  - Controllers
  - Middlewares**
    - EnableFeatureMiddleware.cs
  - Models
  - Views
  - appsettings.json
  - Program.cs
  - Startup.cs

Add New Item - ex11aspnetcoremiddlewareprj

Installed

- Visual C#
  - ASP.NET Core
  - Xamarin.Forms
  - General
- Online

Sort by: Default

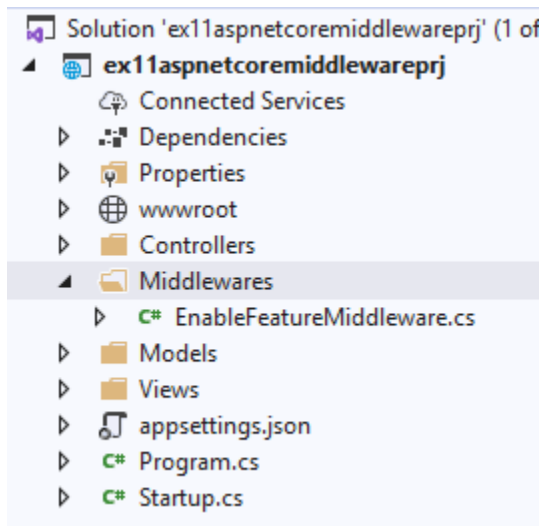
Search (Ctrl+E)

Tabbed Page	Visual C#
View Cell	Visual C#
Assembly Information File	Visual C#
Code File	Visual C#
Razor View Start	Visual C#
Razor View Imports	Visual C#
Tag Helper Class	Visual C#
<b>Middleware Class</b>	Visual C#
Startup Class	Visual C#
App Settings File	Visual C#
Resources File	Visual C#
Text File	Visual C#
HTML Page	Visual C#
JavaScript File	Visual C#

Type: Visual C#  
A class to write your middleware

Name: EnableFeatureMiddleware.cs

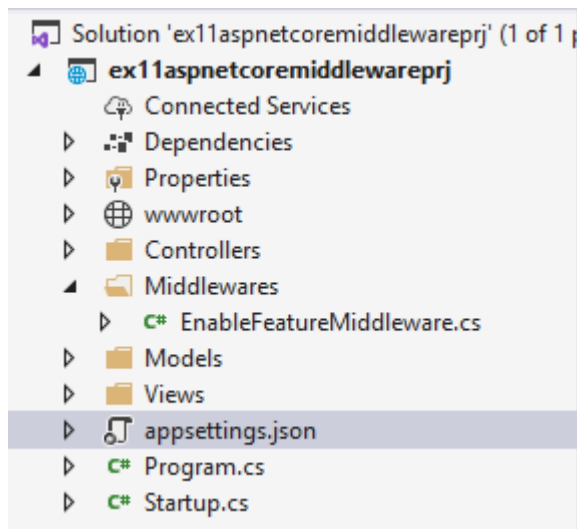
Add Cancel



```
// You may need to install the Microsoft.AspNetCore.Http.Abstractions package into your project
3 references
public class EnableFeatureMiddleware
{
    private readonly RequestDelegate _next;

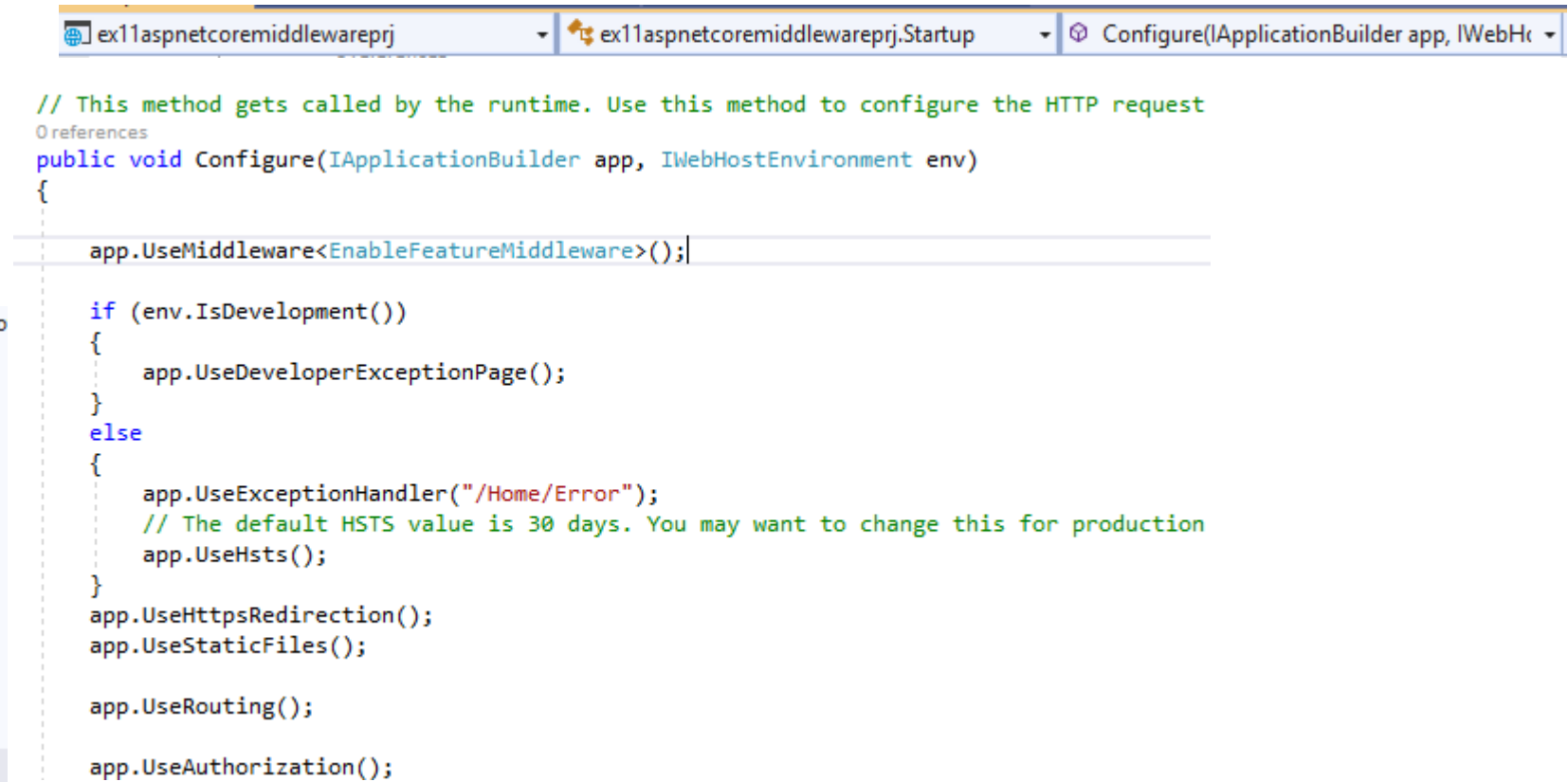
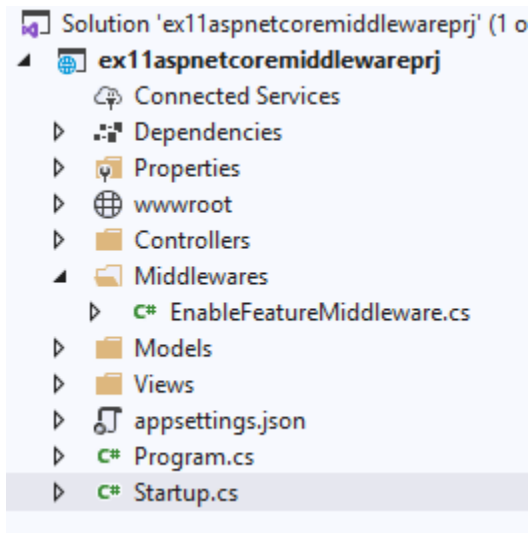
    0 references
    public EnableFeatureMiddleware(RequestDelegate next)
    {
        _next = next;
    }

    0 references
    public async Task Invoke(HttpContext httpContext, IConfiguration config)
    {
        //step 1
        if (httpContext.Request.Path.Value.Contains("/enable"))
        {
            var features = config.GetSection("EnableFeatures");
            var displayFeatures = features.GetChildren().Select(x => $"{x.Key}:{x.Value}");
            await httpContext.Response.WriteAsync(string.Join("\n", displayFeatures));
        }
        else
        {
            await _next(httpContext);
        }
    }
}
```

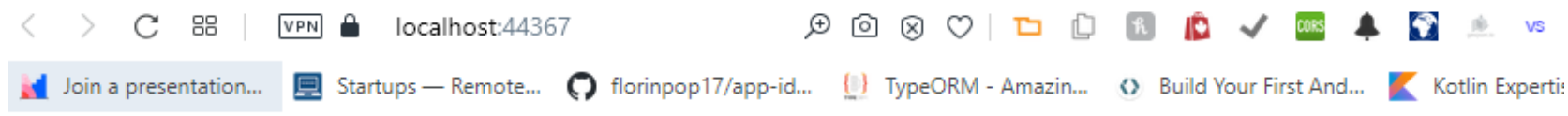
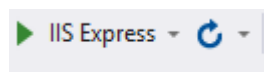


Schema: <https://json.schemastore.org/appsettings>

```
{
  "Logging": {
    "LogLevel": {
      "Default": "Information",
      "Microsoft": "Warning",
      "Microsoft.Hosting.Lifetime": "Information"
    }
  },
  "mailSettings": {
    "smtp": {
      "deliveryMethod": "SpecifiedPickupDirectory",
      "specifiedPickupDirectory": {
        "pickupDirectoryLocation": "C:\\\\folder"
      }
    }
  },
  "EnableFeatures": {
    "Email": true,
    "SignUp": true,
    "Locations": true,
    "twitter": false,
    "facebook": false,
    "bookmarks": true
  },
  "AllowedHosts": "*"
}
```



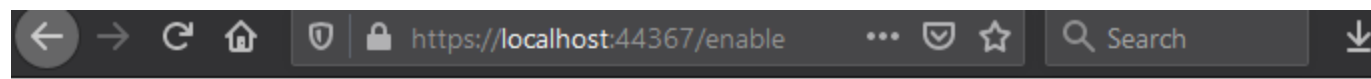
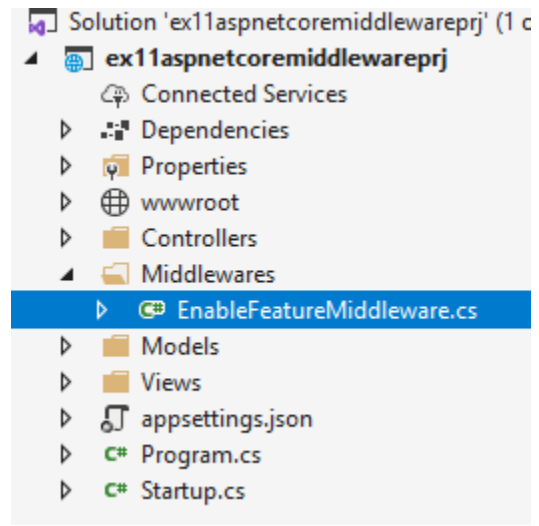




ex11aspnetcoremiddlewareprj Home Privacy

# Welcome

Learn about [building Web apps with ASP.NET Core](#).



```
bookmarks:True
Email:True
facebook:False
Locations:True
SignUp:True
twitter:False
```

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Original Series

Updated on May 2020  
<https://github.com/awasekhirni/.NetCORE/tree/master/.NETCORE3.x>

SYED AWASE KHIRNI


## Example 12: ASP.NET Core Razor Web Application CRUD

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9/3/2020

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## Configure your new project

ASP.NET Core Web Application

C#

Linux

macOS

Windows

Cloud

Service


Web

Project name

ex12aspnetcorerazorcrud

Location

D:\awase-harddisk\CT\Csharp2017\aspnetcore3x\codeplay\ex12aspnetcorerazorcrud\

Solution name 

ex12aspnetcorerazorcrud

☒ Place solution and project in the same directory

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[Get additional project templates](#)

### Authentication

No Authentication

[Change](#)

### Advanced

☒ Configure for HTTPS

☐ Enable Docker Support

(Requires [Docker Desktop](#))

Linux

☐ Enable Razor runtime compilation

Author: Microsoft

Source: Templates 3.1.8

Back

Create

Solution 'ex12aspnetcorerazorcrud' (1 of 1 pr

ex12aspnetcorerazorcrud

Connected Services

Dependencies

Properties

wwwroot

Controllers

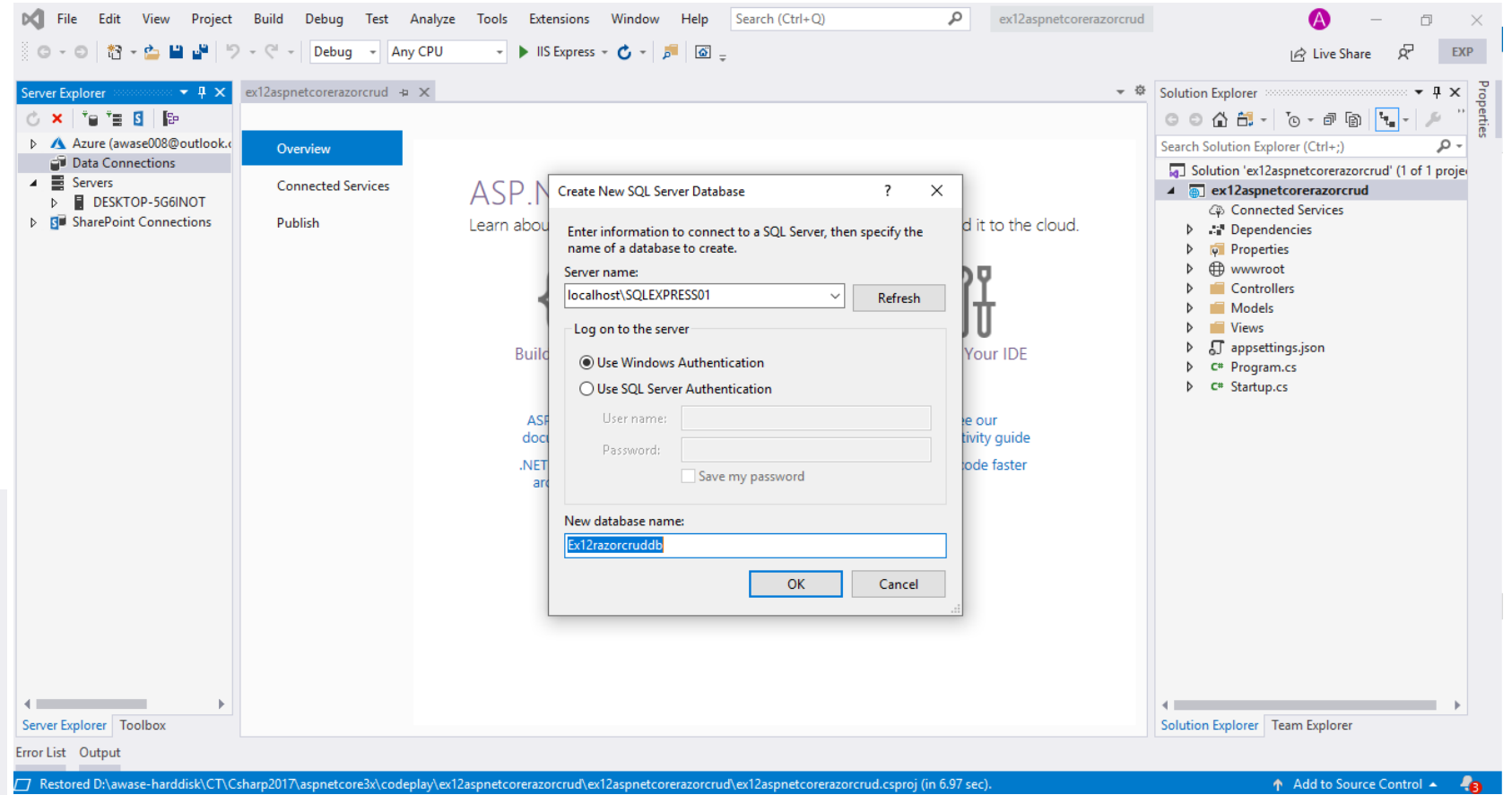
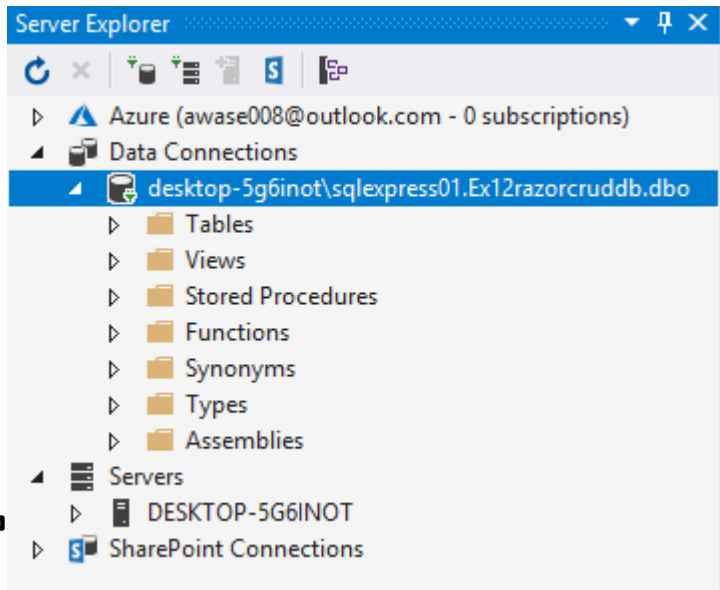
Models

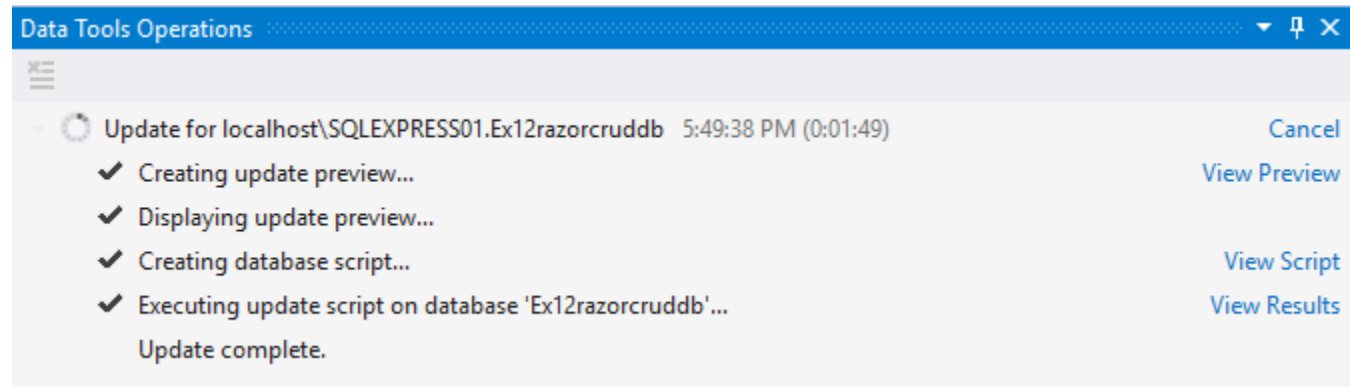
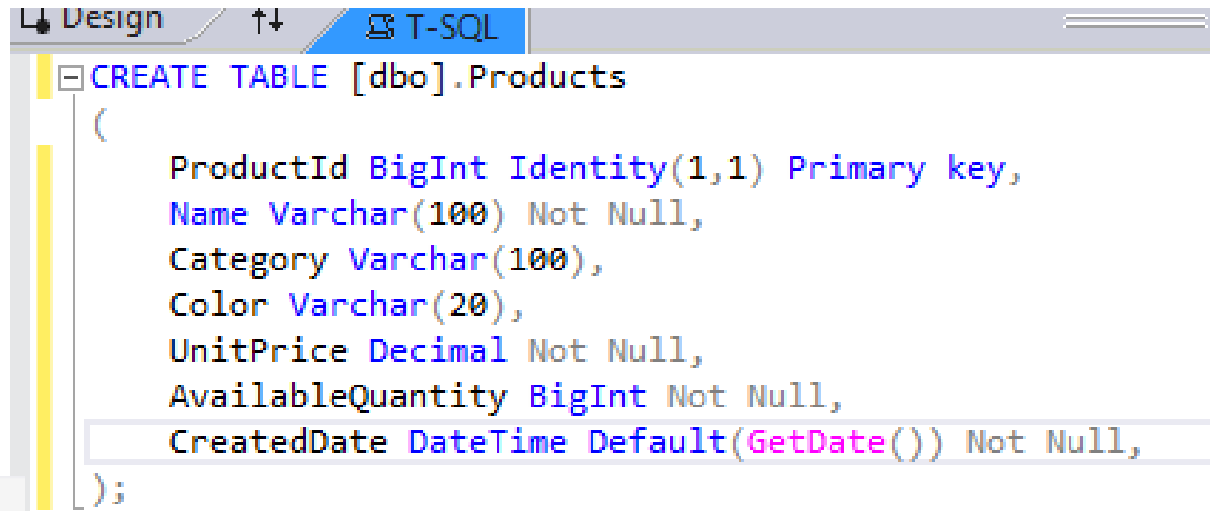
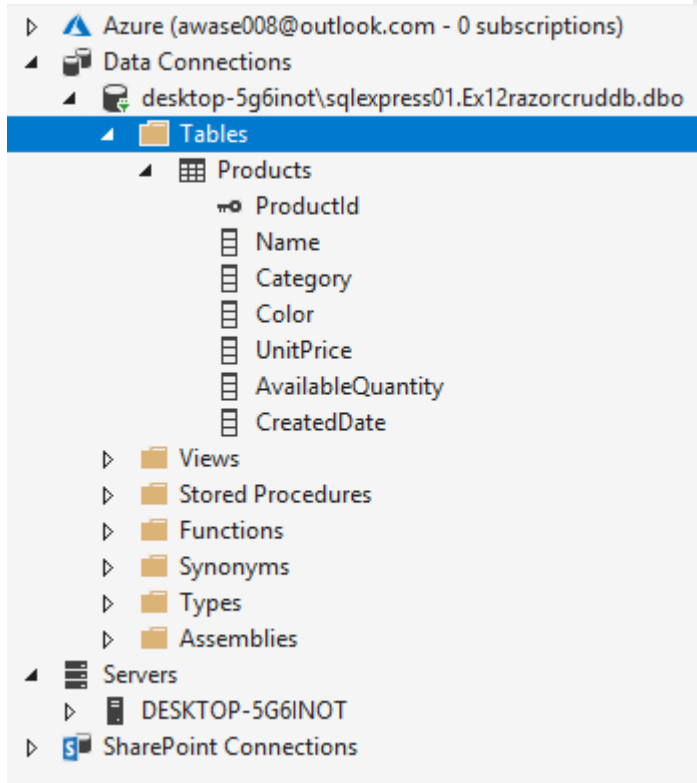
Views

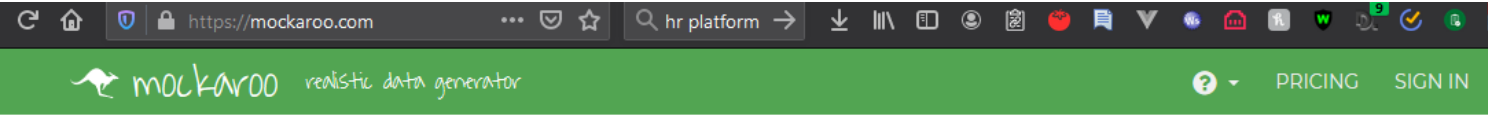
appsettings.json

Program.cs

Startup.cs







Need some mock data to test your app? Mockaroo lets you generate up to 1,000 rows of realistic test data in CSV, JSON, SQL, and Excel formats. Download data using your browser or sign in and create your own [Mock APIs](#).  
[Need more data?](#) Plans start at just \$50/year. Mockaroo is also available as a [docker image](#) that you can deploy in your own private cloud.

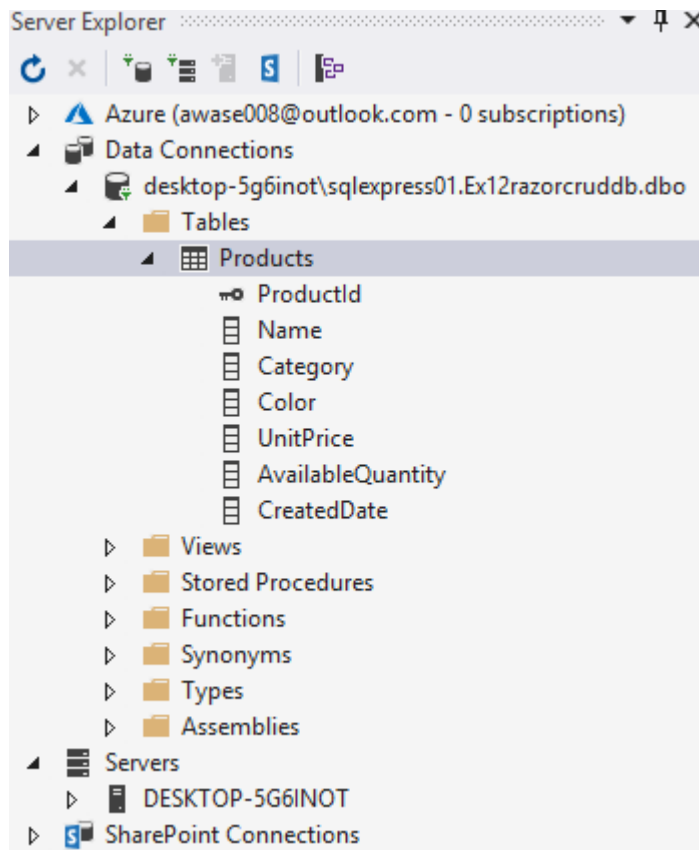
Field Name	Type	Options
ProductId	Row Number	blank: 0 % fx ×
Name	Car Make	blank: 0 % fx ×
Category	Car Model	blank: 0 % fx ×
Color	Color	blank: 0 % fx ×
UnitPrice	Number	min: 50000 max: 1000000 decimals: 2 blank: 0 % fx ×
AvailableQuantity	Number	min: 1 max: 100 decimals: 0 blank: 0 % fx ×
CreatedDate	Datetime	9/2/2019 to 9/2/2020 in SQL datetime blank: 0 % fx ×

[Add another field](#)

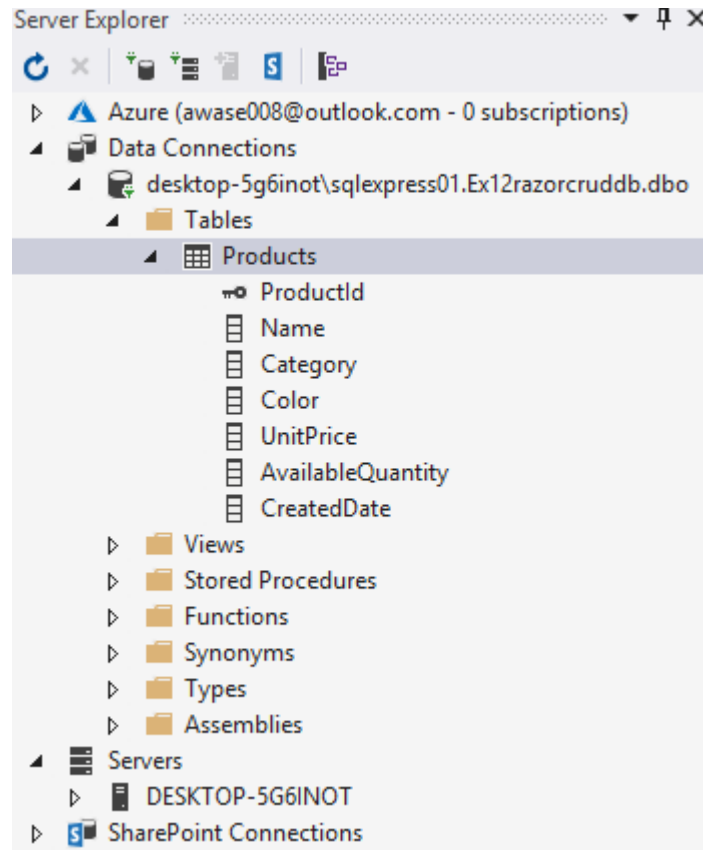
# Rows: 10 Format: SQL Table Name: dbo.Products ☐ include create table

[Download Data](#) [Preview](#) | [More](#) Want to save this for later? [Sign up for free.](#)

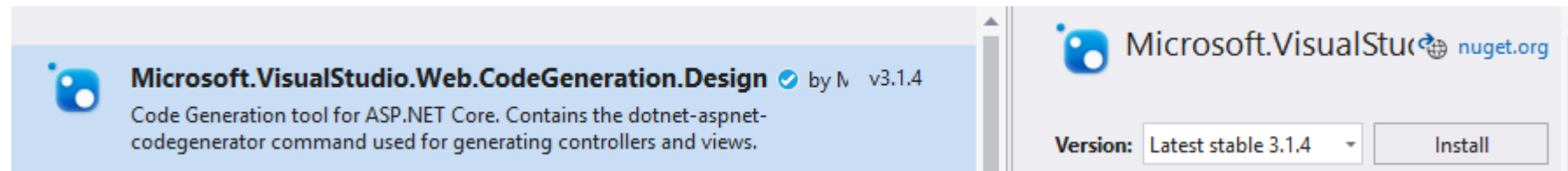




- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Mercedes-Benz', 'G-Class', 'Crimson', 782173.94, 81, '2019-09-15 20:36:48');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Mercedes-Benz', '600SEC', 'Crimson', 470350.08, 72, '2020-08-30 22:23:30');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Lincoln', 'MKZ', 'Fuscia', 219253.08, 30, '2020-05-12 11:37:42');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Lexus', 'LS', 'Yellow', 349169.07, 62, '2020-03-26 08:54:13');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Ford', 'Explorer Sport Trac', 'Fuscia', 550463.57, 28, '2020-05-31 00:45:28');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Mercedes-Benz', '400E', 'Puce', 156313.98, 10, '2020-06-10 06:24:40');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'GMC', 'Suburban 2500', 'Green', 548709.99, 70, '2020-03-16 12:00:26');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Mitsubishi', 'Outlander', 'Green', 901194.99, 92, '2019-12-21 16:43:13');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Toyota', 'Avalon', 'Turquoise', 529810.21, 67, '2019-11-04 21:54:04');
- insert into dbo.Products ( Name, Category, Color, UnitPrice, AvailableQuantity, CreatedDate) values ( 'Chevrolet', 'Suburban 2500', 'Turquoise', 701365.7, 64, '2020-07-05 09:44:49');



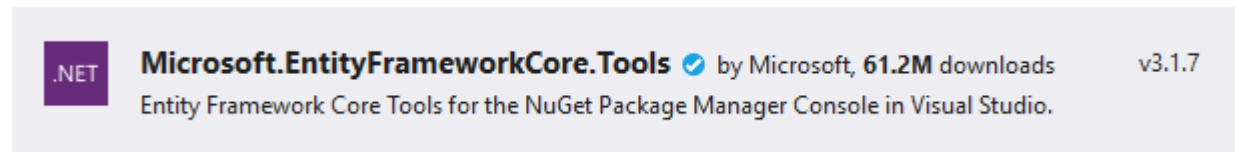
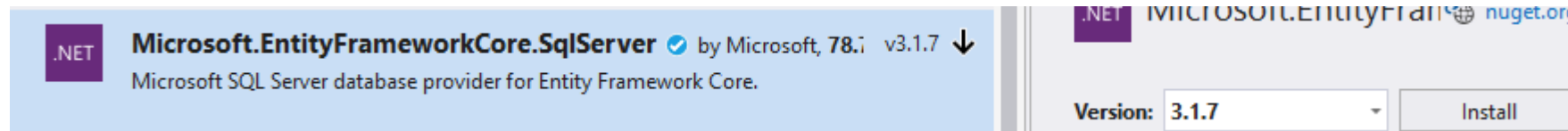
dbo.Products [Data] ex12aspnetcorerazorcrud							
	ProductId	Name	Category	Color	UnitPrice	AvailableQuan...	CreatedDate
▶	1	Mercedes-Benz	G-Class	Crimson	782174	81	9/15/2019 8:36:...
	2	Mercedes-Benz	600SEC	Crimson	470350	72	8/30/2020 10:23...
	3	Lincoln	MKZ	Fuscia	219253	30	5/12/2020 11:37...
	4	Lexus	LS	Yellow	349169	62	3/26/2020 8:54:...
	5	Ford	Explorer Sport T...	Fuscia	550464	28	5/31/2020 12:45...
	6	Mercedes-Benz	400E	Puce	156314	10	6/10/2020 6:24:...
	7	GMC	Suburban 2500	Green	548710	70	3/16/2020 12:00...
	8	Mitsubishi	Outlander	Green	901195	92	12/21/2019 4:43...
	9	Toyota	Avalon	Turquoise	529810	67	11/4/2019 9:54:...
	10	Chevrolet	Suburban 2500	Turquoise	701366	64	7/5/2020 9:44:4...
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

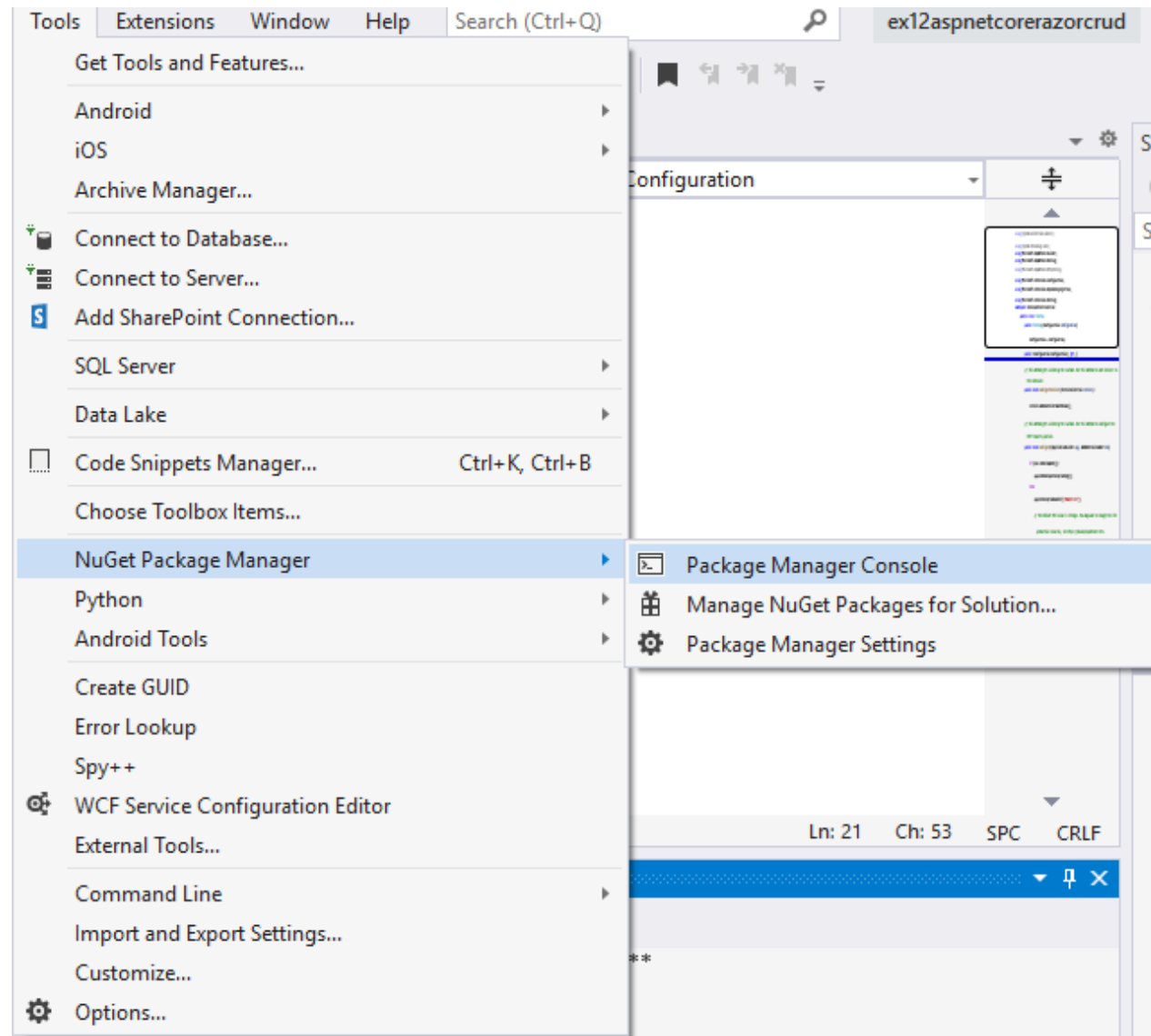


```
Installing NuGet package Microsoft.VisualStudio.Web.CodeGeneration.Design 3.1.4.
```

```
Installing NuGet package Microsoft.EntityFrameworkCore 3.1.7.
```

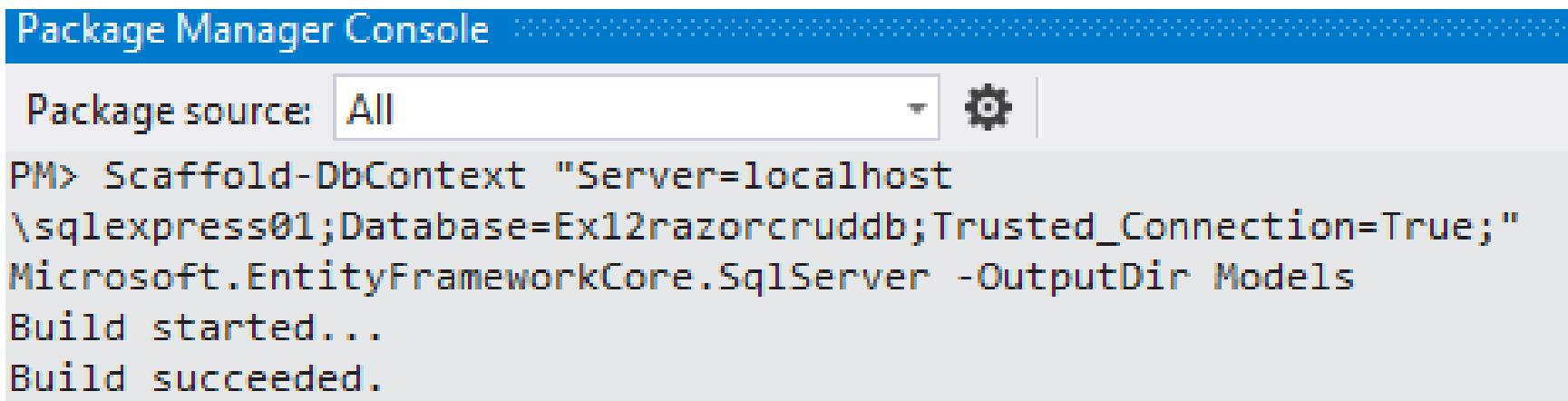
```
Installing NuGet package Microsoft.VisualStudio.Web.CodeGeneration.Contracts 3.1.4.
```





## Scaffold-DbContext

"Server=localhost\\sqlexpress01;Database=Ex12razorcruddb;Trusted\_Connection=True;" Microsoft.EntityFrameworkCore.SqlServer -OutputDir Models



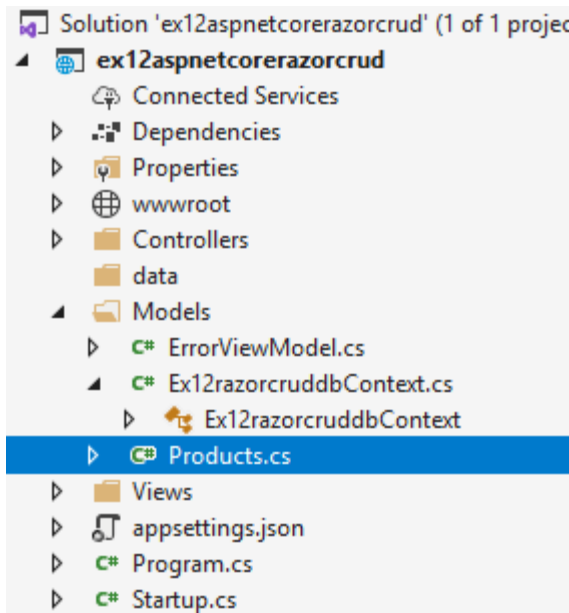
```
Package Manager Console
Package source: All
PM> Scaffold-DbContext "Server=localhost
\\sqlexpress01;Database=Ex12razorcruddb;Trusted_Connection=True;"
Microsoft.EntityFrameworkCore.SqlServer -OutputDir Models
Build started...
Build succeeded.
```

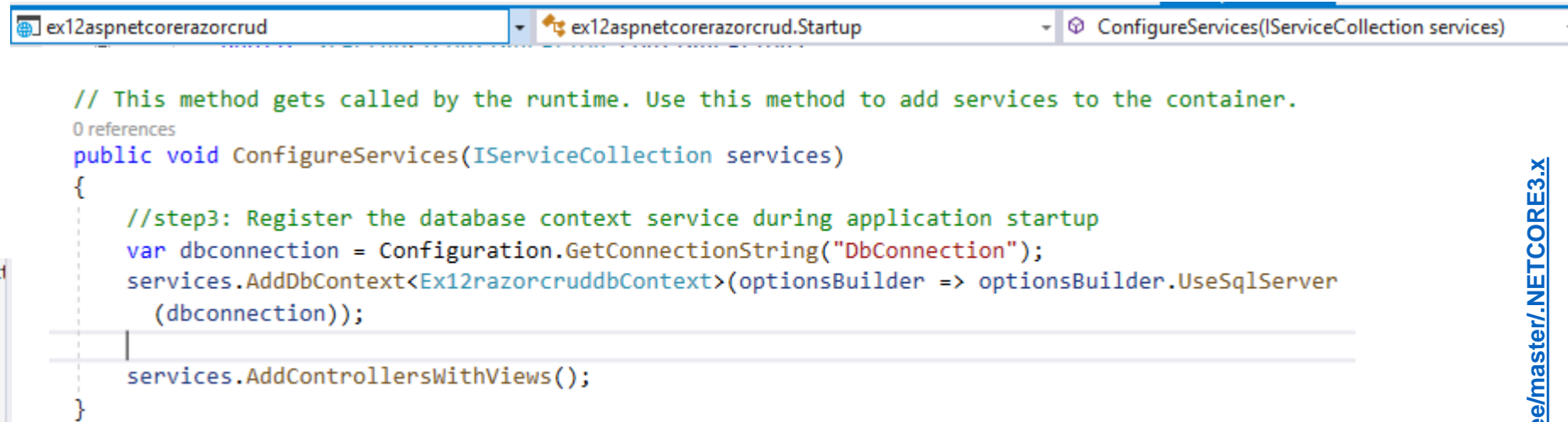
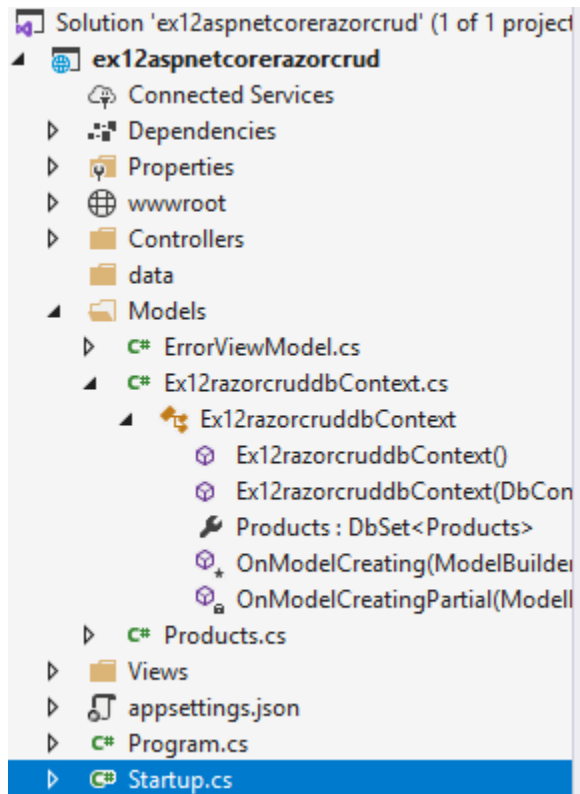
1

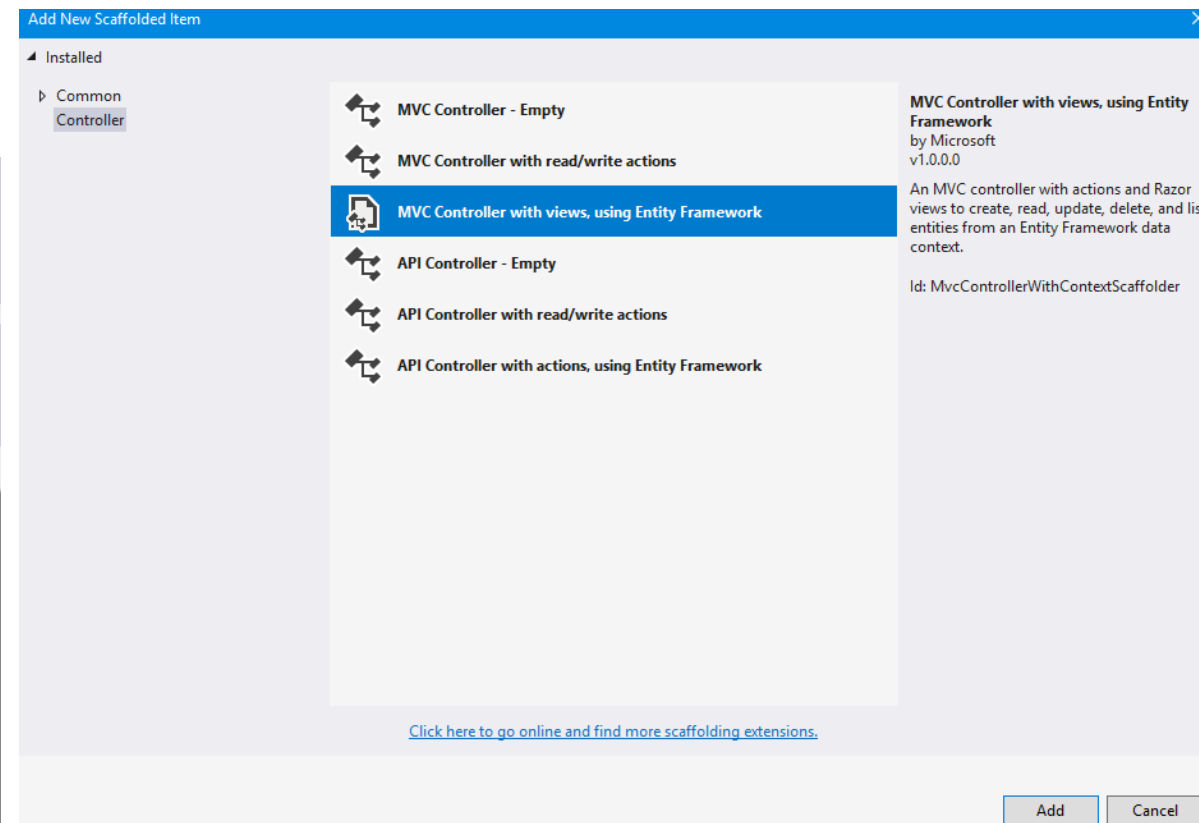
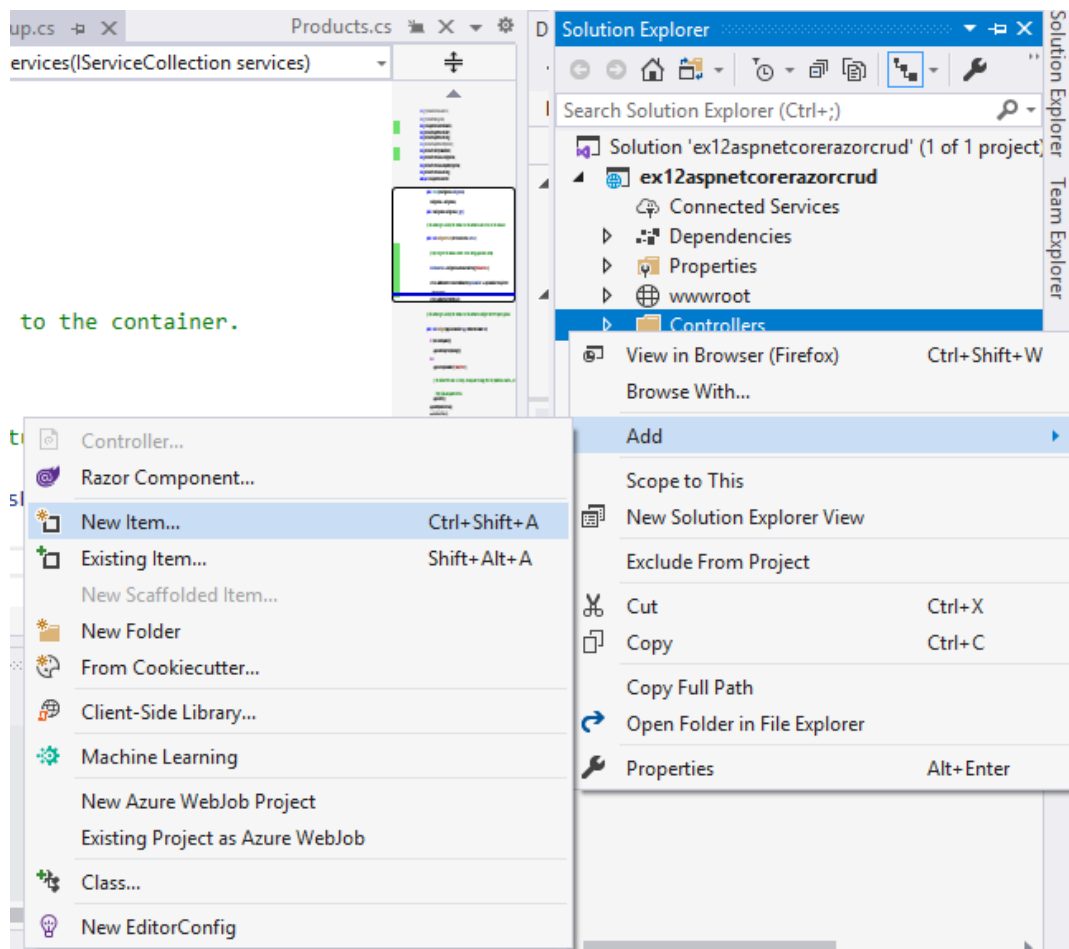
- Remove **OnConfiguring** method from DbContext file

2

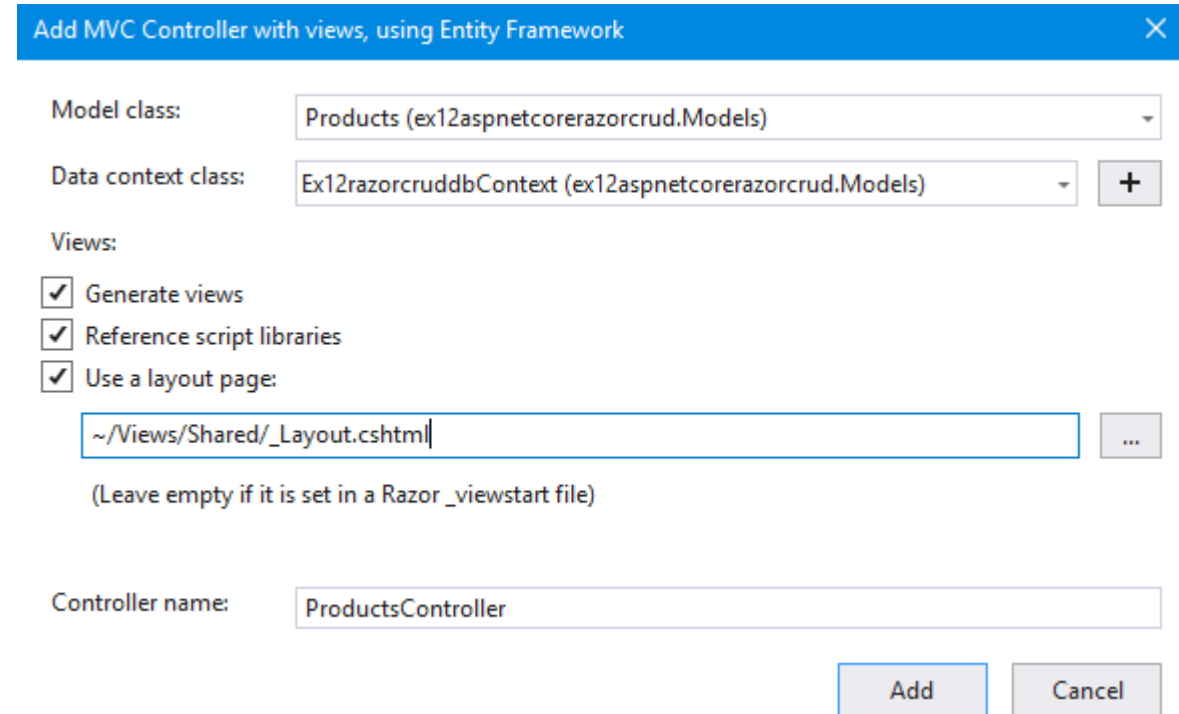
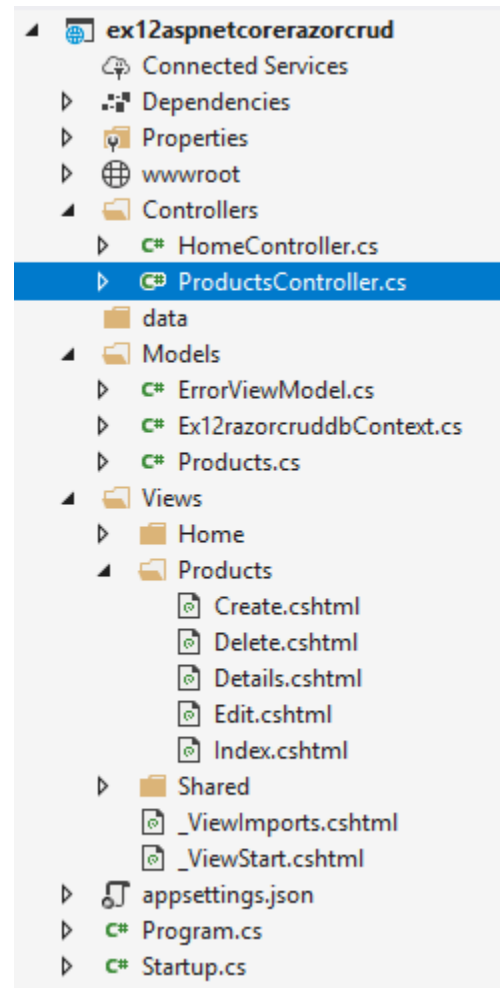
- Add connection string parameters to **appsettings.json**



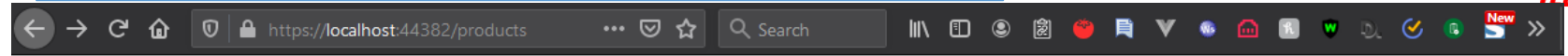








https://localhost:44382/products



ex12aspnetcorerazorcrud Home Privacy

## Index

[Create New](#)

Name	Category	Color	UnitPrice	AvailableQuantity	CreatedDate	
Mercedes-Benz	G-Class	Crimson	782174.00	81	9/15/2019 8:36:48 PM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Mercedes-Benz	600SEC	Crimson	470350.00	72	8/30/2020 10:23:30 PM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Lincoln	MKZ	Fuscia	219253.00	30	5/12/2020 11:37:42 AM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Lexus	LS	Yellow	349169.00	62	3/26/2020 8:54:13 AM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Ford	Explorer Sport Trac	Fuscia	550464.00	28	5/31/2020 12:45:28 AM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Mercedes-Benz	400E	Puce	156314.00	10	6/10/2020 6:24:40 AM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
GMC	Suburban 2500	Green	548710.00	70	3/16/2020 12:00:26 PM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Mitsubishi	Outlander	Green	901195.00	92	12/21/2019 4:43:13 PM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Toyota	Avalon	Turquoise	529810.00	67	11/4/2019 9:54:04 PM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Chevrolet	Suburban 2500	Turquoise	701366.00	64	7/5/2020 9:44:49 AM	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

https://localhost:44382/Products/Create

ex12aspnetcorerazorcrud [Home](#) [Privacy](#)

## Create

### Products

Name

Category

Color

UnitPrice

AvailableQuantity

Create

[Back to List](#)

## Edit

### Products

Name

Mercedes-Benz

Category

G-Class

Color

Crimson

UnitPrice

782174.00

AvailableQuantity

81

CreatedDate

2019-09-15T20:36:48.000

Save

[Back to List](#)

## Details

### Products

<b>Name</b>	Mercedes-Benz
<b>Category</b>	G-Class
<b>Color</b>	Crimson
<b>UnitPrice</b>	782174.00
<b>AvailableQuantity</b>	81
<b>CreatedDate</b>	9/15/2019 8:36:48 PM

[Edit](#) | [Back to List](#)