



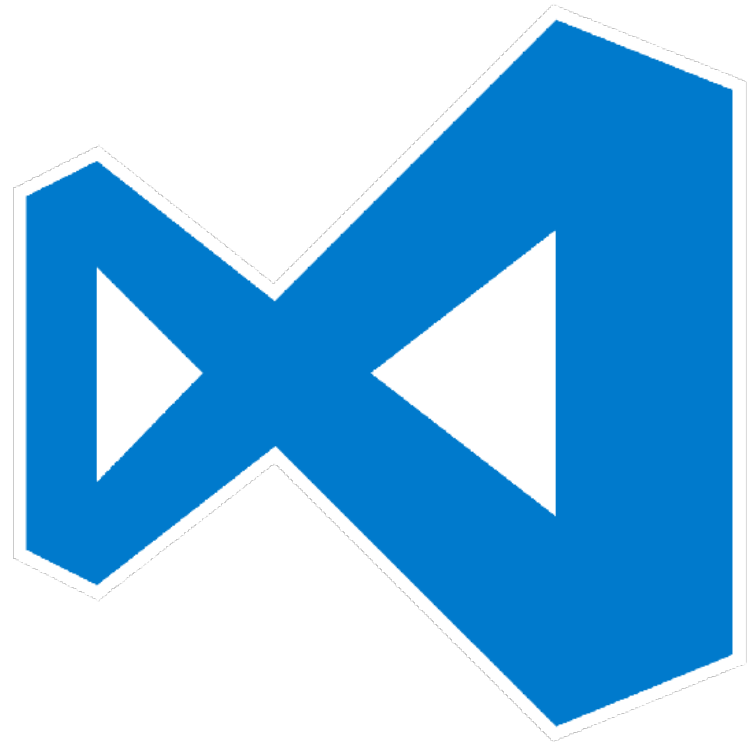
# Machine Setup and Git

High Country Angular Meetup  
Monday, June 18, 2018



# ***Selecting an Editor***

- Atom
- Coda2
- Eclipse
- Visual Studio
- Visual Studio Code (VS Code)
- WebStorm

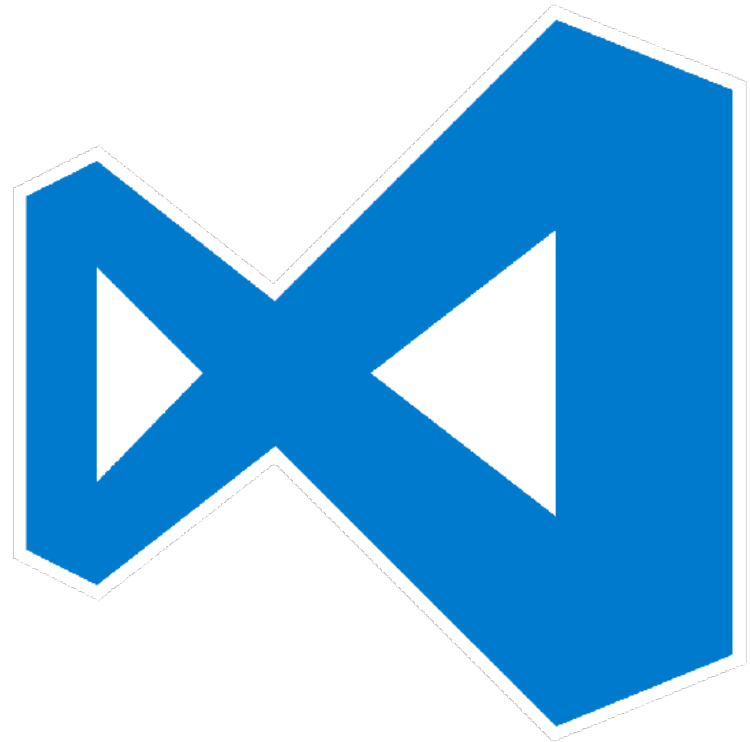


# Selecting an Editor

VS Code runs on Windows, Mac, and Linux

Great support for Angular

- Auto Completion
- Intellisense
- Syntax Checking
- and Refactoring



# LAB – Installing VS Code

[code.visualstudio.com](https://code.visualstudio.com)

The image shows the Visual Studio Code website and a screenshot of the VS Code interface. The website header includes links for Visual Studio Code, Docs, Updates, Blog, Community, Extensions, and FAQ, along with a Search Docs button and a Download button. A banner for Version 1.23 is displayed. The main content area features the text "Code editing. Redefined." and "Free. Open source. Runs everywhere." with download buttons for .deb, .rpm, and a dropdown for other platforms. A disclaimer at the bottom states: "By using VS Code, you agree to its license and privacy statement."

The screenshot of the VS Code interface shows the "www.ts - node-express-ts - Visual Studio Code" window. The left sidebar displays the "EXTENSIONS" view with a list of popular extensions:

Extension	Version	Downloads	Rating	Author	Action
C#	1.2.2	356K	★★★★★	Microsoft	Install
Python	0.3.17	211K	★★★★★	Don Jayamanne	Install
Debugger for Chrome		148K	★★★★★	Microsoft JS Diagnostics	Install
C/C++	0.7.1	143K	★★★★★	Microsoft	Install
Go	0.6.39	99K	★★★★★	Rich Go language support for Visual Stu...	Install
ESLint	0.10.18	88K	★★★★★	Intense ES Linting VS Code	Install

The main editor area shows a TypeScript file named "app.ts" with the following code:

```
1 import app from './app';
2 import debugModule = require('debug');
3 import http = require('http');
4
5 const debug = debugModule('node-express-typescript:ser
6
7 // Get port from environment and store in Express.
8 const port = normalizePort(process.env.PORT || '3000')
9 app.set('port', port);
10
11 // CSSImportRule
12 // CSSSupportsRule
13 export
14 exports
15 import
16 importScripts
17 MessagePort
18 normalizePort
19 port const port: number | string | boolean
20
21 function normalizePort(val: any): number|string|boolean
```

# ***LAB – Installing VS Code***

Choose the installer appropriate for your OS

## Download Visual Studio Code

Free and open source. Integrated Git, debugging and extensions.



↓ Windows

Windows 7, 8, 10

.zip | 32 bit versions



↓ .deb

Debian, Ubuntu

↓ .rpm

Red Hat, Fedora, SUSE

.tar.gz | 32 bit versions



↓ Mac

macOS 10.9+

## ***LAB – Installing VS Code***

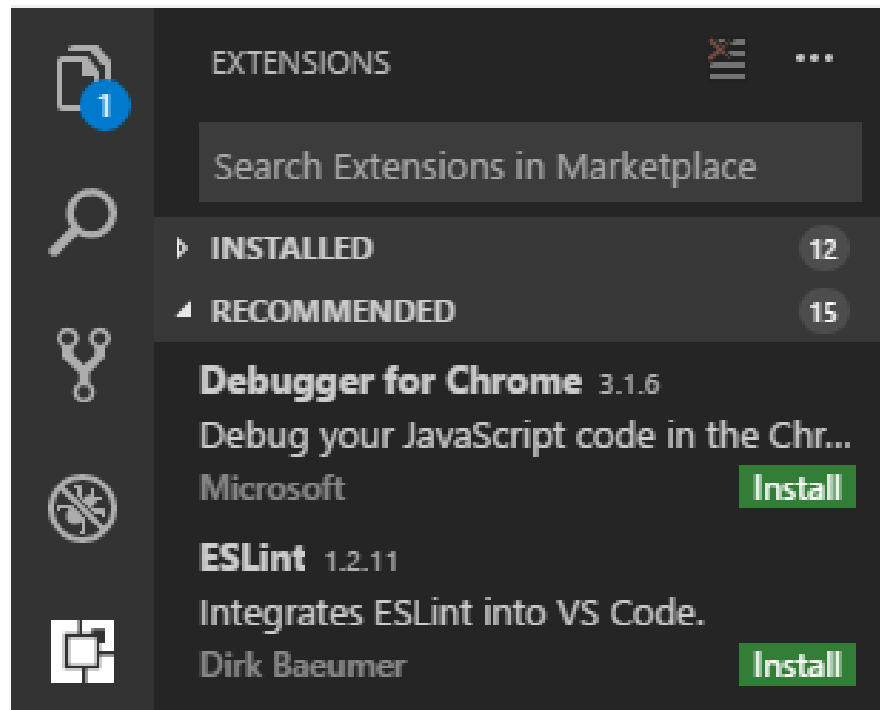
Run the install



# LAB – Installing VS Code

Once installed, open VS Code and open Extensions by clicking on the Extensions icon at the bottom of the left menu.

Use the Search to find **Angular Essentials**





## ***LAB – Installing VS Code***

**Angular Essentials** is an extension pack curated and maintained by Angular developer John Papa

- Angular v6 Snippets
- Angular Language Service
- EditorConfig for Visual Studio Code
- TSLint
- Debugger for Chrome  
(You'll want to use Chrome with the Augury extension)
- Path Intellisense
- angular2-inline
- Winter is Coming theme
- Prettier – Code Formatter

**Click INSTALL**

# ***LAB – Installing VS Code***

Choose File > Preferences > Settings and in the User Settings and add the following to your settings to configure your new Extensions:

```
{  
  "window.zoomLevel": 1,  
  "gitlens.advanced.messages": {  
    "suppressShowKeyBindingsNotice": true  
  },  
  "editor.formatOnSave": true,  
  "prettier.singleQuote": true,  
  "prettier.eslintIntegration": true,  
  "prettier.tabWidth": 2,  
  "gitlens.historyExplorer.enabled": true,  
  "typescript.updateImportsOnFileMove.enabled": "always",  
  "editor.codeActionsOnSave": {  
    "source.organizeImports": true  
  }  
}
```

# ***LAB – Installing VS Code***

Choose File > Preferences > Settings and in the User Settings and add the following to your settings to configure your new Extensions:

Grab it here: **[tinyurl.com/vscode-settings](https://tinyurl.com/vscode-settings)**

# ***LAB – Installing VS Code***

## **Windows:**

- restart your computer

## **MacOS:**

- CTRL+SHIFT+P to open the command palette
- Type Shell Command and choose Install 'code' command in PATH

Now you'll be able to type 'code .' in any directory to open your projects.

# ***NPM (Node Package Manager)***



## **What is NPM?**

NPM is a command line utility that interacts with a repository of open source projects.

Easily install libraries, packages, and applications - along with their dependencies.

Execute scripts to transpile our code and launch our Angular applications.

# LAB – Installing NPM



[npmjs.com](https://npmjs.com)

On the NPM site, scroll down to Get Started and then click on the link for **node.js**



## Get started with npm

The npm command-line tool is bundled with **Node.js**. If you have it installed, then you already have npm too. If not, go download **Node.js**.

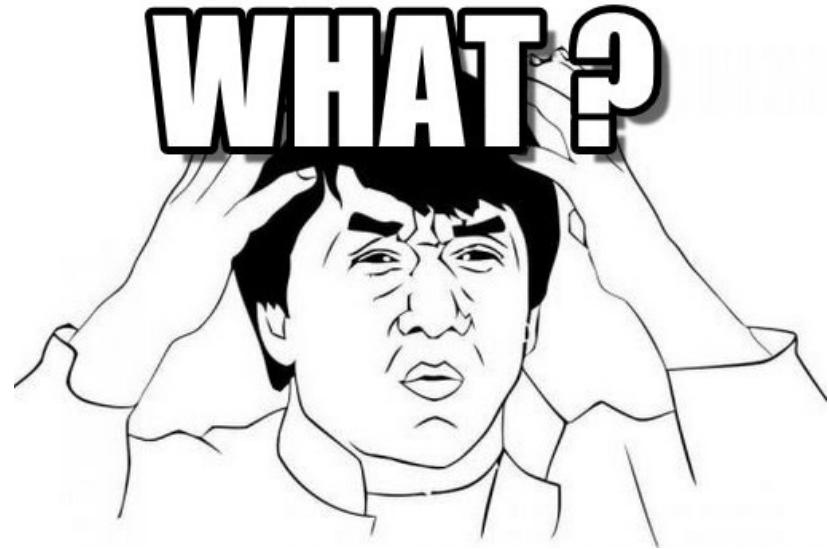
# ***LAB – Installing NPM***

## **What is Node.js?**

Node.js is an open source server environment that uses JavaScript on the server

Node can:

- generate dynamic page content
- create, open, read, write, delete, and close files on the server
- collect form data
- add, delete, and modify data in your database



# ***LAB – Installing NPM***

## **Is Node.js a file?**

.js is the conventional filename extension for JavaScript code

the name "Node.js" does not refer to a particular file in this context it is the name of the product

NPM is bundled with Node so to install NPM, you install Node.js and get both.

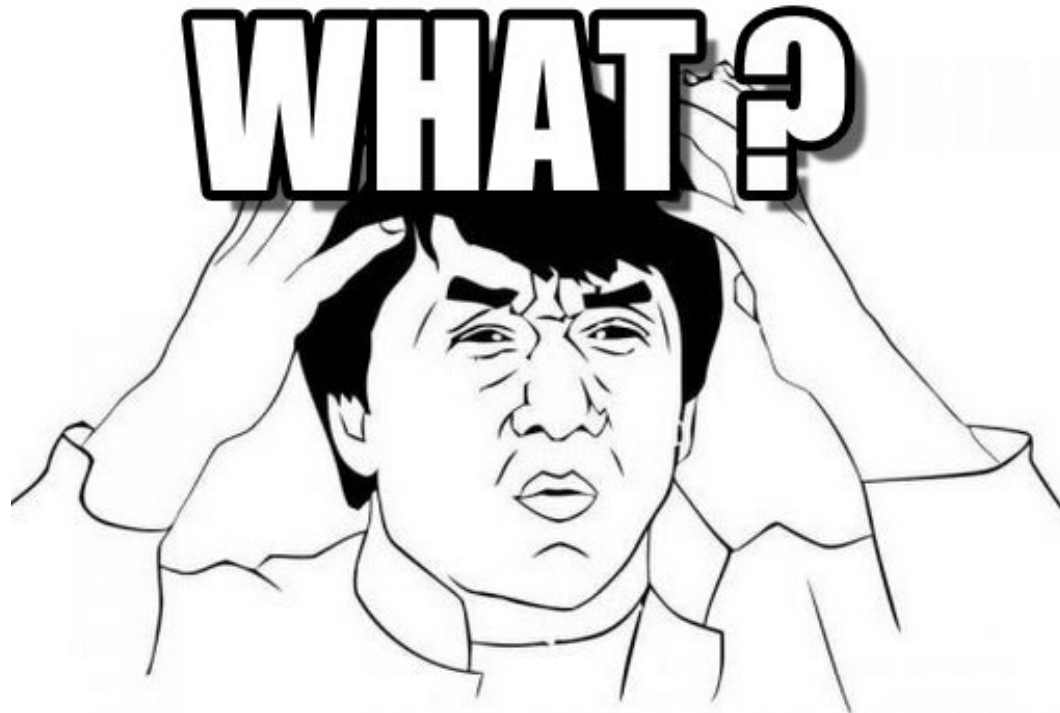




# ***LAB – Installing Node.js and NPM***

## **NVM – Node Version Manager**

For Linux and macOS, use Node Version Manager (NVM). NVM is a community tool that allows you to run different versions of Node.js on your machine.



# LAB – Installing Node.js and NPM

There is an NVM for Windows, but can be involved to install.

[tinyurl.com/nvm-windows](https://tinyurl.com/nvm-windows)

Use the Nodejs.org Downloads page. Choose the LTS version installer appropriate for your version of Windows.

## Downloads

Latest LTS Version: 8.11.2 (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

node-v8.11.2-x86.msi



#### macOS Installer

node-v8.11.2.pkg



#### Source Code

node-v8.11.2.tar.gz

Windows Installer (.msi)	32-bit	64-bit
Windows Binary (.zip)	32-bit	64-bit

# ***LAB – Installing NVM and Node.js and NPM***

**Install NVM on Linux or macOS - [tinyurl.com/install-nvm](https://tinyurl.com/install-nvm)**

In your terminal install using Curl or Wget:

```
curl -o- https://raw.githubusercontent.com/creationix/nvm/v0.33.0/install.sh | bash
```

```
wget -qO- https://raw.githubusercontent.com/creationix/nvm/v0.33.0/install.sh | bash
```

Verify your installation:

```
nvm --version
```

The logo for Node Version Manager (nvm) features the lowercase letters 'nvm' in a bold, white, sans-serif font against a dark gray background.

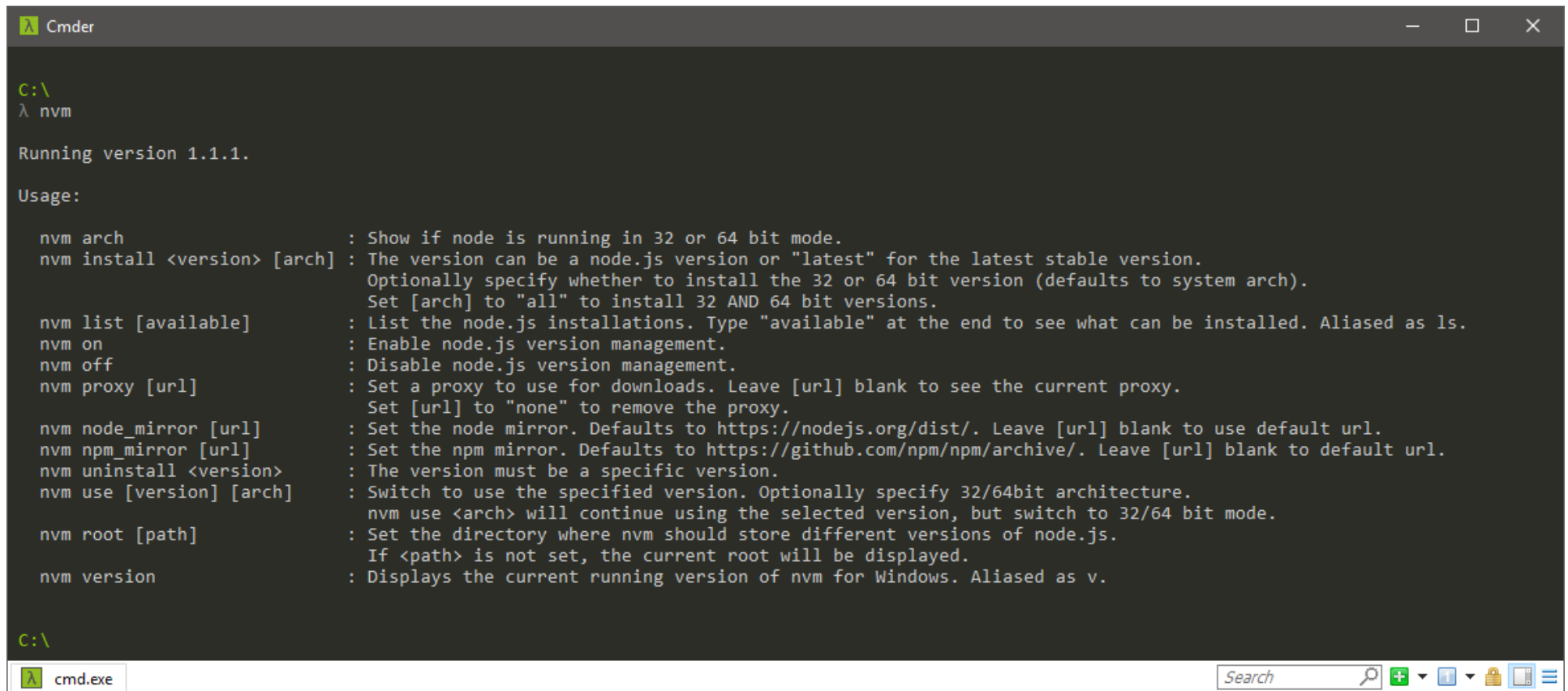
**node version manager**

Simple bash script to manage multiple active node.js versions

# LAB – Installing NVM and Node.js and NPM

Install the latest available LTS version of Node.js and NPM:

**nvm install --lts**



```
C:\> nvm

Running version 1.1.1.

Usage:

nvm arch                : Show if node is running in 32 or 64 bit mode.
nvm install <version> [arch] : The version can be a node.js version or "latest" for the latest stable version.
                                Optionally specify whether to install the 32 or 64 bit version (defaults to system arch).
                                Set [arch] to "all" to install 32 AND 64 bit versions.
nvm list [available]      : List the node.js installations. Type "available" at the end to see what can be installed. Aliased as ls.
nvm on                   : Enable node.js version management.
nvm off                  : Disable node.js version management.
nvm proxy [url]          : Set a proxy to use for downloads. Leave [url] blank to see the current proxy.
                                Set [url] to "none" to remove the proxy.
nvm node_mirror [url]    : Set the node mirror. Defaults to https://nodejs.org/dist/. Leave [url] blank to use default url.
nvm npm_mirror [url]     : Set the npm mirror. Defaults to https://github.com/npm/npm/archive/. Leave [url] blank to default url.
nvm uninstall <version>  : The version must be a specific version.
nvm use [version] [arch] : Switch to use the specified version. Optionally specify 32/64bit architecture.
                                nvm use <arch> will continue using the selected version, but switch to 32/64 bit mode.
nvm root [path]          : Set the directory where nvm should store different versions of node.js.
                                If <path> is not set, the current root will be displayed.
nvm version              : Displays the current running version of nvm for Windows. Aliased as v.

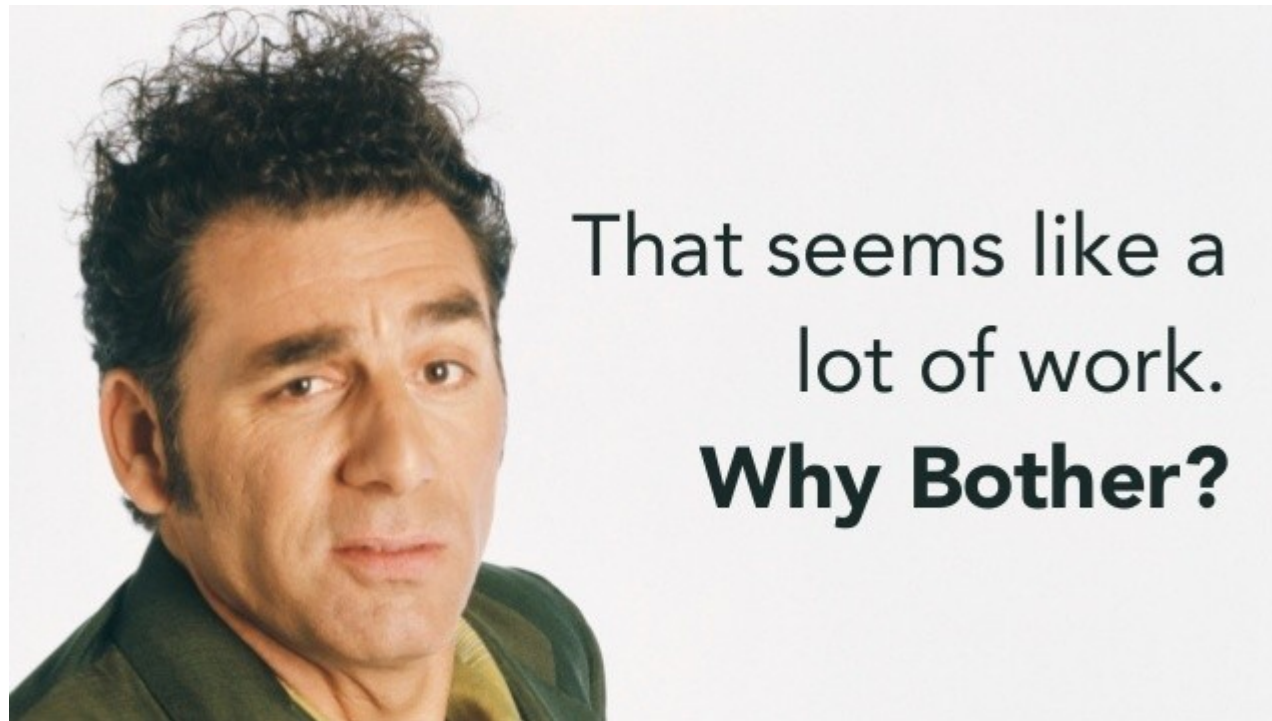
C:\>
```

# Setting Up an Angular Application

## Manual Steps:

- Create an application folder
- Add package definition and configuration files
- Install the packages
- Create the application's Angular Module
- Create the main.ts file
- Create the host page (index.html)

# Setting Up an Angular Application



# Setting Up an Angular Application

Setting this up manually is time consuming and prone to error, so luckily we have other options.

## **GitHub**

The Angular team provides a set of quickstart files you can use to setup a boilerplate application.

**[github.com/angular/quickstart](https://github.com/angular/quickstart)**

## **Angular CLI**

Command line tool that will generate the setup files and boilerplate code for an Angular application.

# Setting Up an Angular Application

## Angular CLI

- Generates your components, services, modules, and other files.
- Scaffolds and executes your unit and end-to-end-tests.
- Provides options to minimize, package, and prepare the files you need for deployment.

Angular CLI is the recommended tool for building, testing, and deploying Angular applications. **[github.com/angular/angular-cli](https://github.com/angular/angular-cli)**

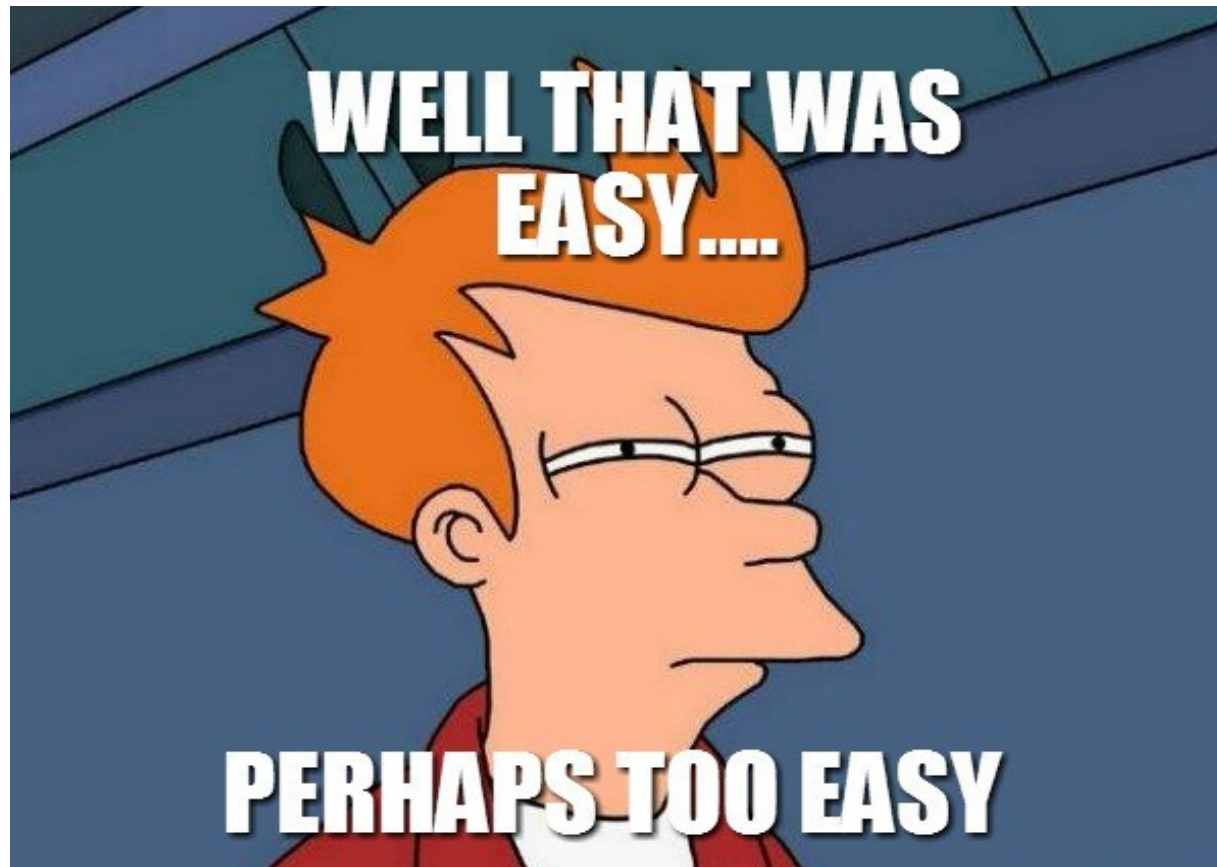




## ***LAB - Installing Angular CLI***

Open a terminal and run:

```
npm install -g @angular/cli
```



## ***LAB - Setting up a new Angular Project***

Open a terminal and change to the directory where you want to place the new Angular project

Run:

**ng new PROJECT-NAME**

**cd PROJECT-NAME**

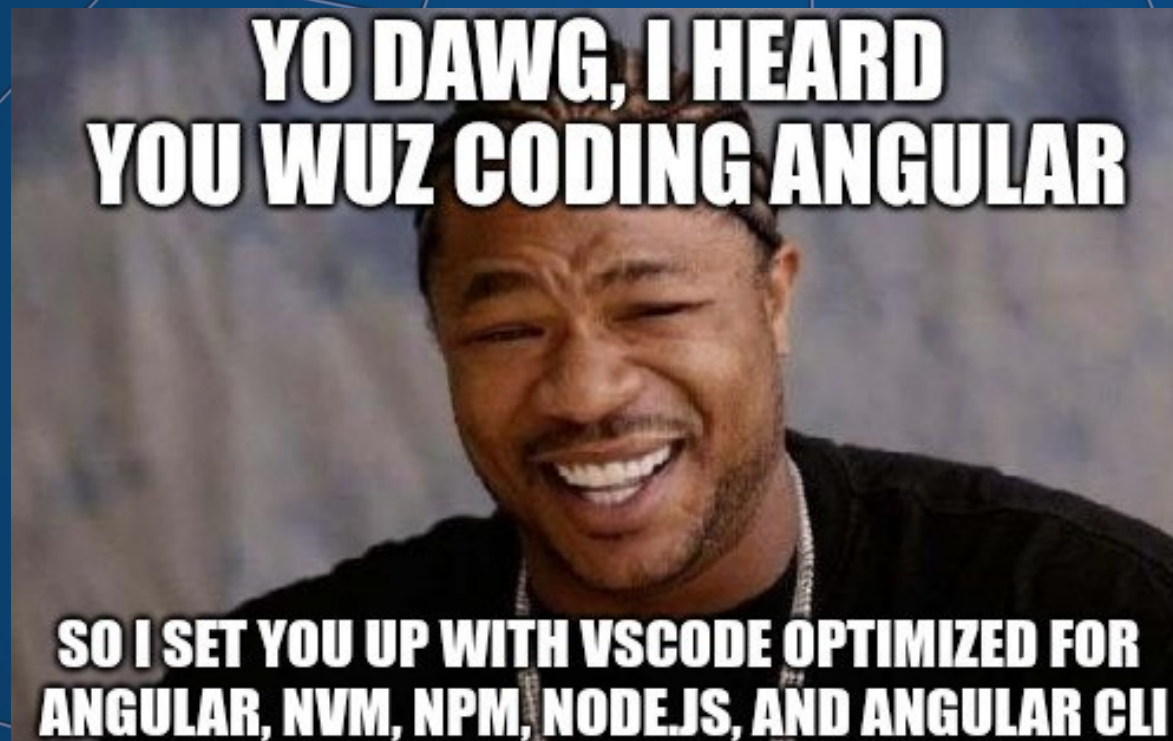
**code .**

**ng serve -o**

The application will automatically reload in your browser if you change any source files.

In VS Code, open **src > app > app.component.html**

Edit any of the text and you'll see the change in your browser.



**You now have all the tools you need to build Angular applications on your local machine.**

**But what about sharing your code and working collaboratively with a team ?**

**That's where Git comes in . . .**



# git

<https://github.com/ngHighCountry/HighCountryAngular.git>