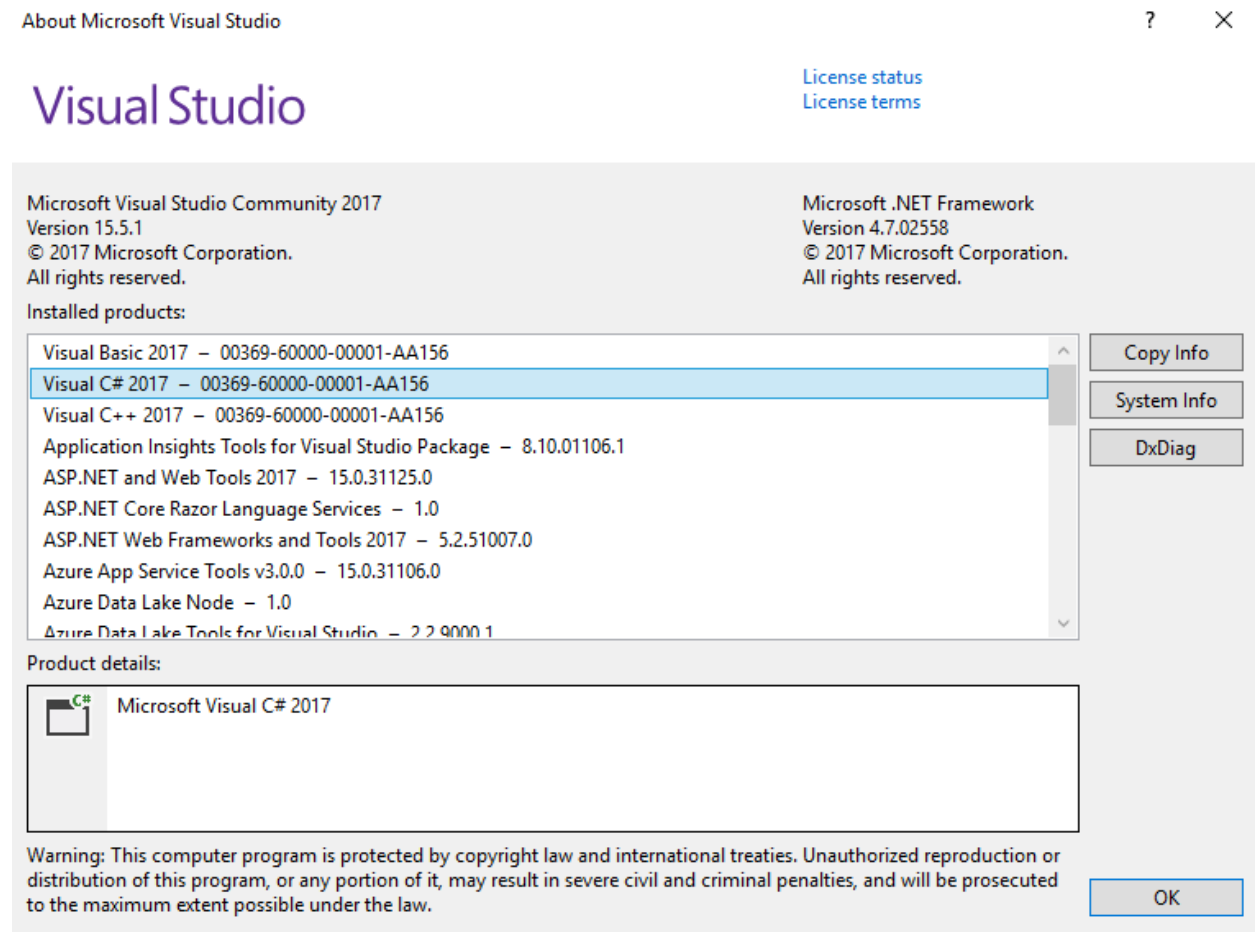


## SETTING UP ANGULAR IN VISUAL STUDIO 2017

Is it possible to run Angular and Type Script in Visual Studio? Yes it is. Here I document how I set this up.

This is the version of VS 2017 that I am using and I code using C#:



## DOWNLOADING NODE.JS AND NPM FROM THE NODEJS WEBSITE

Firstly we need to install NODE.js and npm, node package manager. These need to be downloaded and installed on your machine.

VS requires Node version 4.6x or greater

NPM 3.x.x or greater

These are downloaded together in a single package which can be found at:

<https://nodejs.org/en/download/>




Select the package for your system as for example Windows, macOS etc and down load.

I used Windows Installer 64-bit for my Windows 10 machine.

## Downloads

Latest LTS Version: **8.9.4** (includes npm 5.6.0)

Download the Node.js source code or a pre-built installer for your platform, and start developing today.

LTS Recommended For Most Users	Current Latest Features		
 Windows Installer <small>node-v8.9.4-x84.msi</small>	 macOS Installer <small>node-v8.9.4.pkg</small>	 Source Code <small>node-v8.9.4.tar.gz</small>	
Windows Installer (.msi)	32-bit	64-bit	
Windows Binary (.zip)	32-bit	64-bit	
macOS Installer (.pkg)	64-bit		
macOS Binaries (.tar.gz)	64-bit		
Linux Binaries (x86/x64)	32-bit	64-bit	
Linux Binaries (ARM)	ARMv6	ARMv7	ARMv8
Source Code	node-v8.9.4.tar.gz		

**For Windows users how do you determine which operating system you have?**

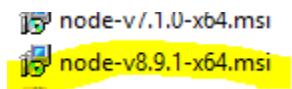
Go to the search window and type **msinfo32**.

This will bring up the system information window and look up System Type. If it says x64-based PC then you have a 64 bit processor. If it says x86-based PC then you have a 32 bit operating system.

System Information		
File Edit View Help		
System Summary		
Hardware Resources		
Components		
Software Environment		
Item	Value	
OS Name	Microsoft Windows 10 Home	
Version	10.0.15063 Build 15063	
Other OS Description	Not Available	
OS Manufacturer	Microsoft Corporation	
System Name	LAPTOP-QKVFQ59K	
System Manufacturer	HP	
System Model	HP ENVY m7 Notebook	
System Type	x64-based PC	
System SKU	M1W11UA#ABA	
Processor	Intel(R) Core(TM) i7-6500U CPU @ 2.50GHz, 2601 Mhz, 2 Core(s), 4 Logical	
BIOS Version/Date	Insyde F.36, 7/25/2016	
SMBIOS Version	2.8	
Embedded Controller Version	87.62	
BIOS Mode	UEFI	
BaseBoard Manufacturer	HP	
BaseBoard Model	Not Available	
BaseBoard Name	Base Board	
Platform Role	Mobile	
Secure Boot State	On	
PCR7 Configuration	Elevation Required to View	
Windows Directory	C:\WINDOWS	
System Directory	C:\WINDOWS\system32	
Boot Device	\Device\HarddiskVolume1	
Locale	United States	
Hardware Abstraction Layer	Version = "10.0.15063.502"	
User Name	LAPTOP-QKVFQ59K\bonnie	
Time Zone	Eastern Standard Time	
Installed Physical Memory (RAM)	16.0 GB	
Total Physical Memory	15.9 GB	
Available Physical Memory	7.82 GB	
Total Virtual Memory	18.3 GB	
Available Virtual Memory	4.13 GB	
Page File Space	2.38 GB	
Page File	C:\pagefile.sys	
Device Encryption Support	Elevation Required to View	
Hyper-V - VM Monitor Mode E...	Yes	
Hvper-V - Second Level Address...	Yes	

Select the appropriate download package.

This will download an msi file into your downloads folder.



Right click on the msi and select INSTALL and follow the instructions.

## AFTER DOWNLOADING YOUR NODE PACKAGE:

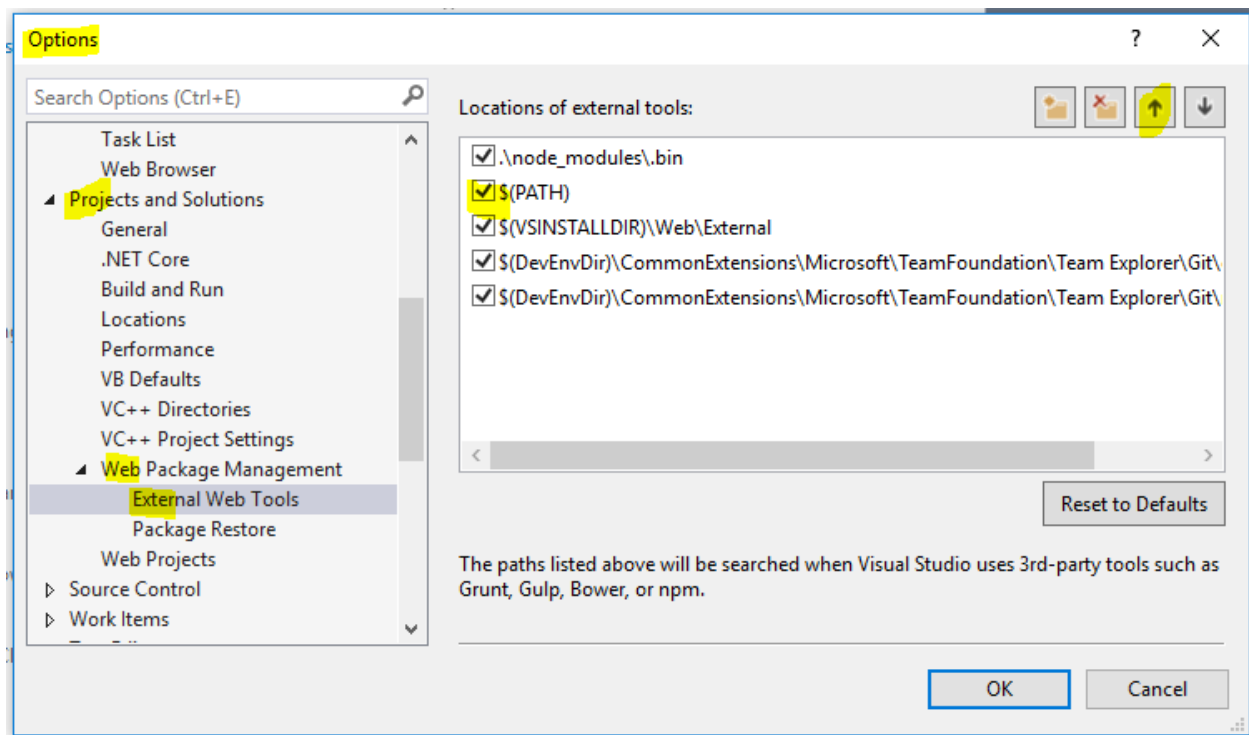
After installation of node and npm, type cmd in the search box and bring up the command window.

To see which version of node you have installed type: node -v

To see which version of npm you have installed type: npm -v

## CONFIGURING VISUAL STUDIO TO RUN NODE

Open an instance of Visual Studio and go to Tools → Options → Projects and Solutions → Web Package Management → External Web Tools. You will see:



Move the global path entry, \$(PATH), up to second position in the queue by selecting it and using the up arrow so that it looks like the configuration above. This tells Visual Studio to look for npm in the global path before it searches other folders.

## DOWNLOADING AND INSTALLING TYPESCRIPT

The next package that needs to be downloaded and installed is TypeScript.

This can be obtained from <https://www.microsoft.com/en-us/download/>

Do a search on typescript

<https://www.microsoft.com/en-us/search/result.aspx?q=typescript+dev+download>

For my system I selected TS for VS2017

## Downloads: typescript dev download

### TypeScript for Visual Studio 2015

TypeScript is a language for application-scale JavaScript development. It is included in Visual Studio 2015.

Free  
11/27/2017

### TypeScript SDK for Visual Studio 2017

TypeScript is a language for application-scale JavaScript development.

Free  
11/27/2017

### TypeScript for Visual Studio 2013

TypeScript is a language for application-scale JavaScript development. It is included in Visual Studio 2013 Update 2 or later.

Free  
3/1/2016

### TypeScript for Visual Studio 2012

TypeScript is a language for application-scale JavaScript development. This power tool adds TypeScript support to Visual Studio 2012. For Visual Studio ...


Free  
6/18/2015

### Safer TypeScript

Safer TypeScript is an alternative type-checker and code generator for TypeScript that guarantees type-safety through a combination of static and dynamic ...

Free  
5/12/2016

Download the TypeScript executable to your downloads folder.

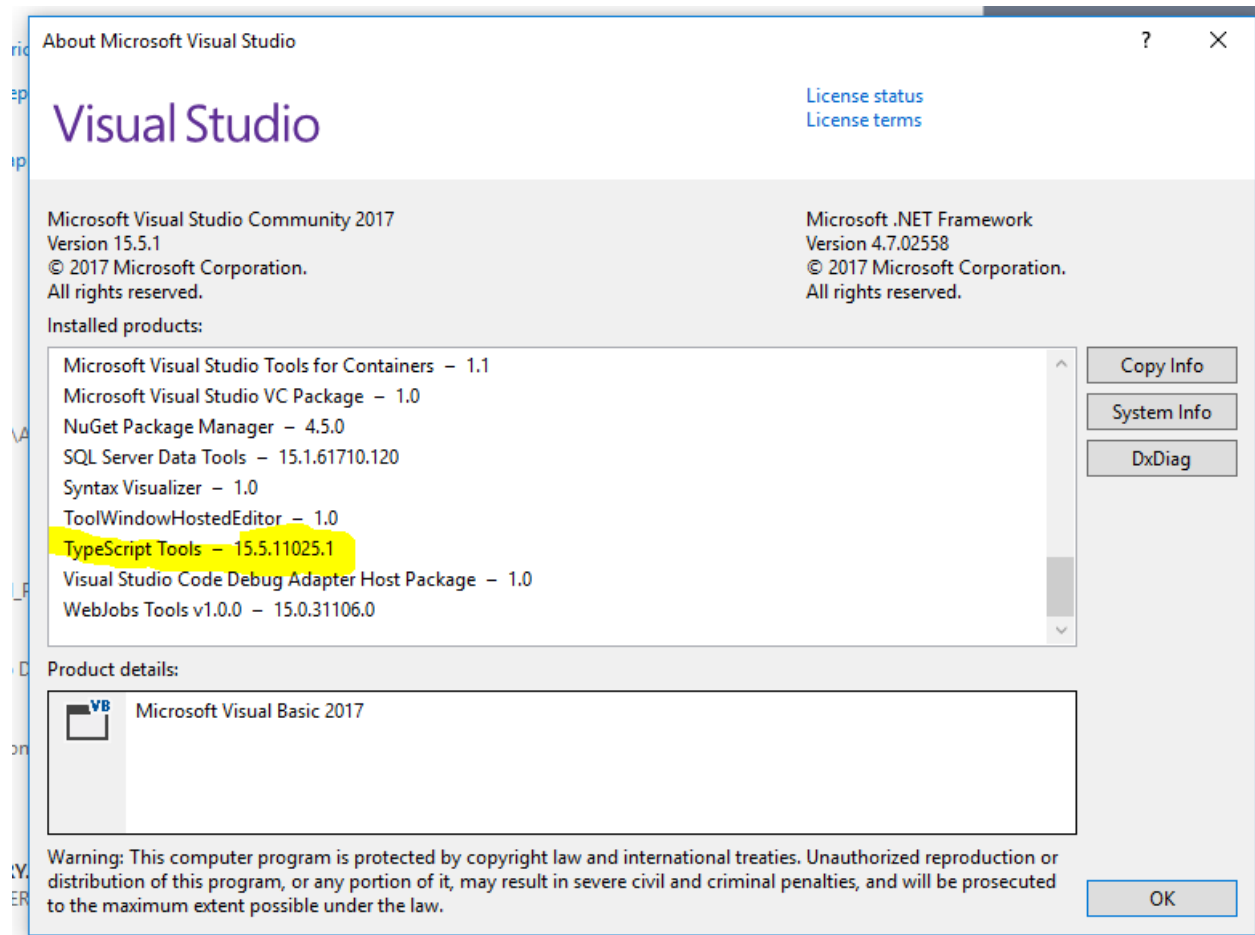
 TypeScript\_SDK.exe

Right click the executable and install as administrator. Follow the instructions for the install.

For Angular applications the version of TypeScript must be 2.2.0 or later.

How can I verify what was installed?

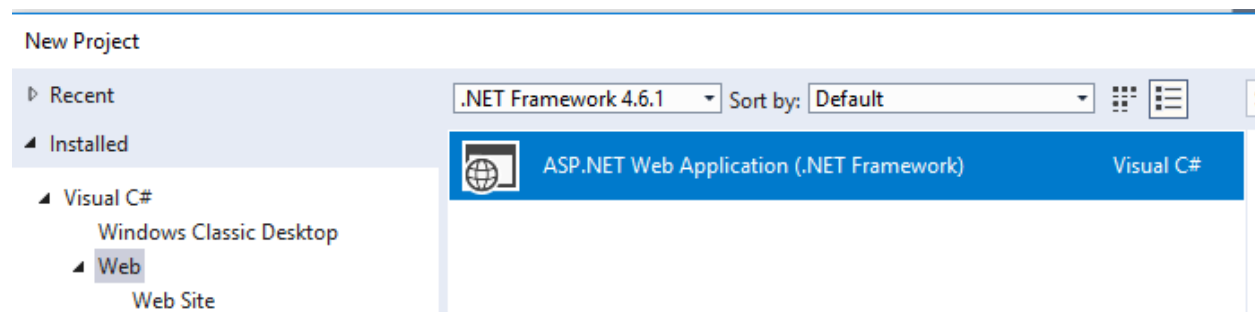
After installing go to Visual Studio and click Help → About Microsoft Visual Studio → TypeScript Tools



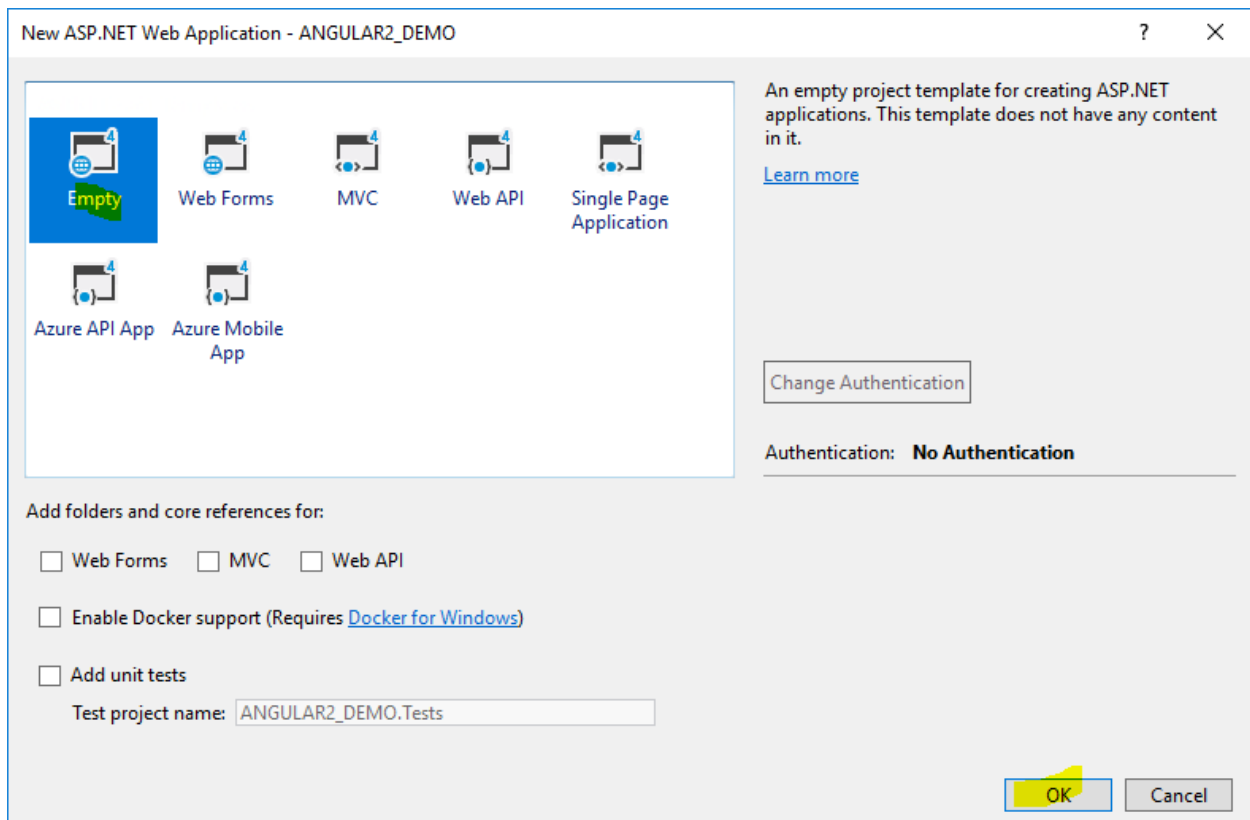
You will also need to install the QUICKSTART file from the Angular site which is covered below.

### CREATING AN ANGULAR APPLICATION – setting up the application in Visual Studio 2017

Open an instance of VS2017 and select New Project → Project → Web →



Select the empty template and click OK

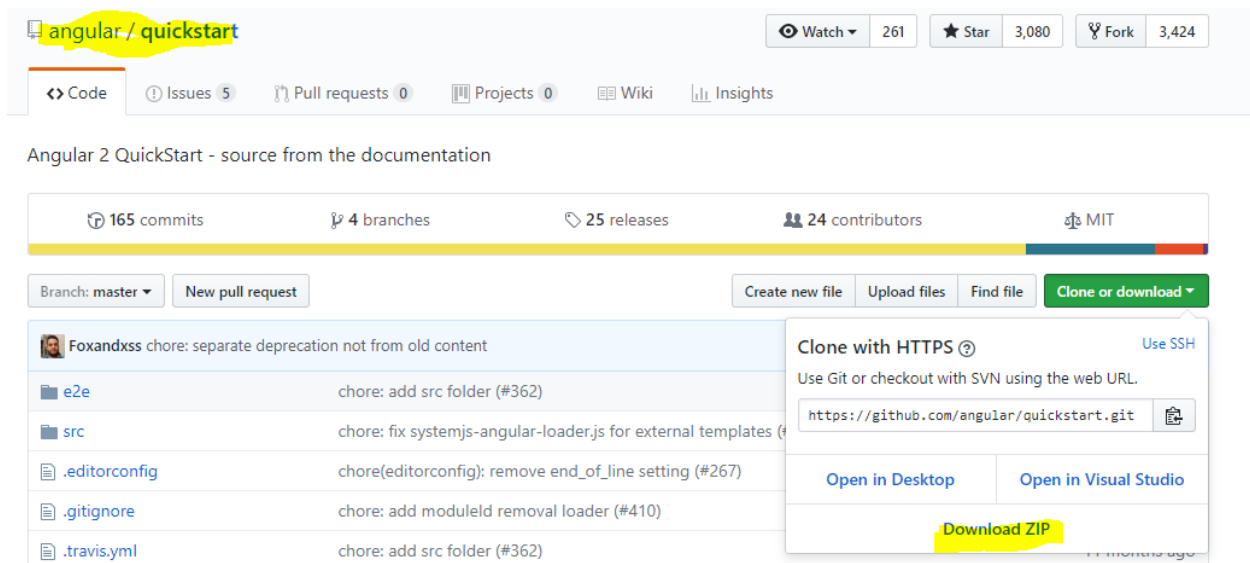


## DOWNLOAD QUICKSTART FILES FROM THE ANGULAR WEBSITE

<https://github.com/angular/quickstart>

or go to [github.com/angular](https://github.com/angular) and do a search on quickstart

and download the zip file. We will be using some of the files in here but not all of them are required.

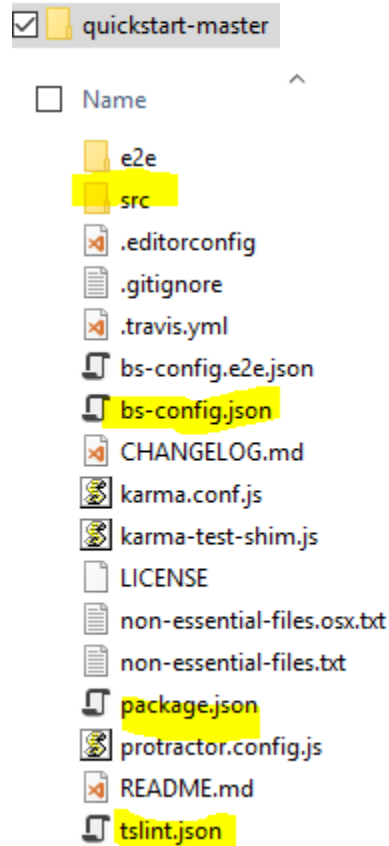


We will be copying files from the extracted folder to run Angular in VS2017

Extract and copy the starter files to the project.

What files do I need to copy into my VS project?

You need to copy the src folder, bs-config.json, package.json, tslint.json



Copy these files into the root directory of the project, not the solution folder.

If, for example, I have a project called ANGULAR2\_DEMO as shown I will have a series of folders to navigate