

# Setup for Angular Classes

## Infrastructure

- Projector connectable to the instructor's laptop
- Whiteboard and/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> or read it from a USB thumb drive and to extract the files.
- 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	<ul style="list-style-type: none"><li>• <a href="http://google.com/chrome">http://google.com/chrome</a></li><li>• <a href="http://mozilla.org/firefox">http://mozilla.org/firefox</a></li><li>• <a href="http://microsoft.com/edge">http://microsoft.com/edge</a></li></ul>
---------	---

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	<ul style="list-style-type: none"><li>• Visual Studio Code -- 1.16 or better</li></ul>
----------	--

Sources	<ul style="list-style-type: none"><li>• <a href="http://code.visualstudio.com">http://code.visualstudio.com</a></li><li>• <a href="http://atom.io">http://atom.io</a></li><li>• <a href="http://brackets.io">http://brackets.io</a></li><li>• <a href="http://jetbrains.com/webstorm">http://jetbrains.com/webstorm</a></li></ul>
---------	---

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	<ul style="list-style-type: none"> <li>• 2.13 or better</li> </ul>
Source	<a href="https://git-for-windows.github.io/">https://git-for-windows.github.io/</a>
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	<ol style="list-style-type: none"> <li>1. Hit the Windows button.</li> <li>2. In the search box, type "bash". You should see "Git Bash".</li> <li>3. Click it.</li> <li>4. A command window will come up. Type in  <code>bash --version</code></li> <li>5. If you see a version number, it is installed properly.</li> </ol>

## 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	<ul style="list-style-type: none"> <li>• node 6.9 or higher</li> <li>• npm 3 or higher</li> </ul>
Source	<a href="http://nodejs.org/download">http://nodejs.org/download</a>
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	<ol style="list-style-type: none"> <li>1. Open a bash window and type in  <code>node --version</code></li> <li>2. If you see a version number, node is installed properly.</li> <li>3. Type in  <code>npm --version</code></li> <li>4. If you see a version number, npm is installed properly.</li> </ol>
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 database server will allow us to better simulate real-world problems and solutions by working with data.

Version	<ul style="list-style-type: none"> <li>• 1.0 or higher</li> </ul>
Installation instructions	<ol style="list-style-type: none"> <li>1. Open a command line window and type in...  <code>npm install --global @angular/cli</code></li> </ol>
Validation steps	<ol style="list-style-type: none"> <li>1. Open a new bash window and type in  <code>ng --version</code></li> <li>2. If you see version 1.0 or higher, it is installed properly</li> </ol>

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.
-----------------------	---

## MongoDB

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

Versions	<ul style="list-style-type: none"> <li>3.2 or higher</li> </ul>
Sources	<a href="https://www.mongodb.com/download-center#community">https://www.mongodb.com/download-center#community</a>
Installation instructions	<p>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.</p> <ol style="list-style-type: none"> <li>1. Download the installer and choose to run it.</li> <li>2. Follow the instructions in the installer.</li> <li>3. As a regular user (<b>not</b> an admin), create a directory called "C:\data\db" (/data/db on Mac/Linux).</li> <li>4. Add mongo's bin directory to the path. If you don't know how to that, here's a video: <a href="http://bit.ly/addmongotopath">http://bit.ly/addmongotopath</a></li> </ol>
Validation steps	<ol style="list-style-type: none"> <li>1. Open a new bash window with the authority of a normal user</li> <li>2. Type in  <pre>mongod</pre> </li> <li>3. You'll see several messages. One of the last ones says that mongo is listening on a port, usually 27017.</li> <li>4. Leave that window running as-is.</li> <li>5. Open another new bash window.</li> <li>6. Type in  <pre>mongo</pre> </li> <li>7. You'll see a command prompt. Type in  <pre>show dbs</pre> </li> <li>8. You should see a database called "local"</li> <li>9. Type in  <pre>use local</pre> </li> <li>10. Type in  <pre>show collections</pre> </li> <li>11. You should see a collection called "startup_log" in the list</li> <li>12. Type in  <pre>db.startup_log.find()</pre> </li> <li>13. If you see any output other than an error message, MongoDB is installed properly.</li> </ol>
Troubleshooting notes	<p>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.</p> <p>If you get errors about permissions when trying to run mongod, it could be that the permissions are set wrong on the data</p>

directory. To solve that, try running mongod as an administrator.