# 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

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| 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. |

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| 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 -- 1.18 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. |

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| 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   1. If you see a version number, it is installed properly. |

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| 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 6.9 or higher * 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   1. If you see a version number, node is installed properly. 2. Type in   npm --version   1. 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. |

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| The Angular CLI | |
| This tool allows us to create applications and run them in development mode. | |
| Version | * 1.5 or higher |
| 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   1. 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. |

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| 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. 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   1. You'll see several messages. One of the last ones says that mongo is listening on a port, usually 27017. 2. Leave that window running as-is. 3. Open another new bash window. 4. Type in   mongo   1. You'll see a command prompt. Type in   show dbs   1. You should see a database called "local" 2. Type in   use local   1. Type in   show collections   1. You should see a collection called "startup\_log" in the list 2. Type in   db.startup\_log.find()   1. 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. |