Setup for Angular Classes

Infrastructure

- Projector connectable to the instructor's laptop
- Whiteboard or flipcharts for lectures
- A connection to the Internet

Hardware

- One computer for every two students with at least 1Gb of free disk space

Security needs

- Authorization to download a zip file from http://github.com.
- Authorization to run "npm install" to pull files from the npm repository. Note that this is not the traditional install, but is a lower-risk way of downloading JavaScript files into a local folder.

Software

One or more modern browsers	
Examples: Google Chrome, Firefox, Edge, Opera, and Safari. Multiple browsers will allow the student to experience browser differences.	
Versions	Any - latest is preferred
Sources	• http://google.com/chrome • http://mozilla.org/firefox • http://microsoft.com/edge
Validation steps	Open any of those browsers and browse to any site. If you can see the site, it is installed properly.

A text editor	
One with JavaScript syntax highlighting and code completion would be best. Visual Studio Code is preferred. Atom, Brackets, and WebStorm are acceptable.	
Versions	Visual Studio Code -- 1.25 or better
Sources	• http://code.visualstudio.com • http://atom.io • http://brackets.io • http://jetbrains.com/webstorm
Validation steps	If the editor opens, it is installed properly.

Bash shell
This comes standard on all Apple and Linux machines. It is an extra install on Windows. The most popular way to install on Windows is through Git-for-

windows	
Version	• 2.13 or better
Source	https://git-for-windows.github.io/
Installation instructions	Click the download button. Choose your preferred installer, probably Git-X.X.X-32-bit.exe or Git-X.X.X-64.exe. Once it downloads, run the executable and follow the installer's instructions.
Validation steps	1. Hit the Windows button. 2. In the search box, type "bash". You should see "Git Bash". 3. Click it. 4. A command window will come up. Type in `bash --version` 5. If you see a version number, it is installed properly.

node and npm

Both of these tools are installed together as part of the same package. node is needed to create a local web server and run project setup scripts. npm is needed to download and configure JavaScript libraries.	
Versions	• node 8.9 or higher (As of Angular 6) • npm 5.2 or higher
Source	http://nodejs.org/download
Installation instructions	The download page give you a choice between LTS and Current. Either is fine. LTS is preferred. Download the installer and follow the instructions provided.

Validation steps	1. Open a new bash window and type in
	`node --version`
	2. If you see a version number, node is installed properly.
	3. Type in
	`npm --version`
	4. If you see a version number, npm is installed properly.

Troubleshooting notes	If the command is not found, you may need to add the node directory to the PATH. For Windows, it is %PROGRAM FILES%\nodejs and for Unix (including MacOS), it is /usr/local/bin.

The Angular CLI

This tool allows us to create applications and run them in development mode.	
Version	• 1.7.4 or higher (As of Angular 6)
Installation instructions	1. Open a command line window and type in... `npm install --global @angular/cli`
Validation steps	1. Open a new bash window and type in `ng --version` 2. If you see the version it is installed properly
Troubleshooting notes	If the command is not found, you may need to add the install directory to the PATH. For Windows, it is %APP_DATA%\npm

	and for Unix (including MacOS), it is /usr/local/bin. If you aren't able to install this due to lack of administrative privileges, we can work around the install by using npx or installing the Angular CLI locally and setting path.

MongoDB

This database server will allow us to better simulate real-world problems and solutions by working with data.

Versions	• 3.2 or higher
Sources	https://www.mongodb.com/download-center#community
Installation instructions	You will have a choice of the level. Choose "Community Edition". You may have a choice between LTS and Current. Either is fine. LTS is preferred. 1. Download the installer and choose to run it. 2. Follow the instructions in the installer. But on the 3rd screen uncheck "Install MongoDB Compass". 3. As a regular user (**not** an admin), create a directory called "C:\data\db" (/data/db on Mac/Linux). 4. Add mongo's bin directory to the path. If you don't know how to that, here's a video: http://bit.ly/addmongotopath

Validation steps	1. Open a new bash window with the authority of a normal user
	2. Type in
	`mongod`
	3. You'll see several messages. One of the last ones says that mongo is listening on a port, usually 27017.
	4. Leave that window running as-is.
	5. Open another new bash window.
	6. Type in
	`mongo`
	7. You'll see a command prompt. Type in
	`show dbs`
	8. You should see a database called "local"
	9. Type in
	`use local`
	10. Type in
	`show collections`
	11. You should see a collection called "startup_log" in the list
	12. Type in
	`db.startup_log.find()`
	13. If you see any output other than an error message, MongoDB is installed properly.

Troubleshooting notes	• If the command is not found, you may need to add the node directory to the PATH. For Windows, it is %PROGRAM FILES%\mongo and for Unix (including MacOS), it is

/usr/local/bin.

- If you get errors about permissions when trying to run mongod, it could be that the permissions are set wrong on the data directory. To solve that, try running mongod as an administrator.
- If the install just fails with no explanation, try disabling your anti-virus/firewall software during install.