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# Angular 9 in ASP.NET MVC 5 with Angular CLI and Visual Studio 2017/ 2019

BY MITHUNVP · PUBLISHED MAY 29, 2018 · UPDATED AUGUST 9, 2020

Angular is one of the most indemand web front-end frameworks developed by







# **CATEGORIES** Angular Angular 2 ► ASP.NET Core ► ASP.NET Core 1.0 ► ASP.NET MVC 5 Async **►** Dot Net FF Core 2 ► Install & Configure LINQ **►** TypeScript Visual Studio Code **►** WCF

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this article, let use Angular ( ASP.NET MVC ! CLI.

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I had written d

Angular4 in ASP.NET MVC 5, I felt it was a little tedious to get it working as so many technologies are involved. This article describes minimal steps to get started.



Upgraded to use Angular 9 with ASP.NET MVC 5 on branch **mvc5angular9** 

Software pre-requites

- Microsoft Visual Studio
   2017/2019 (any edition)
- Install Latest NodeJs
- TypeScript 3.8

# Installing Angular CLI

Angular CLI is a tool for developing an Angular-based (web, PWA) application, everything is out of the box like generating components, services, pipes, unit tests, etc. For installing CLI, its must-have NodeJS installed previously. Use this command to install

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# & Angular app together

Create an ASP.NET MVC 5 application. Named it as ngGitHouse. Nothing fancy in this but its first step. Once the CLI is installed, we create a brand new Angular application by running this command *ng new* gitHouseApp -minimal inside MVC 5 application folder structure.



Create an Angular app inside MVC 5

It would take a few minutes to get all node modules downloaded. You can see in the folder structure that githouseapp folder is created in MVC 5 application folder structure.

To ensure that the aithouseapp is set up properly;

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following com If this succeed good to go.

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# Moving essentials files & folder to root

Our intention is to use the Angular framework inside MVC 5 views, to make it easy for understanding and maintenance lets move some essentials files and folder to root of MVC 5 application. The files & folder to be moved are

- Src folder This is the actual source folder of the Angular application, the entire project structure is present in this folder.
- package.json file containing the list of NPM packages needed to develop client application
- angular.json file
   containing Configuration
   settings for the Angular
   application. This file is
   essential for Angular-CLI to
   work seamlessly.
- tsconfig.json –

  configuration file must for

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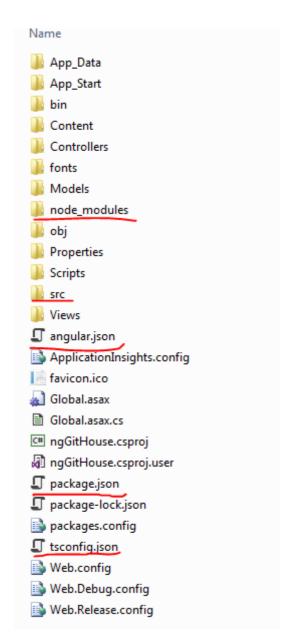
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node\_mo containing node mod always he ....

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**LL** Do NOT forget to include the above files & folder in Solution Explorer except node\_modules



ASP.NET MVC 5 & Angular files









# Update config settings

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We have altered how
AngularCLI generates the
folder structure because we
indent to use it in ASP.NET MVC
5 application. For CLI to work
well, we have to update
settings in the below
configuration file

tsconfig.json – This file is used by TypeScript compiler to transpile to JavaScript. It's a mandatory file wherever TypeScript is used. The *include* config entry tells us to compile TypeScript from the src folder only instead of the entire project structure. If you plan to use TypeScript in another folder, do add in this section. The *outDir* entry in *compilerOptions* provides a folder for placing all transpiled files with source maps.

Source Maps helps us to debug the TypeScript (Angular in this case) code in the browser just like JavaScript







```
ASP.NET CORE
  "compile(
                 Building fully
false,
  "include'
                 Asynchronous
    "./src'
              ASP.NET Core Web
  ],
                     API
  "compile:
    "baseUrl": "./",
    "outDir":
"./scripts/out-tsc",
    "sourceMap": true,
    "declaration":
false,
    "moduleResolution":
"node",
"emitDecoratorMetadata":
true,
"experimentalDecorators"
: true,
    "target": "es5",
    "typeRoots": [
"node modules/@types"
    ],
    "lib": [
      "es2017",
      "dom"
```

angular.json - This is the heart of AngularCLI, it contains all options necessary to play around Angular artifacts like generating components, pipes, service providers, class, directives, etc. The sourceRoot now points to the src folder, the *outputPath* is now pointing to ./Scripts/libs folder as part of the MVC 5 project. The

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OutputPath upo

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the **githouseapp** created by the CLI project.

# Building the application

As we moved folder location, configuration files got updated, its best to run the command *ng build* in the project root folder from the command prompt. If done successfully, you would see a similar image as below. *Don't forget to include scripts/libs folder in Solution Explorer.* 



ng build -watch will run the build when file changes



ng build running successfully

Loading
Angular in
MVC 5 views

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Now that ever properly, let's
Angular9 app views. I will be
Contact.cshtr
while scaffold

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application. I removed the existing code to include our code to load the component as below. The **app-root** is an Angular Component generated by default using CLI

```
@section Scripts {
    <script
type="text/javascript"
src="~/Scripts/libs/runt
ime.js"></script>
    <script
type="text/javascript"
src="~/Scripts/libs/poly
fills.js"></script>
    <script
type="text/javascript"
src="~/Scripts/libs/styl
es.js"></script>
    <script
type="text/javascript"
src="~/Scripts/libs/vend
or.js"></script>
    <script
type="text/javascript"
src="~/Scripts/libs/main
.js"></script>
<app-root></app-root>
```

The *Scripts* section includes the link to files created in **libs** folder run from above step.

The JS files referencing order

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Run the application the Contact lite to load the Ar

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Source code (

to play around with it

# Debugging the app

We successfully ran the
Angular9 code in ASP.NET MVC
5, debugging the code in the
browser (chrome) involves
press F12, select *Sources* tab.
Check out the below image for
file location while running
application. Do run the
command *ng build -watch* to
compile Angular9 code
automatically

Running & Debugging Angular Code
in ASP.NET MVC 5











Tags: Angular

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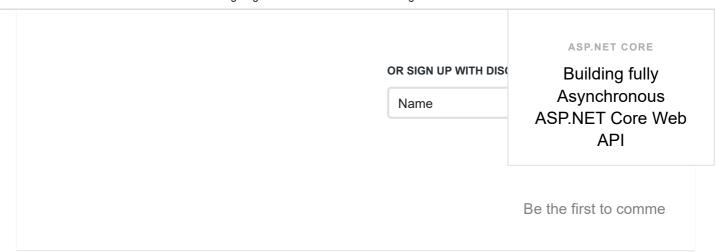








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