ASP.NET CORE CRUD WITH ANGULAR2 ANIMATION ,WEB API ,EF & SQL SERVER

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Date : 2017/03/11

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 visz file from this link.

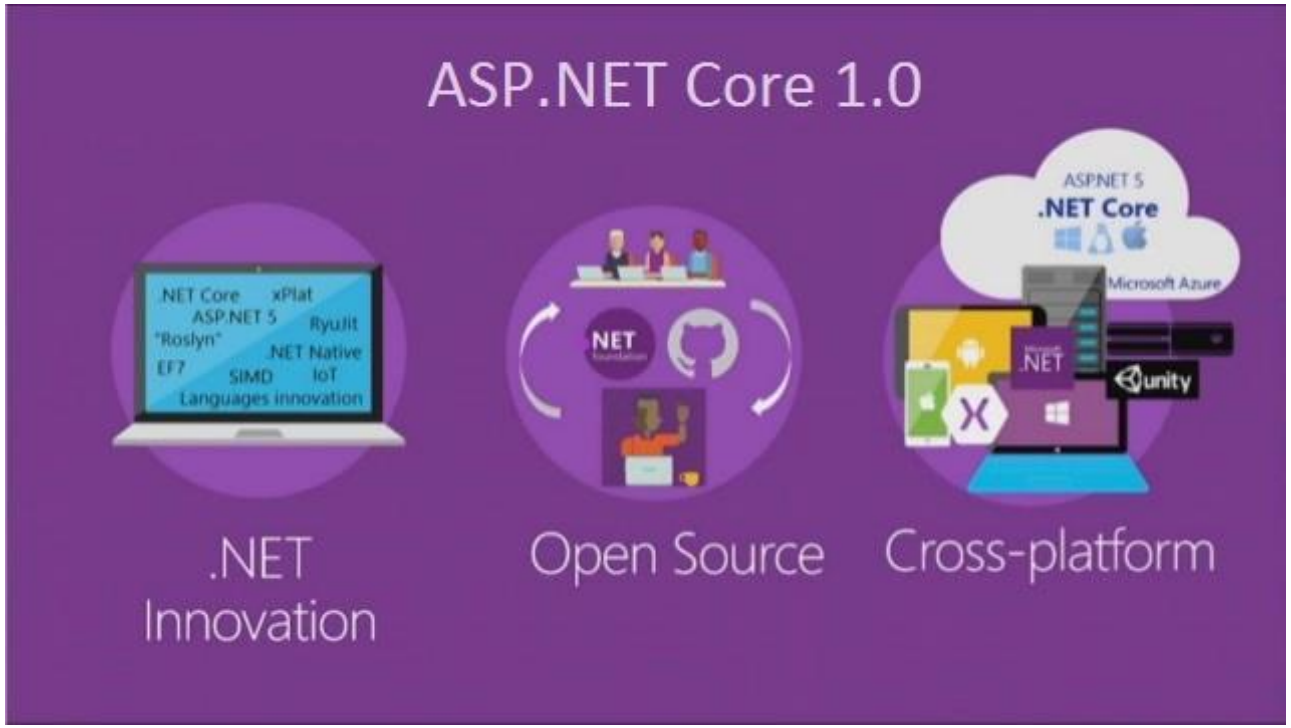
Agenda

- Introduction to ASP.NET Core
- Introduction to Angular2
- Introduction to SQL Server
- Introduction to WEB API
- Entity Framework
- Demo for ASP.NET Core,Angular2 CRUD with Animation using Template Pack, WEB API and EF 1.0.1

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)	



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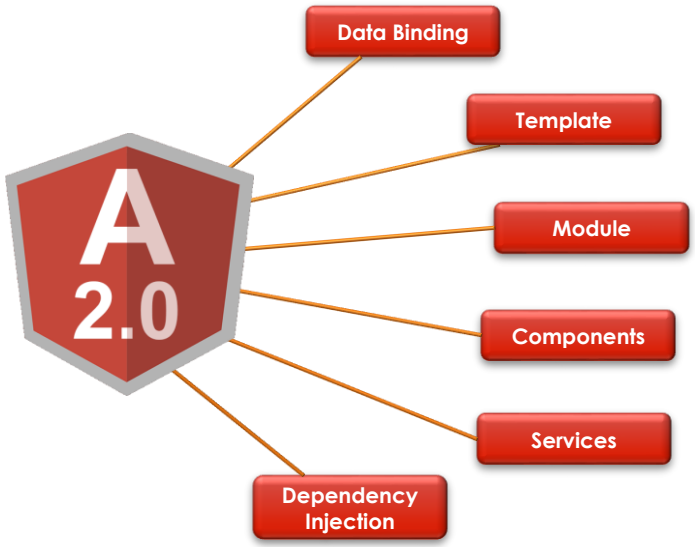
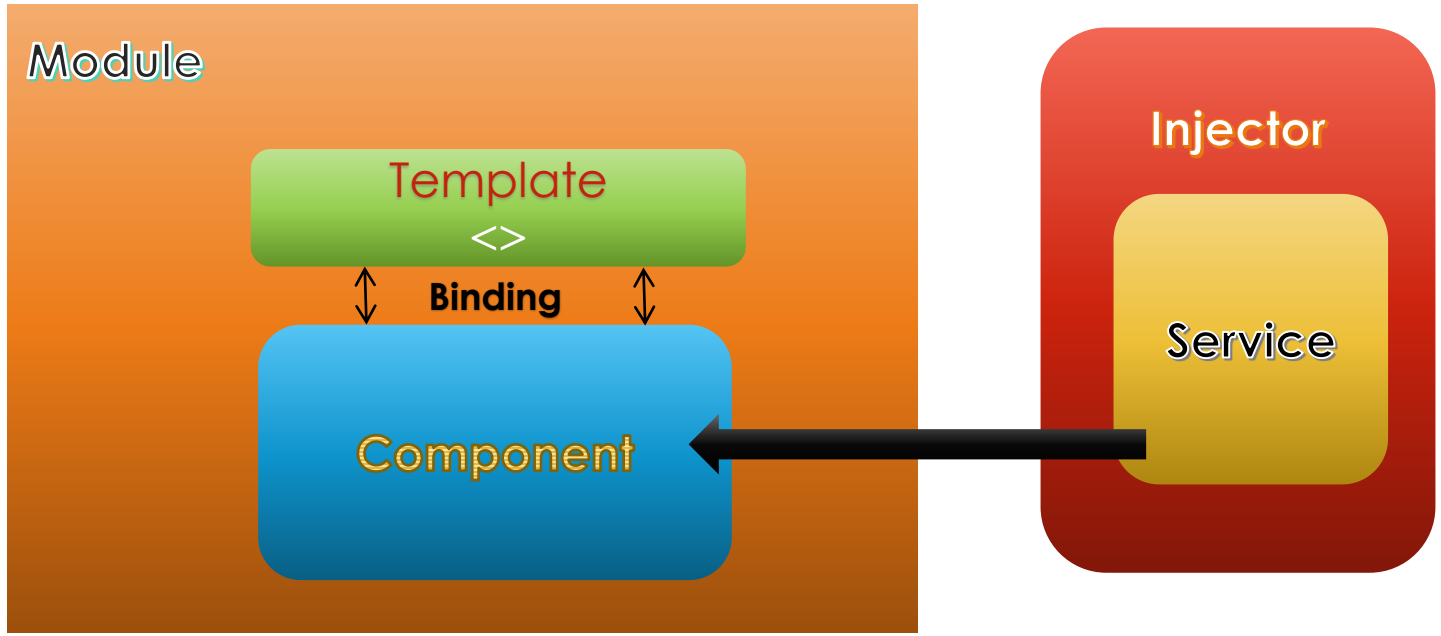
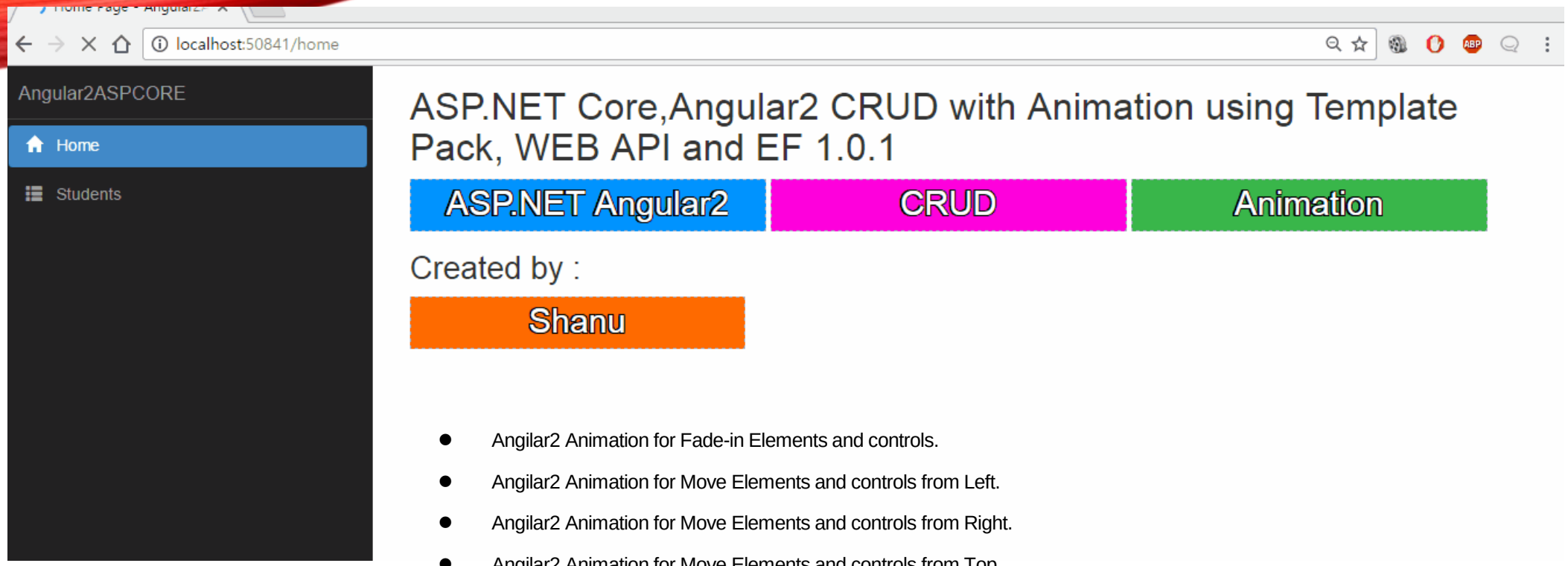
ANGULAR2 Architecture

ANGULARJS 2 by Google





ANGULAR2 Animation



- Angilar2 Animation for Fade-in Elements and controls.
- Angilar2 Animation for Move Elements and controls from Left.
- Angilar2 Animation for Move Elements and controls from Right.
- Angilar2 Animation for Move Elements and controls from Top.
- Angilar2 Animation for Move Elements and controls from Bottom.
- Angilar2 Animation to enlarge Button on Click.

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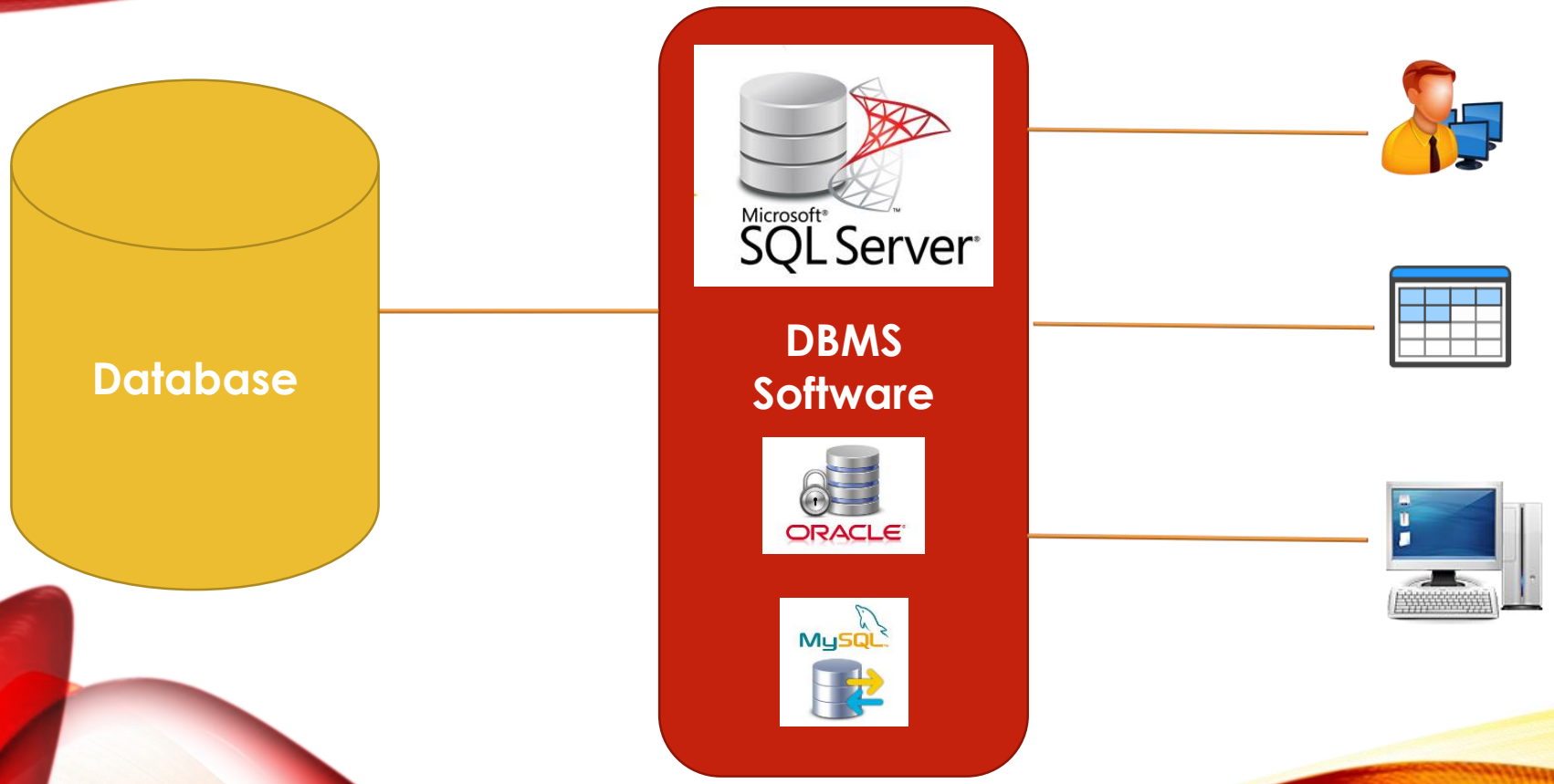
SQL SERVER

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



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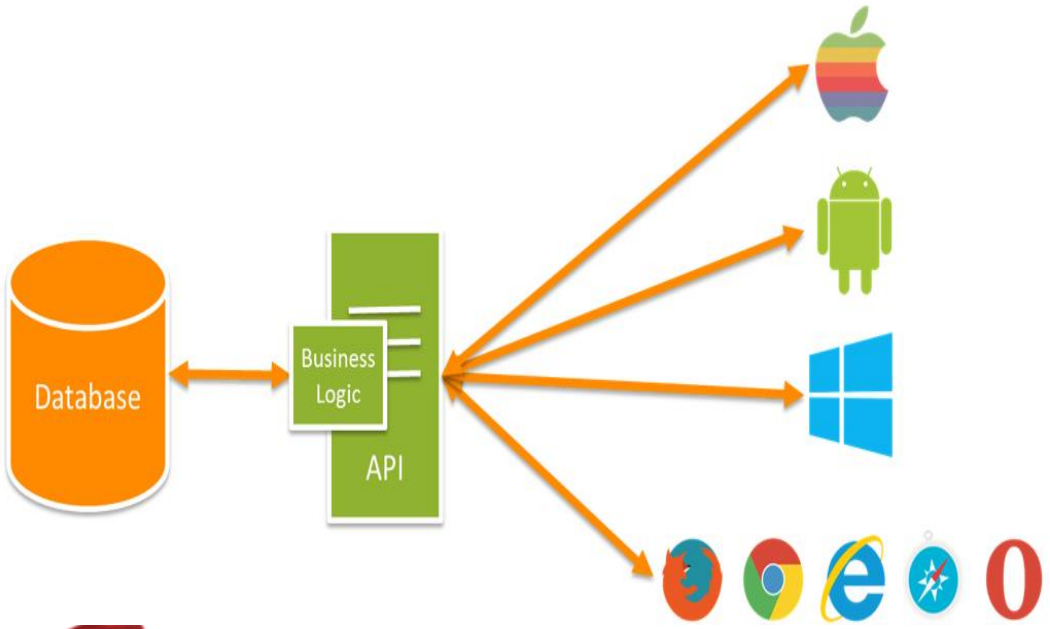
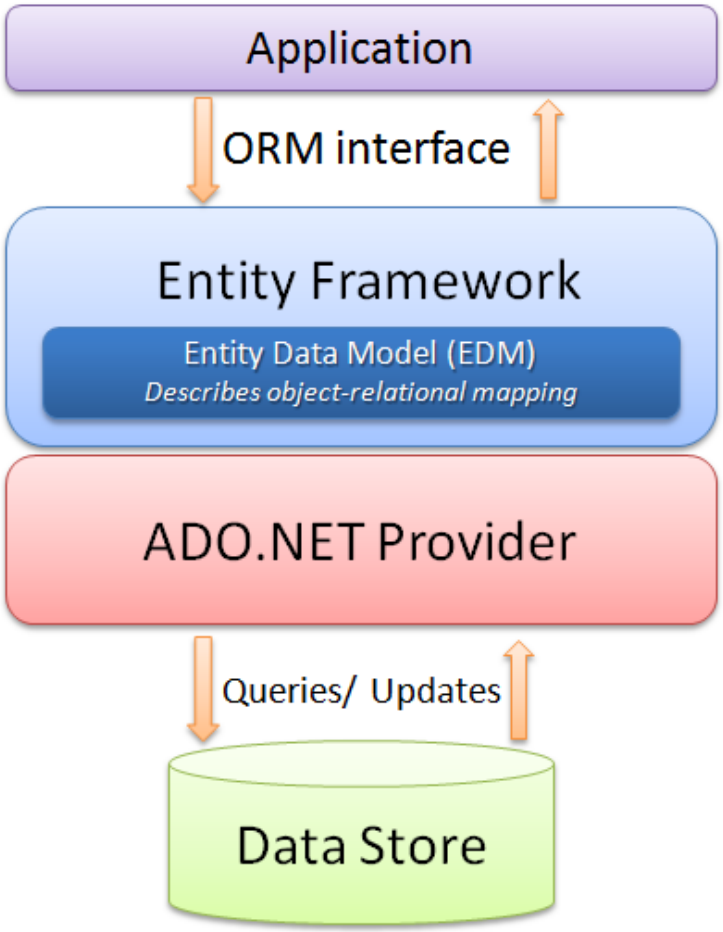
Web API



- 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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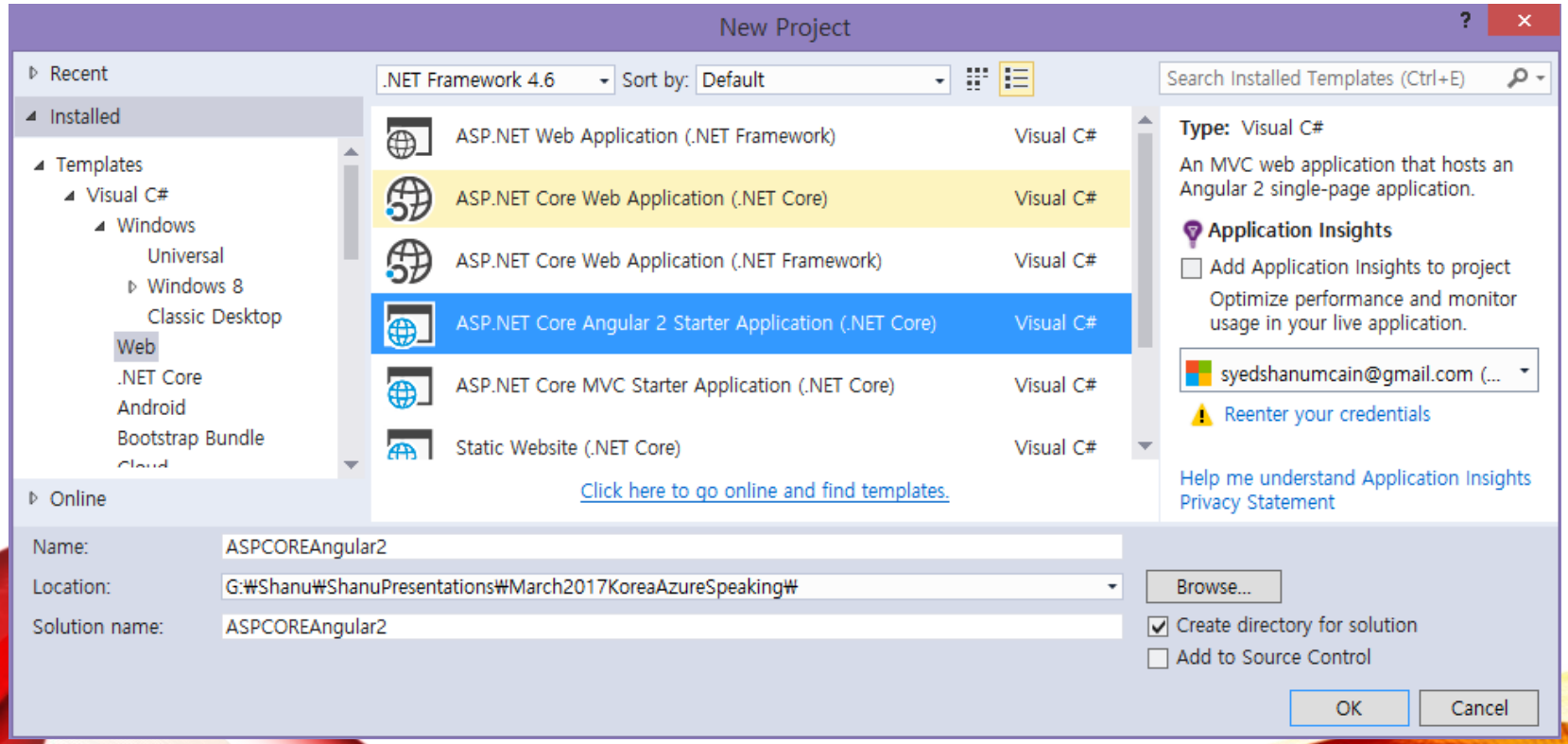
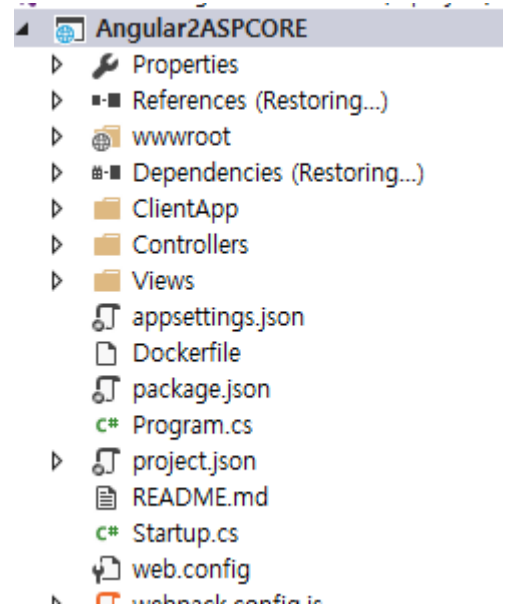
① SQL Server 2014

- ✓ **Create Database and Table**

ASP.NET CORE Application

✓ **Create ASP.NET Core Angular2 Starter Application**





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- ✓ **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",
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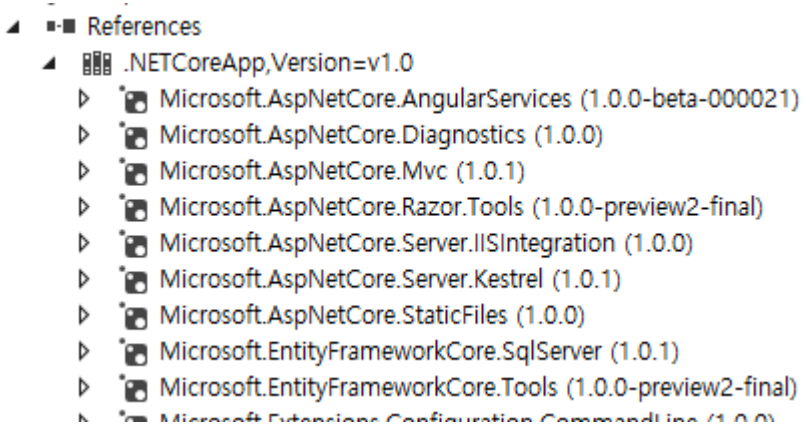
    "Microsoft.Extensions.Options.ConfigurationExtensions": "1.0.0",
    "Microsoft.EntityFrameworkCore.SqlServer": "1.0.1",
    "Microsoft.EntityFrameworkCore.Tools": "1.0.0-preview2-final"
  },
```



ASP.NET CORE Application

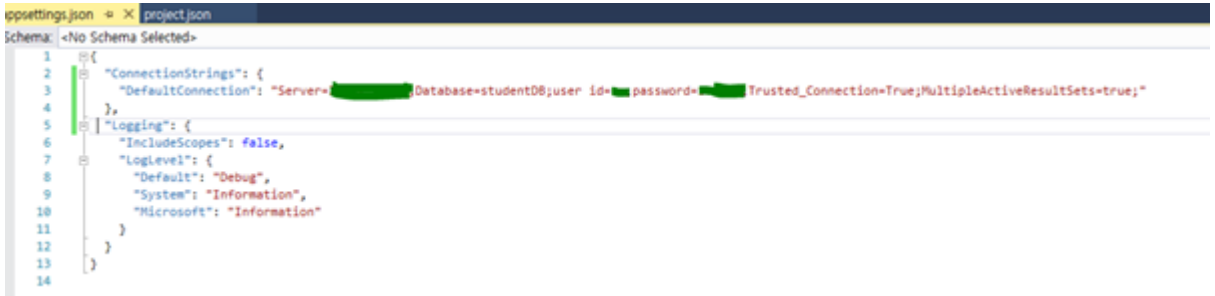
✓ Add Connection String

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

appsettings.json | project.json

Schema: <No Schema Selected>

```
{
  "Logging": {
    "IncludeScopes": false,
    "LogLevel": {
      "Default": "Debug",
      "System": "Information",
      "Microsoft": "Information"
    }
  }
}
```



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ASP.NET CORE Application

✓ Add Connection String

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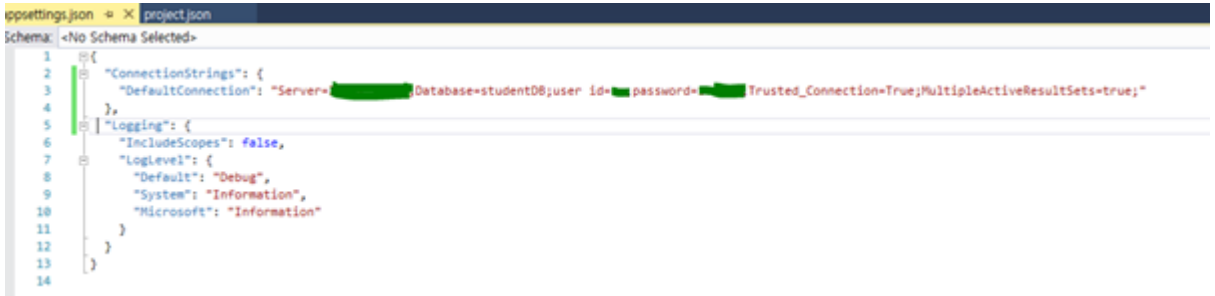
"ConnectionStrings": {
   "DefaultConnection": "Server=YOURDBSERVER;Database=StudentsDB;user id=SQLID;password=SQLPWD;Tr
usted_Connection=True;MultipleActiveResultSets=true;"
},
```

appsettings.json | project.json

Schema: <No Schema Selected>

```
{
  "Logging": {
    "IncludeScopes": false,
    "LogLevel": {
      "Default": "Debug",
      "System": "Information",
      "Microsoft": "Information"
    }
  }
}
```



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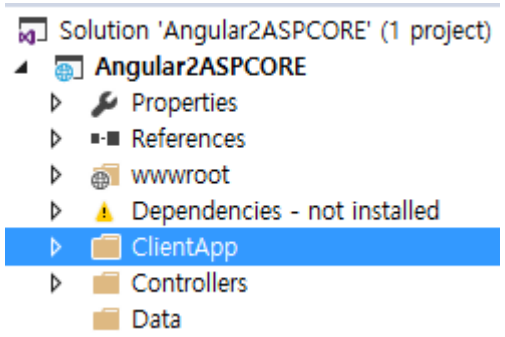
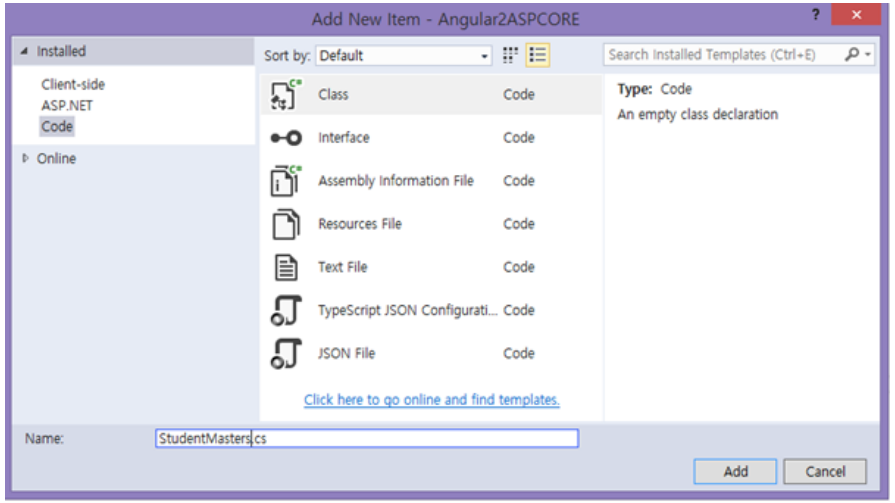
ASP.NET CORE Application

- ✓ **Creating Model Class**





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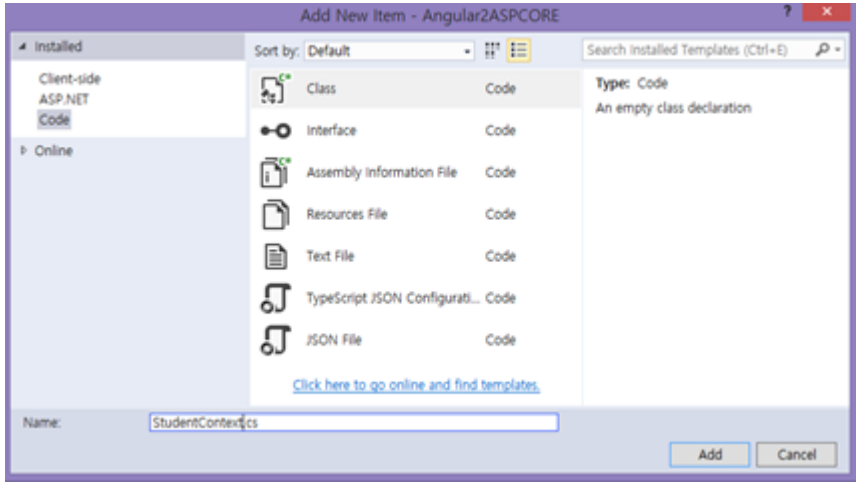
✓ **Creating Database Context**



✓ **Startup.CS**

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

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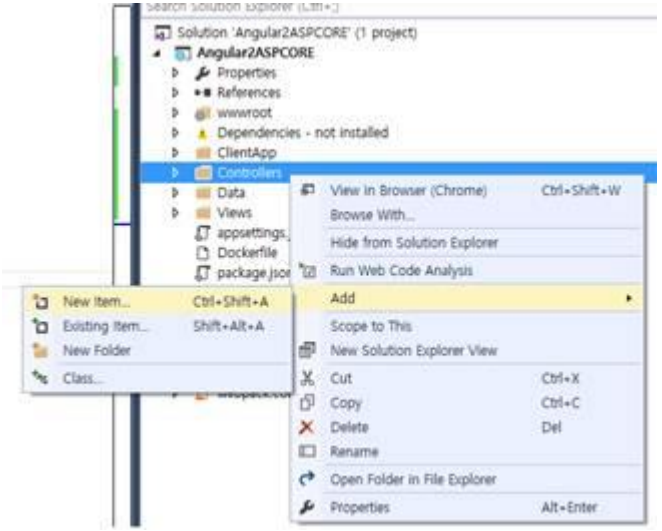
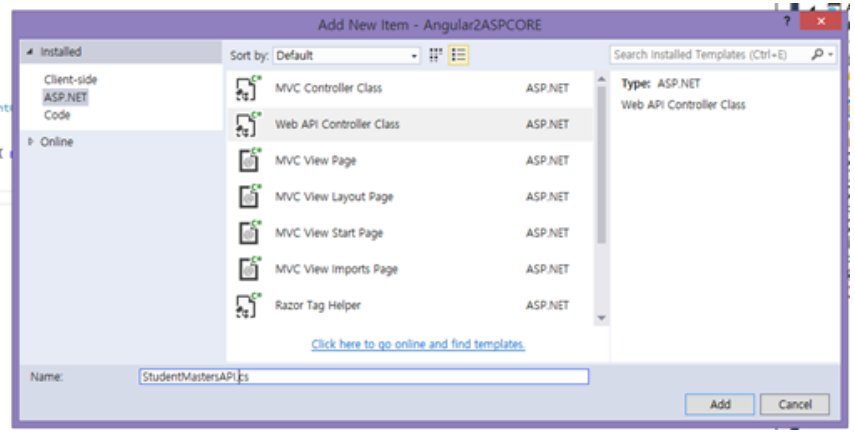
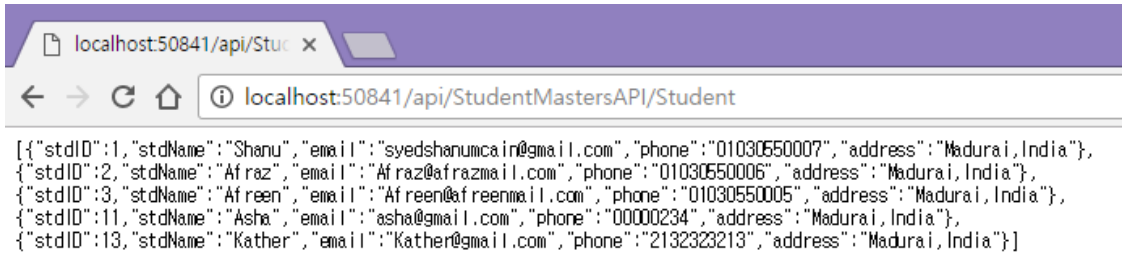
- ✓ **Creating Web API**





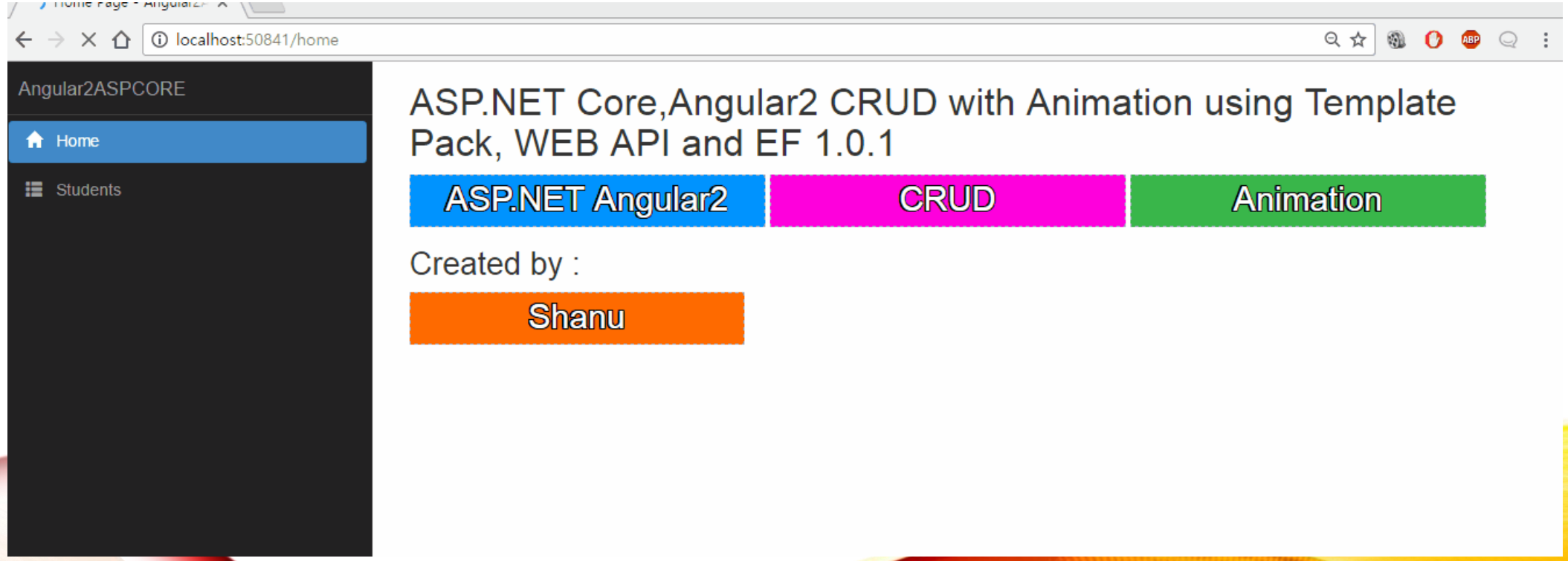
/api/StudentMastersAPI/Student



ASP.NET CORE Application

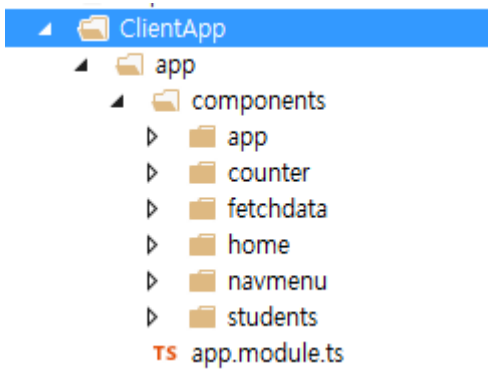
✓ Open Home Component and HTML

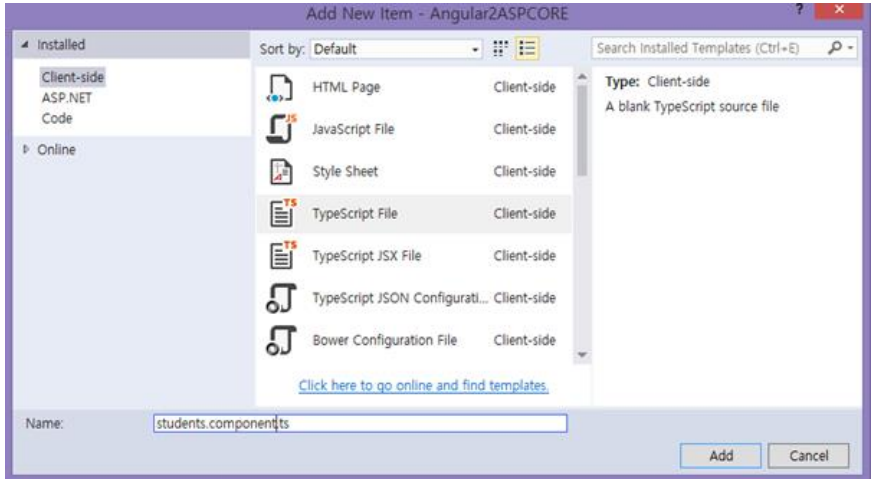
- Add Animation Code.



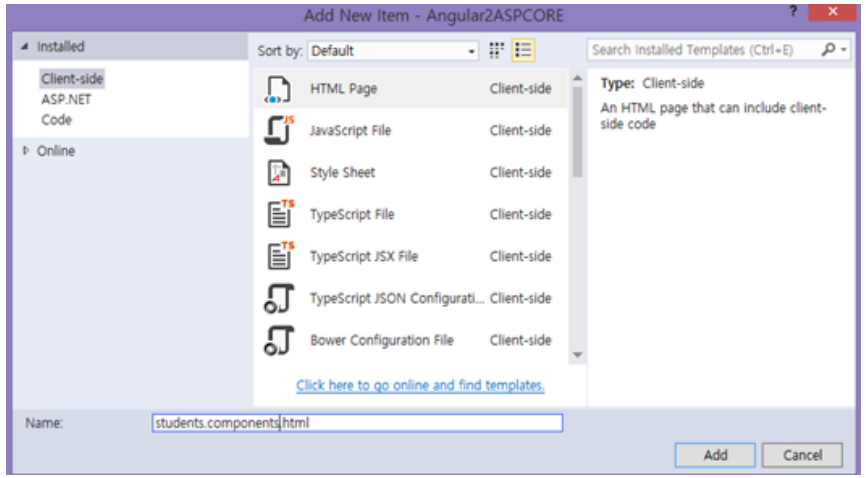
Working with Angular2

✓ **First create Component TypeScript**





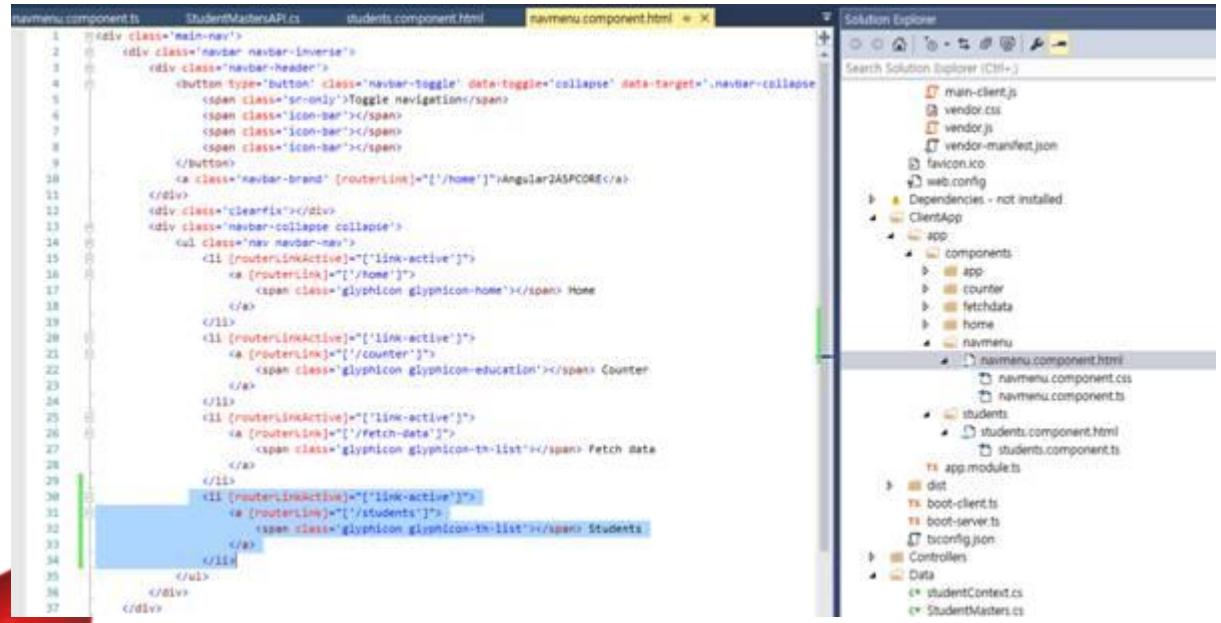
✓ **Create HTML file to view our result**



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

ASP.NET CORE Application

- ✓ **Adding Navigation in menu**

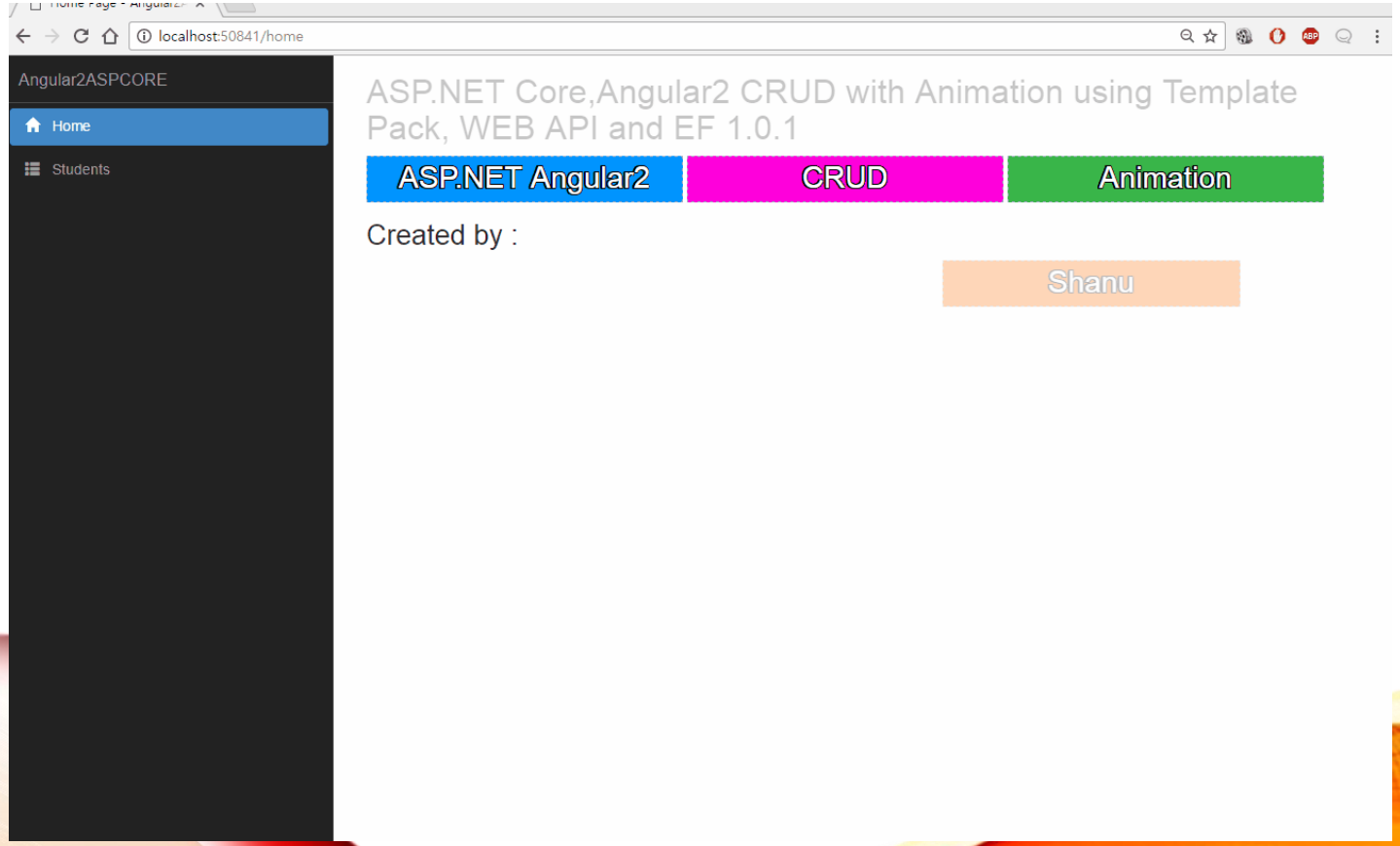



```
<li [routerLinkActive]="['link-active']">
                <a [routerLink]="['/students']">
                   <span class='glyphicon glyphicon-th-list'></span>
Students
                </a>
             </li>
```

ASP.NET CORE Application

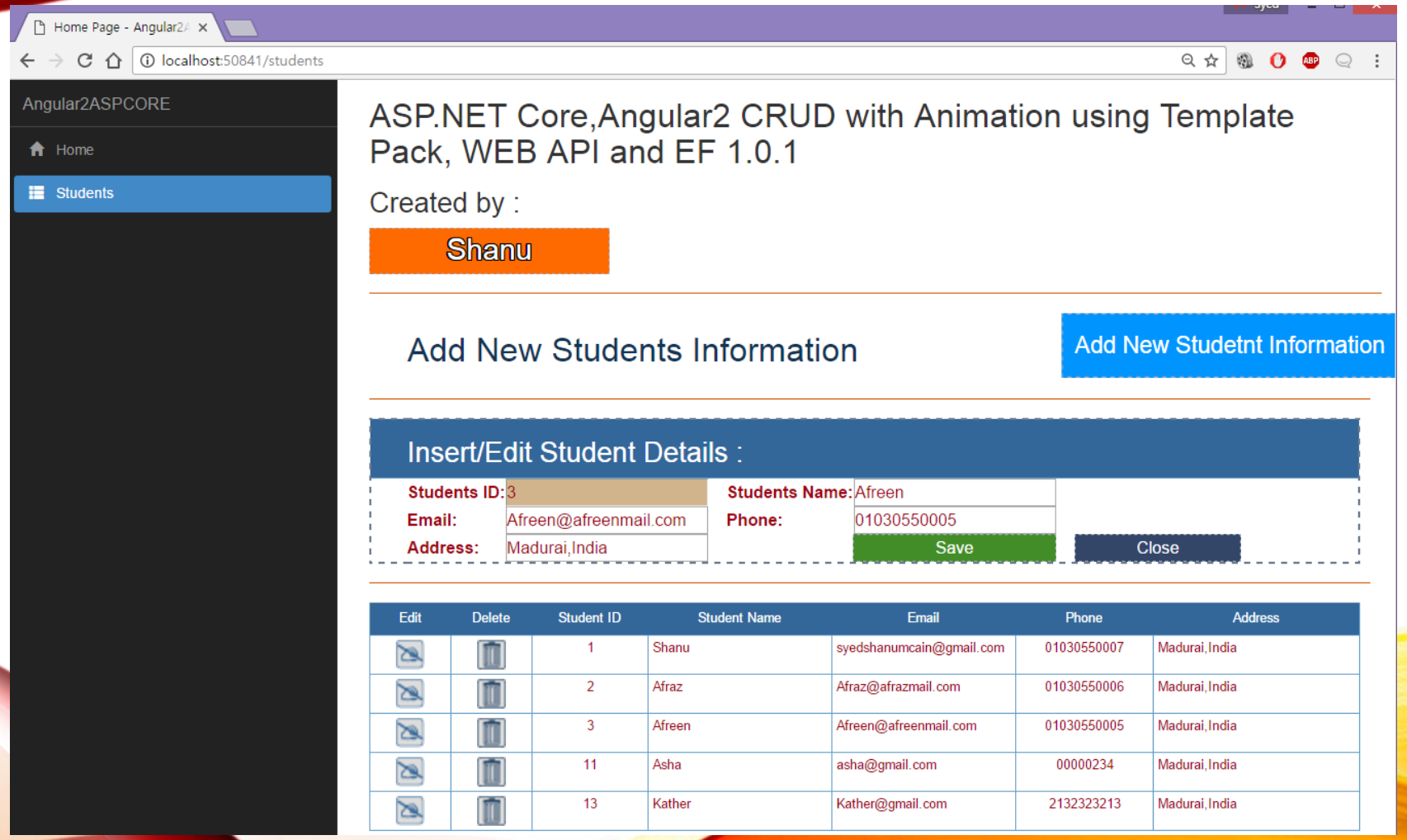
✓ **App Module**

- Import Students Component
- `Add Student Module`



ASP.NET CORE Application

- ✓ **Build and run the application**



Download

https://github.com/syedshanu/ASPNETCOREAngular2

More Resources

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

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

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

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Questions ?

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