

GETTING STARTED WITH ASP.NET CORE AND ANGULAR2

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About Me

- **My Name is Syed Shanu**
- **From Madurai, Tamil Nadu, India**
- **Microsoft MVP**
- **Code Project MVP**
- **Csharp Corner MVP**
- **10+ years of Experience as Software Engineer**
- **Working as a Senior Software Engineer at Zemax Solution ,Seoul ,Korea**

Session Prerequisites

◆ Visual Studio 2015

◆ SQL Server 2014

Download Links

1. First, download and install Visual Studio 2015 with Update 3 from this [link](#).
2. Visual Studio 2015 Update 3 from this [link](#).
3. [Download](#) and install .NET Core 1.0.1
4. [Download](#) and install TypeScript 2.0
5. Node.js v4.0 or above. I have installed V6.9.1 ([Download link](#)).
6. Download and install ASP.NET Core Template Pack viz file from this [link](#).

Agenda

- ◆ **Introduction to ASP.NET Core**
- ◆ **Introduction to Angular2**
- ◆ **Introduction to SQL Server**
- ◆ **Introduction to WEB API**
- ◆ **Entity Framework**
- ◆ **Simple DataBind from DB using ASP.NET Core,Angular2,Web API ,EF and SQL Server**

ASP.NET Core

ASP.NET 4.6 and ASP.NET Core 1.0

ASP.NET 4.6		ASP.NET Core 1.0	
.NET Framework 4.6		.NET Core 1.0	
.NET framework libraries		.NET core libraries	
Compilers and runtime components (.NET Compiler Platform: Roslyn, C#, VB, F# Languages, RyuJIT, SIMD)			

ASP.NET Core 1.0



.NET
Innovation

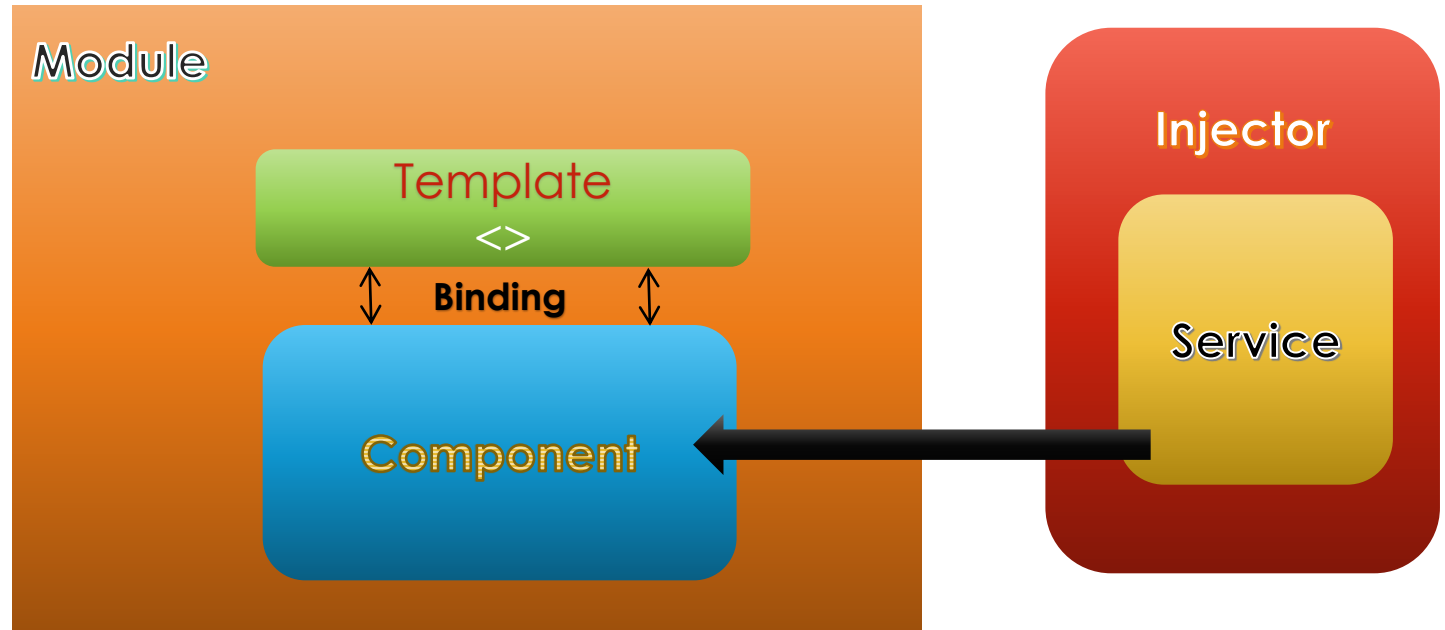
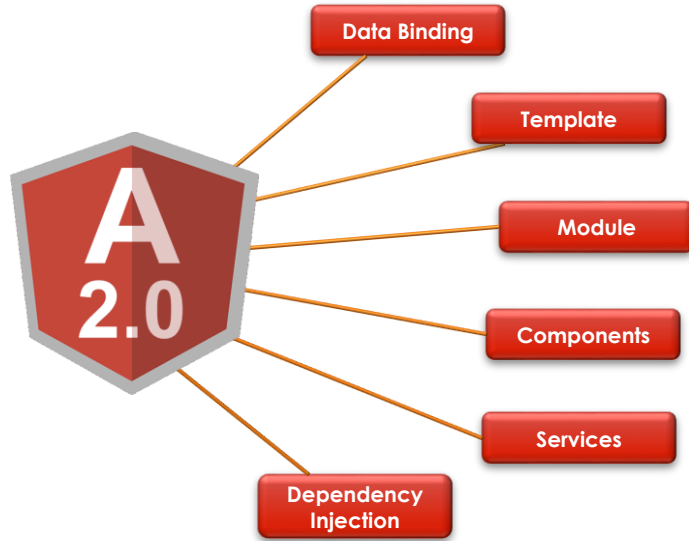


Open Source



Cross-platform

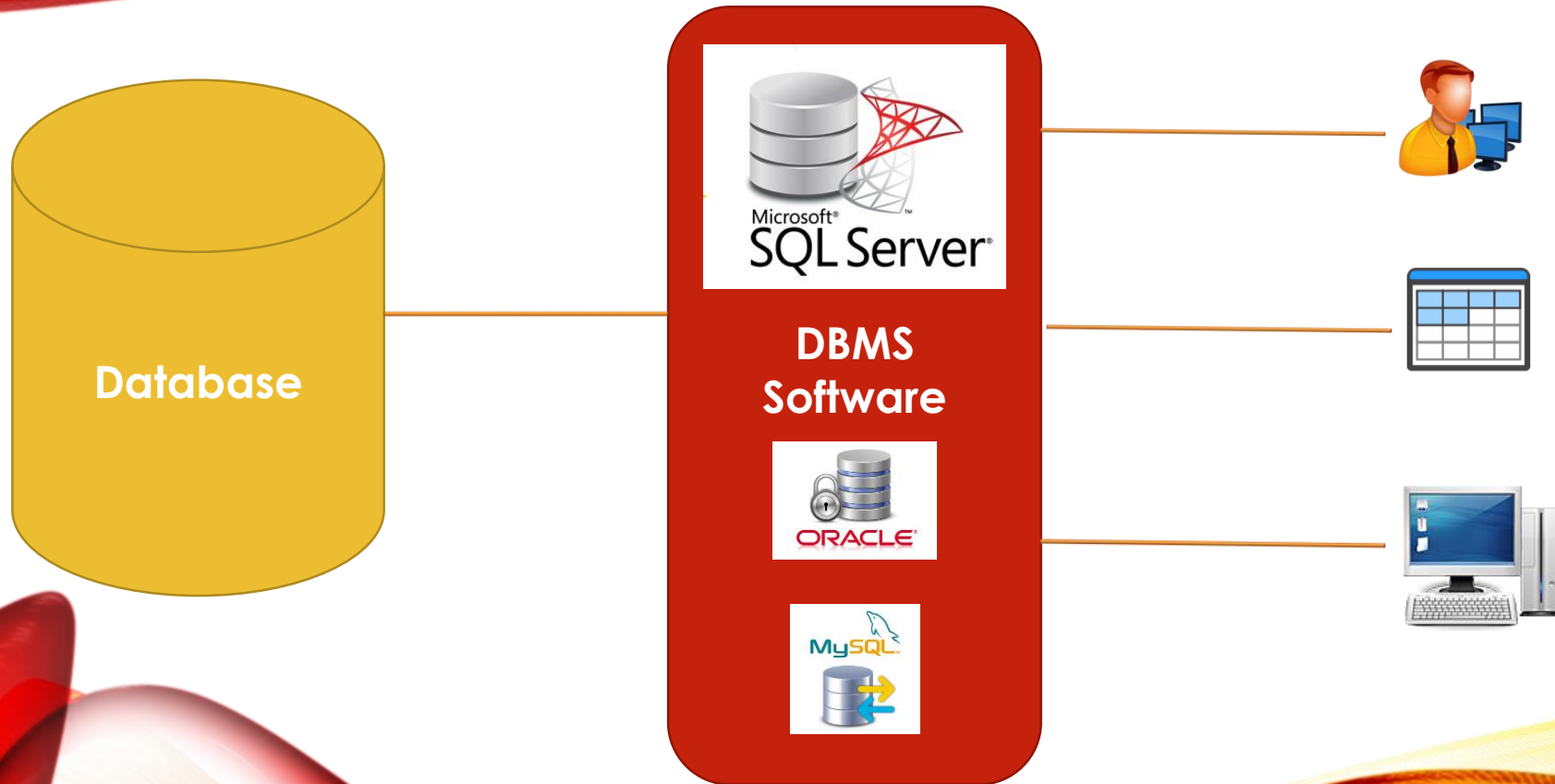
ANGULAR2 Architecture



SQL SERVER

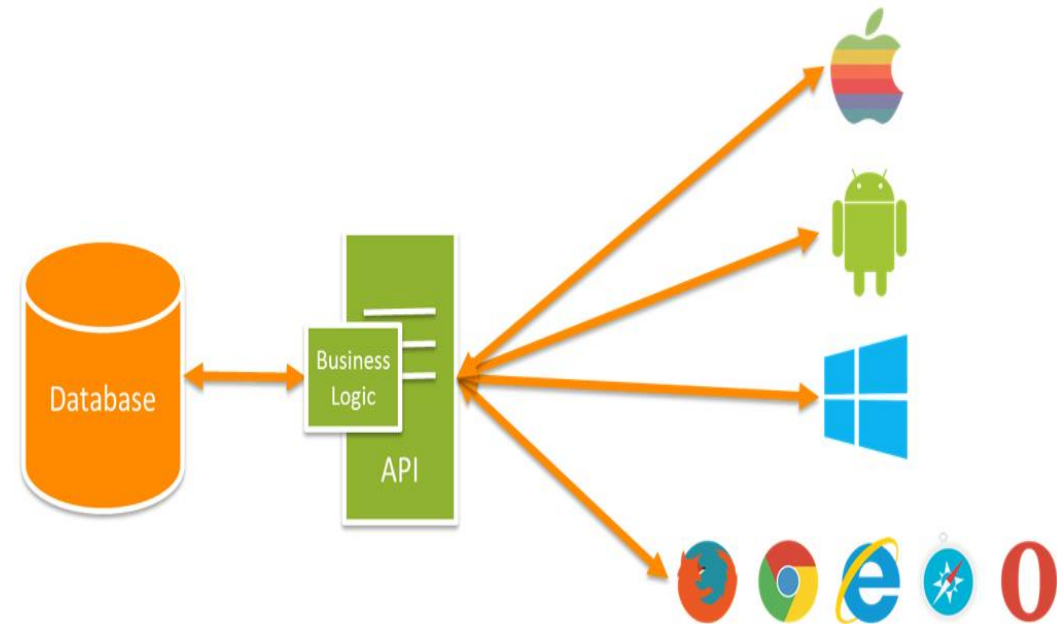


<http://www.c-sharpcorner.com/UploadFile/asmabegam/basic-sql-queries-for-beginners/>

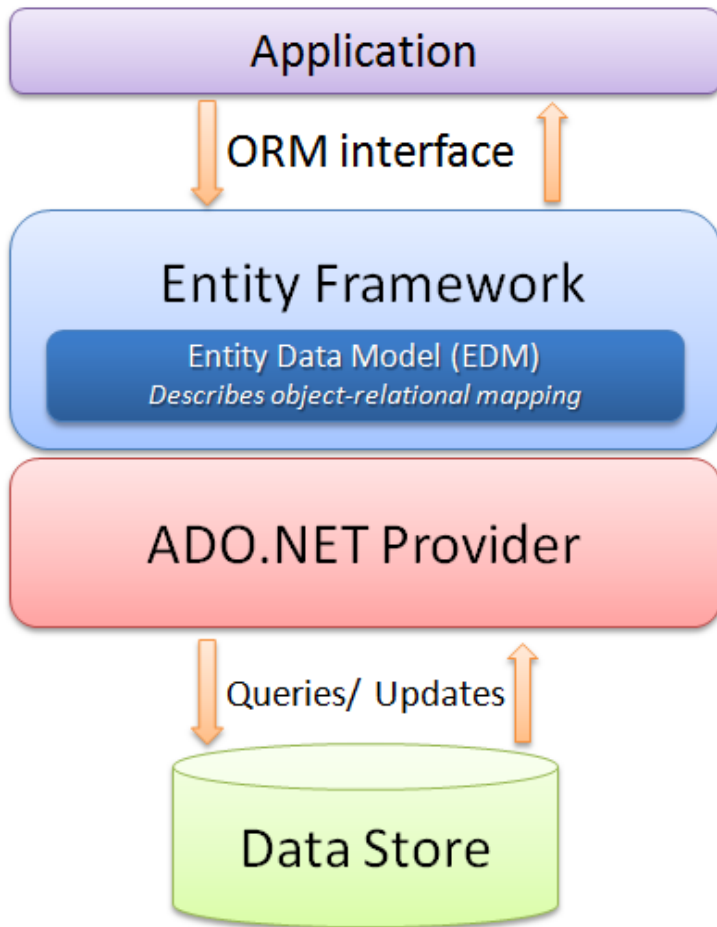


Web API

- API stands for 'Application Programming Interface'
- Web API is a simple and easy way to build HTTP Services for Browsers and Mobiles.
- Web API has the following four methods as **Get/Post/Put and Delete** where:
 - ✓ **Get** is to request for the data. (Select)
 - ✓ **Post** is to create a data. (Insert)
 - ✓ **Put** is to update the data.
 - ✓ **Delete** is to delete data.



Entity Framework



- Entity Framework is an Object Relational Mapper (ORM)
- ORM is a tool for storing data from domain objects to relational database like MS SQL Server
- Microsoft has provided an O/RM framework called "Entity Framework" to automate database related activities for your application.
- It eliminates the need for most of the data-access code that developers usually need to write.
- Performing basic CRUD (Create, Read, Update, Delete) operations.
- Easily managing "1 to 1", "1 to many", and "many to many" relationships
- We can have all data access logic written in higher level languages

ASP.NET CORE Application

Using

- ① SQL Server 2014
- ② ASP.NET Core
- ③ Entity Framework
- ④ Web API
- ⑤ Angular 2

Note: Refer this website to get SQL Script and study in depth to create this website

<http://www.c-sharpcorner.com/article/create-our-first-asp-net-core-angular-2-starter-application-net-core-using-te/>

ASP.NET CORE Application

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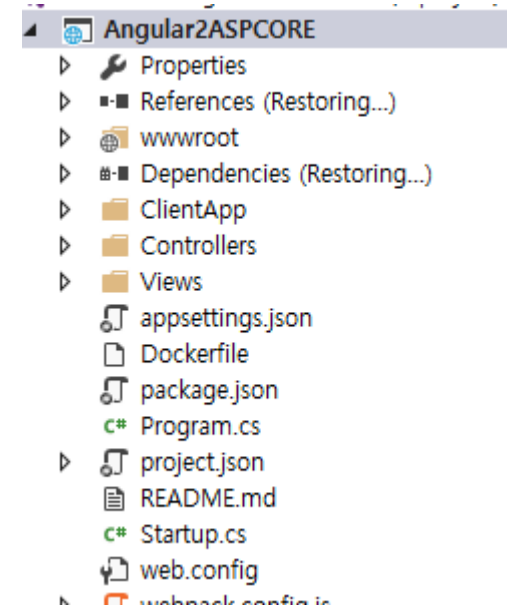
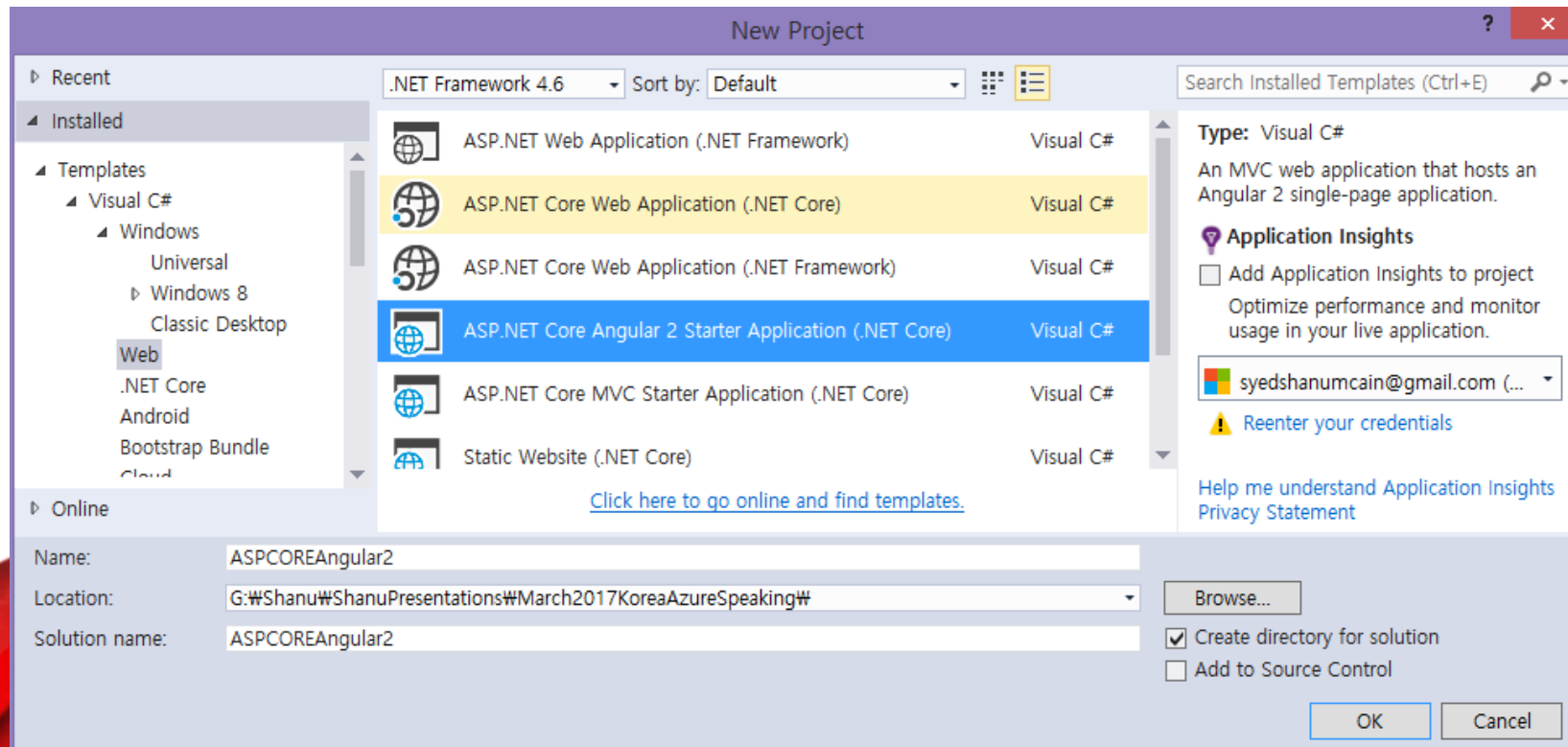
<http://www.c-sharpcorner.com/article/create-our-first-asp-net-core-angular-2-starter-application-net-core-using-te/>

① SQL Server 2014

✓ **Create Database and Table**

ASP.NET CORE Application

✓ Create ASP.NET Core Angular2 Starter Application



ASP.NET CORE Application

✓ **Create Entity framework** , we have used EF version 1.0.1

1. "Microsoft.EntityFrameworkCore.SqlServer": "1.0.1",
2. "Microsoft.EntityFrameworkCore.Tools": "1.0.0-preview2-final"

tp://json.schemastore.org/project

```
{
  "dependencies": {
    "Microsoft.NETCore.App": {
      "version": "1.0.1",
      "type": "platform"
    },
    "Microsoft.AspNetCore.AngularServices": "1.0.0-***",
    "Microsoft.AspNetCore.Diagnostics": "1.0.0",
    "Microsoft.AspNetCore.Mvc": "1.0.1",
    "Microsoft.AspNetCore.Razor.Tools": {
      "version": "1.0.0-preview2-final",
      "type": "build"
    },
    "Microsoft.AspNetCore.Server.IISIntegration": "1.0.0",
    "Microsoft.AspNetCore.Server.Kestrel": "1.0.1",
    "Microsoft.AspNetCore.StaticFiles": "1.0.0",
    "Microsoft.Extensions.Configuration.EnvironmentVariables": "1.0.0",
    "Microsoft.Extensions.Configuration.Json": "1.0.0",
    "Microsoft.Extensions.Configuration.CommandLine": "1.0.0",
    "Microsoft.Extensions.Logging": "1.0.0",
    "Microsoft.Extensions.Logging.Console": "1.0.0",
    "Microsoft.Extensions.Logging.Debug": "1.0.0",
    "Microsoft.Extensions.Options.ConfigurationExtensions": "1.0.0",
    "Microsoft.EntityFrameworkCore.SqlServer": "1.0.1",
    "Microsoft.EntityFrameworkCore.Tools": "1.0.0-preview2-final"
  },
}
```

References

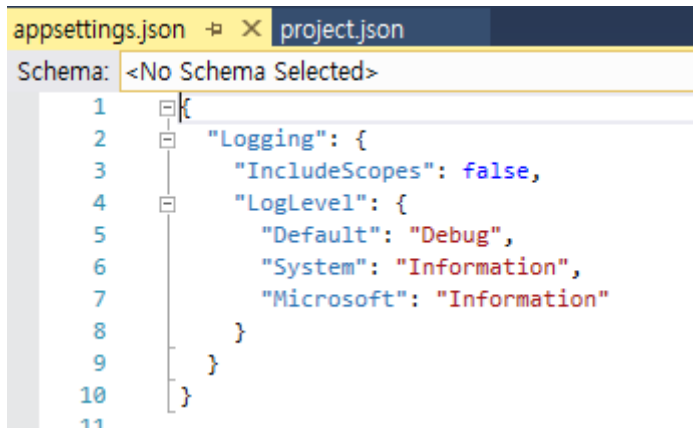
.NETCoreApp,Version=v1.0

- Microsoft.AspNetCore.AngularServices (1.0.0-beta-000021)
- Microsoft.AspNetCore.Diagnostics (1.0.0)
- Microsoft.AspNetCore.Mvc (1.0.1)
- Microsoft.AspNetCore.Razor.Tools (1.0.0-preview2-final)
- Microsoft.AspNetCore.Server.IISIntegration (1.0.0)
- Microsoft.AspNetCore.Server.Kestrel (1.0.1)
- Microsoft.AspNetCore.StaticFiles (1.0.0)
- Microsoft.EntityFrameworkCore.SqlServer (1.0.1)
- Microsoft.EntityFrameworkCore.Tools (1.0.0-preview2-final)
- Microsoft.Extensions.Configuration.CommandLine (1.0.0)

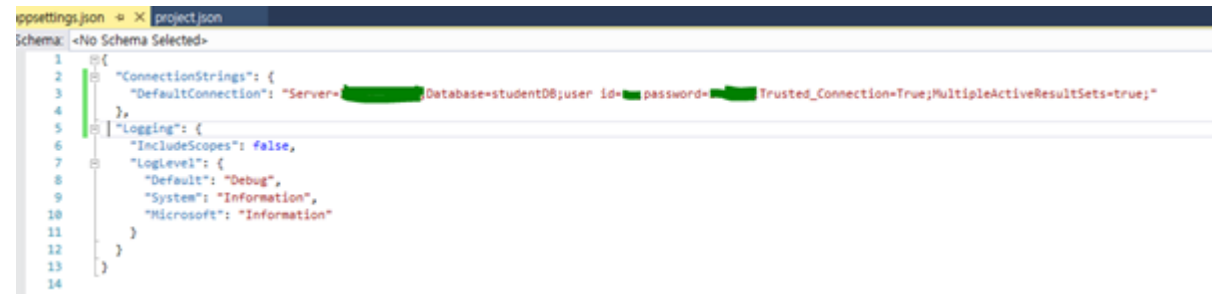
ASP.NET CORE Application

✓ Add Connection String

```
"ConnectionStrings": {  
  "DefaultConnection": "Server=YOURDBSERVER;Database=StudentsDB;user id=SQLID;password=SQLPWD;Trusted_Connection=True;MultipleActiveResultSets=true;"  
},
```



```
1 {  
2   "Logging": {  
3     "IncludeScopes": false,  
4     "LogLevel": {  
5       "Default": "Debug",  
6       "System": "Information",  
7       "Microsoft": "Information"  
8     }  
9   }  
10 }  
11
```

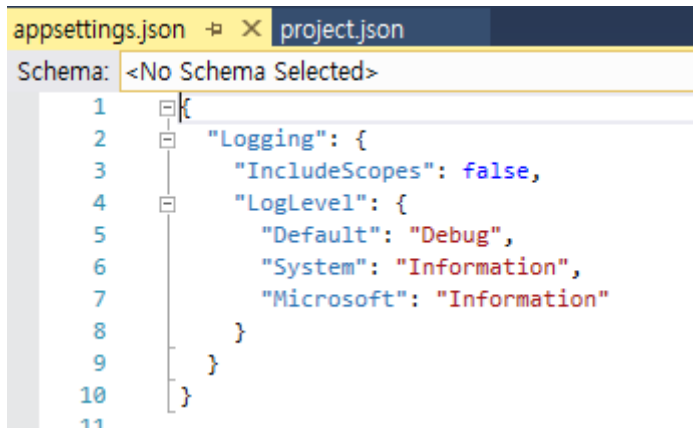


```
1 {  
2   "ConnectionStrings": {  
3     "DefaultConnection": "Server=YOURDBSERVER;Database=studentDB;user id=SQLID;password=SQLPWD;Trusted_Connection=True;MultipleActiveResultSets=true;"  
4   },  
5   "Logging": {  
6     "IncludeScopes": false,  
7     "LogLevel": {  
8       "Default": "Debug",  
9       "System": "Information",  
10      "Microsoft": "Information"  
11    }  
12  }  
13 }  
14
```

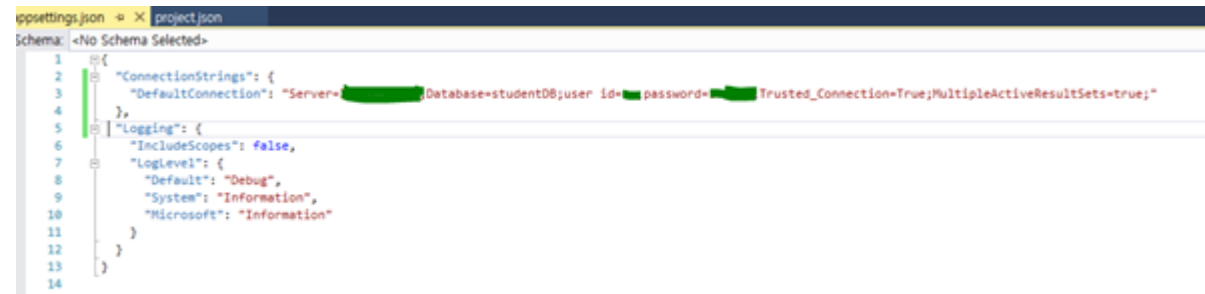

ASP.NET CORE Application

✓ Add Connection String

```
"ConnectionStrings": {  
  "DefaultConnection": "Server=YOURDBSERVER;Database=StudentsDB;user id=SQLID;password=SQLPWD;Trusted_Connection=True;MultipleActiveResultSets=true;"  
},
```



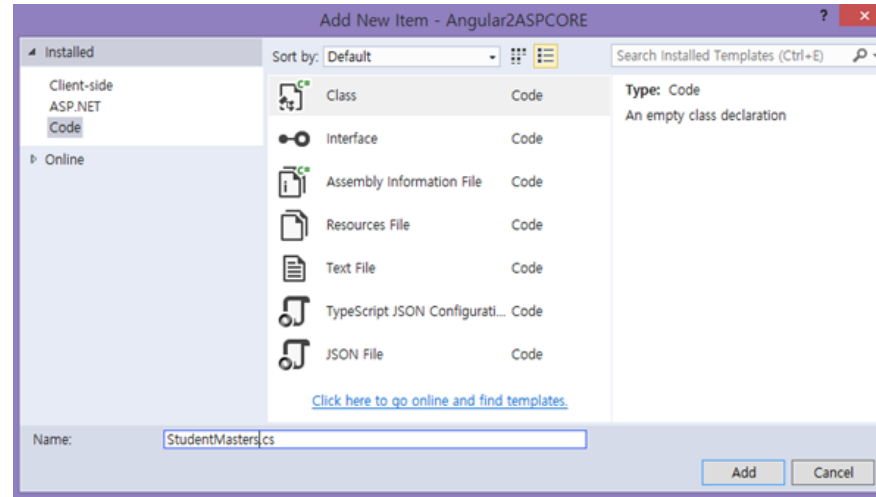
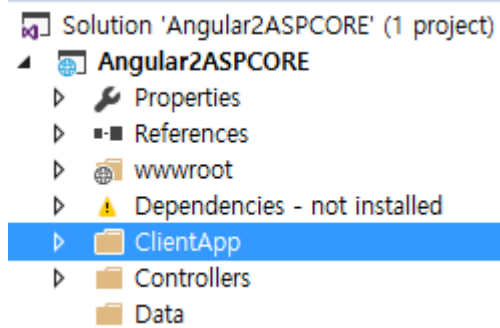
```
appsettings.json  project.json  
Schema: <No Schema Selected>  
1 {  
2   "Logging": {  
3     "IncludeScopes": false,  
4     "LogLevel": {  
5       "Default": "Debug",  
6       "System": "Information",  
7       "Microsoft": "Information"  
8     }  
9   }  
10 }  
11
```



```
appsettings.json  project.json  
Schema: <No Schema Selected>  
1 {  
2   "ConnectionStrings": {  
3     "DefaultConnection": "Server=YOURDBSERVER;Database=studentDB;user id=SQLID;password=SQLPWD;Trusted_Connection=True;MultipleActiveResultSets=true;"  
4   },  
5   "Logging": {  
6     "IncludeScopes": false,  
7     "LogLevel": {  
8       "Default": "Debug",  
9       "System": "Information",  
10      "Microsoft": "Information"  
11    }  
12  }  
13 }  
14
```

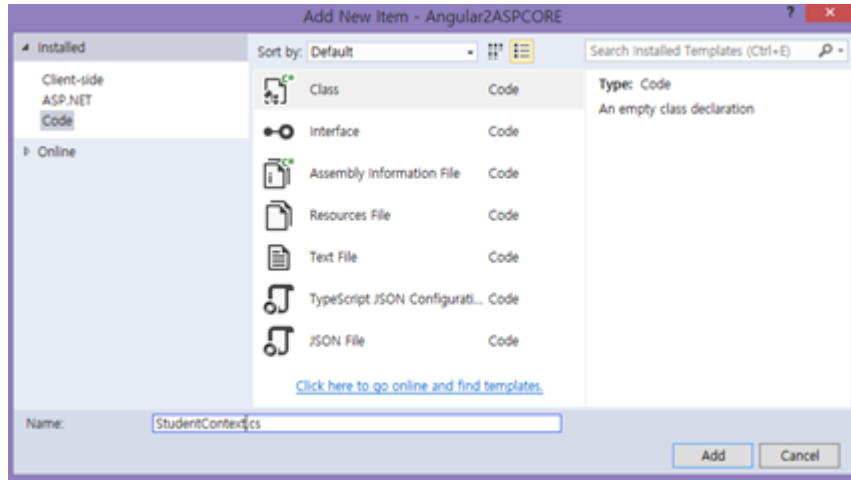
ASP.NET CORE Application

✓ Creating Model Class



ASP.NET CORE Application

✓ Creating Database Context

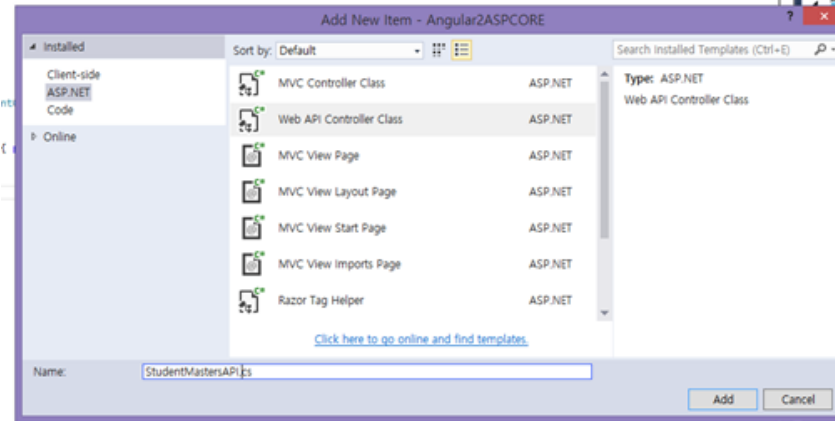
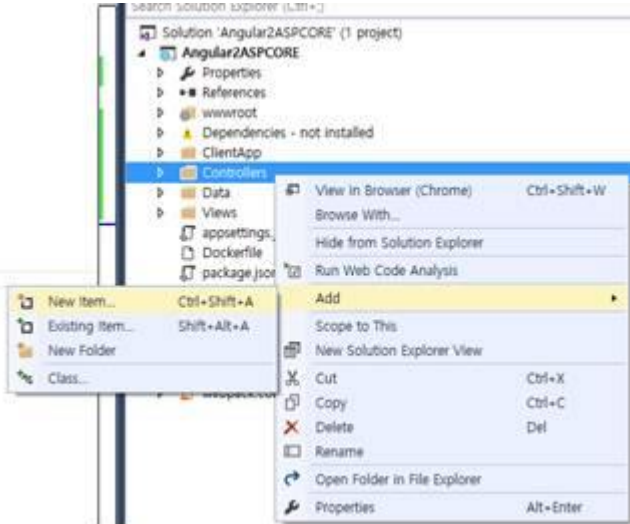


✓ Startup.CS

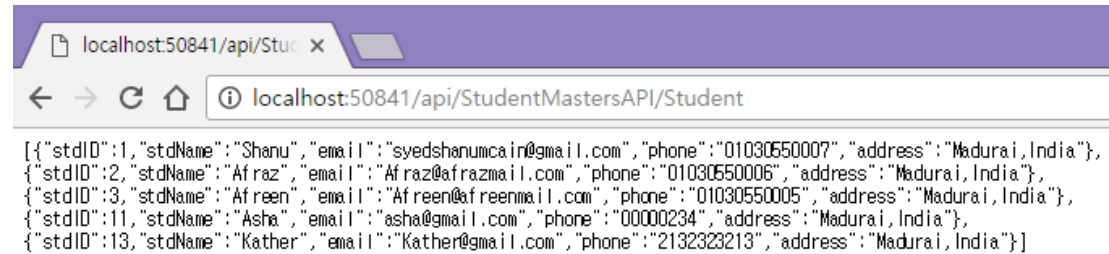
```
services.AddDbContext < studentContext > (options =>  
    options.UseSqlServer(Configuration.GetConnectionString("DefaultC  
onnection")));
```


ASP.NET CORE Application

✓ Creating Web API

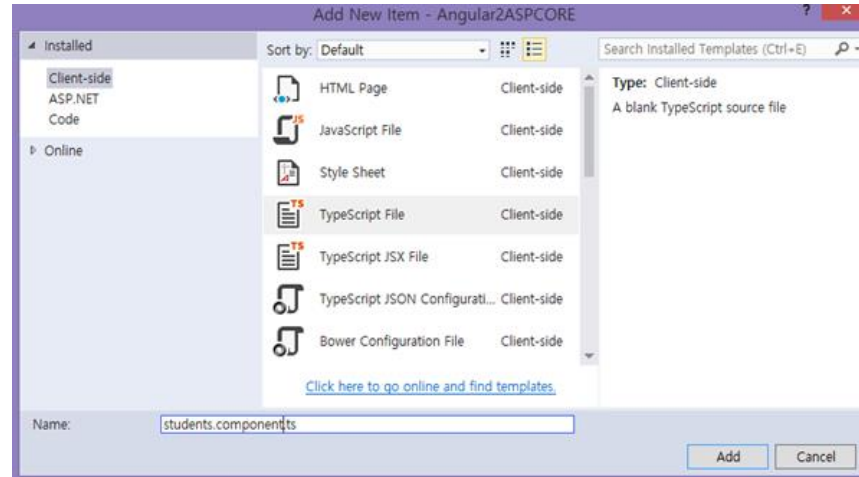
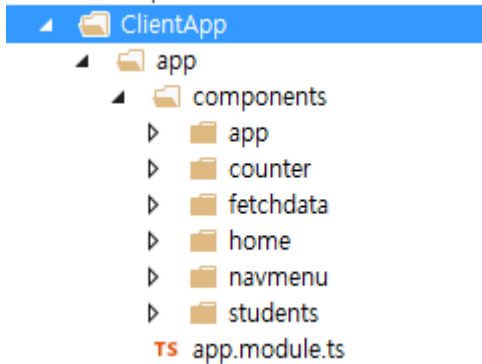


/api/StudentMastersAPI/Student

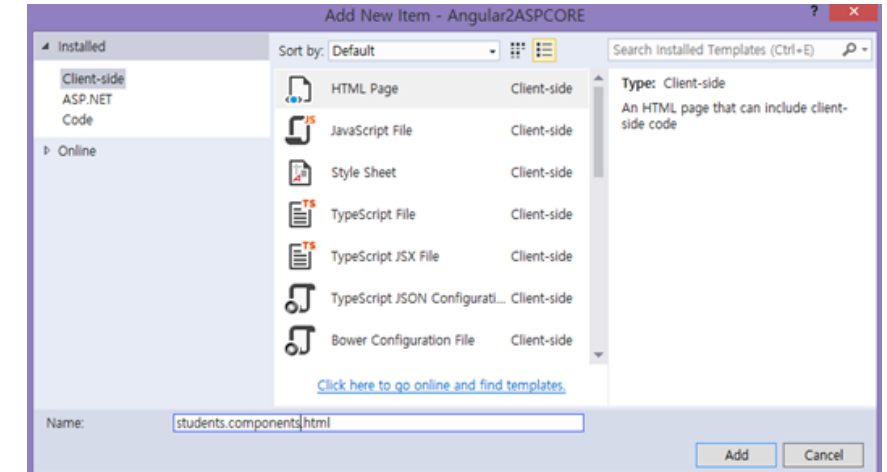


Working with Angular2

✓ First create Component TypeScript



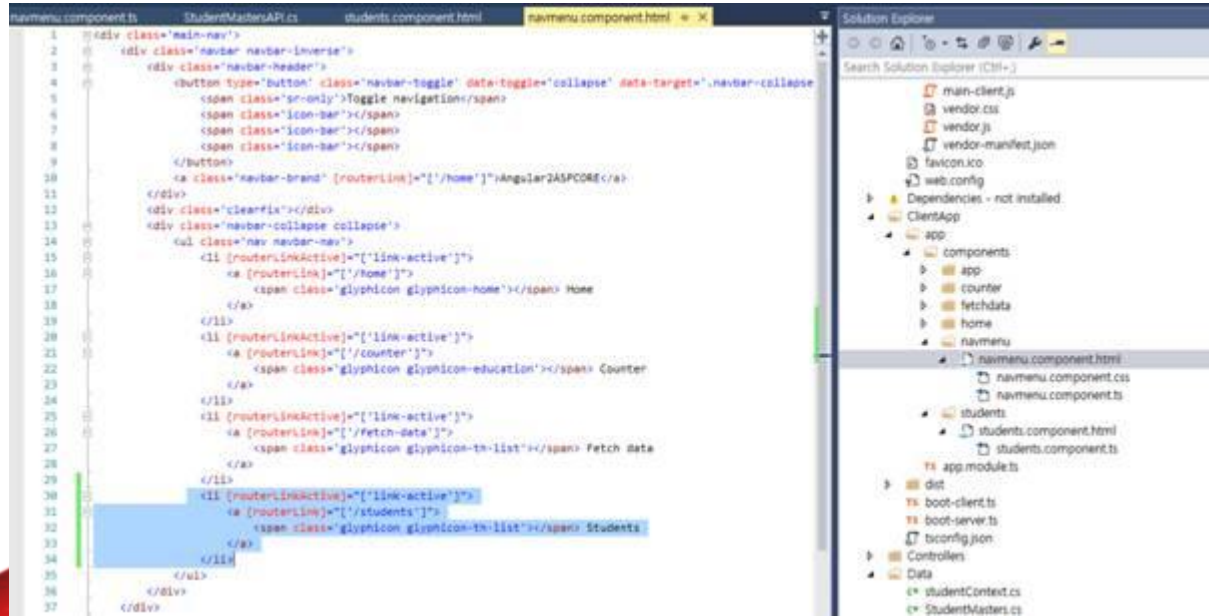
✓ Create HTML file to view our result



- import part
- component part
- class for writing our business logics.

ASP.NET CORE Application

✓ Adding Navigation in menu



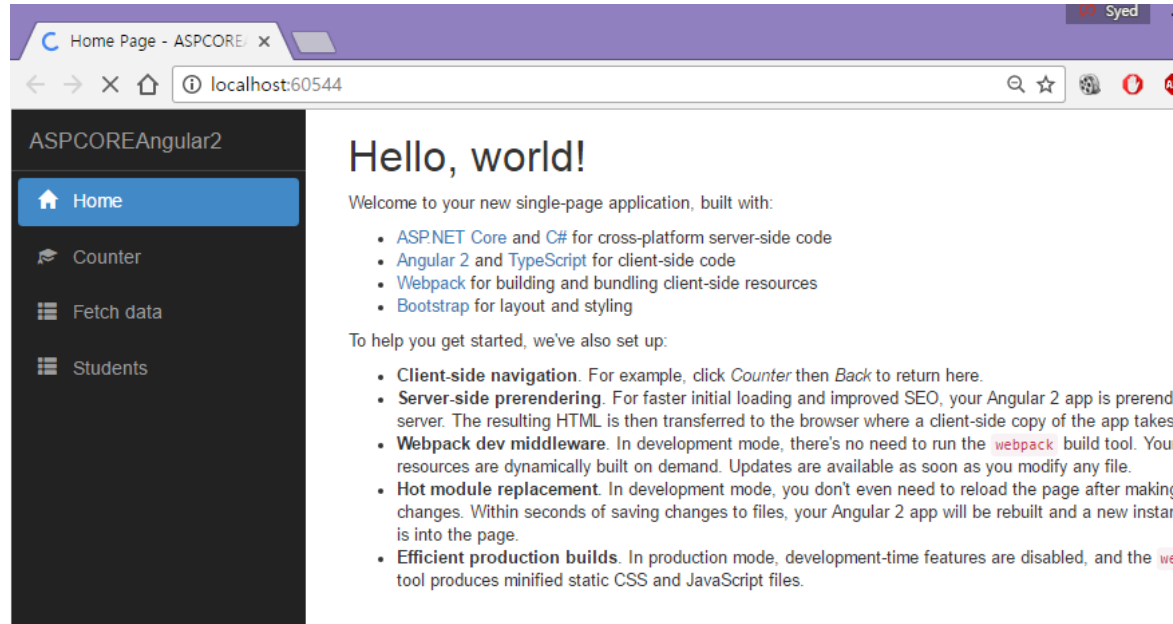
```
1 <div class='main-nav'>
2   <div class='nav-bar nav-bar-inverse'>
3     <div class='nav-bar-header'>
4       <button type='button' class='nav-bar-toggle' data-toggle='collapse' data-target='.nav-bar-collapse'
5         <span class='sr-only'>Toggle navigation</span>
6         <span class='icon-bar'></span>
7         <span class='icon-bar'></span>
8         <span class='icon-bar'></span>
9       </button>
10      <a class='nav-bar-brand' [routerLink]='["/home"]'>Angular2ASPCORE</a>
11    </div>
12    <div class='clear-fix'></div>
13    <div class='nav-bar-collapse collapse'>
14      <ul class='nav nav-bar-nav'>
15        <li [routerLinkActive]='["link-active"]'>
16          <a [routerLink]='["/home"]'>
17            <span class='glyphicon glyphicon-home'></span> Home
18          </a>
19        </li>
20        <li [routerLinkActive]='["link-active"]'>
21          <a [routerLink]='["/counter"]'>
22            <span class='glyphicon glyphicon-education'></span> Counter
23          </a>
24        </li>
25        <li [routerLinkActive]='["link-active"]'>
26          <a [routerLink]='["/fetch-data"]'>
27            <span class='glyphicon glyphicon-th-list'></span> Fetch data
28          </a>
29        </li>
30        <li [routerLinkActive]='["link-active"]'>
31          <a [routerLink]='["/students"]'>
32            <span class='glyphicon glyphicon-th-list'></span> Students
33          </a>
34        </li>
35      </ul>
36    </div>
37  </div>
```

```
<li [routerLinkActive]='["link-active"]'>
  <a [routerLink]='["/students"]'>
    <span class='glyphicon glyphicon-th-list'></span>
  </a>
</li>
```


ASP.NET CORE Application

✓ App Module

- Import Students Component
- Add Student Module



ASP.NET CORE Application

✓ **Build and run the application**

Home Page - ASPCORE x

localhost:60544/students

ASPSCOREAngular2

Home

Counter

Fetch data

Students

Angular 2 with ASP.NET Core Template Pack, WEB API and EF 1.0.1

My Name is : Shanu

Students Details :

Student ID	Student Name	Email	Phone	Address
1	Shanu	syedshanumcain@gmail.com	01030550007	Madurai, India
2	Afraz	Afraz@afrazmail.com	01030550006	Madurai, India
3	Afreen	Afreen@afreenmail.com	01030550005	Madurai, India
11	Asha	asha@gmail.com	00000234	Madurai, India
13	Kather	Kather@gmail.com	2132323213	Madurai, India

More Resources



<https://mvp.microsoft.com/en-us/PublicProfile/5001980?fullName=Syed%20%20Shanu>



C#Corner

<http://www.c-sharpcorner.com/members/syed-shanu>



<http://www.codeproject.com/Articles/syed-shanu>

Questions ?



THANK YOU



Thank you 

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<https://www.facebook.com/syed.shanu.9>