

# Setup for React and Redux 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>
- Authorization to run "npm install" to pull files from the global npm repository.

## 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 -- 1.25 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 8.2 or higher</li> <li>npm 6.0 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 new 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.

## 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>4.0.10 or higher</li> </ul>
Sources	<a href="https://www.mongodb.com/download-center#community">https://www.mongodb.com/download-center#community</a>
Installation instructions - Windows	<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. But on the 3<sup>rd</sup> screen <u>uncheck</u> "Install MongoDB Compass". Compass</li> </ol>

	<p>is unneeded by us and has been known to stall on Windows.</p> <ol style="list-style-type: none"> <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>
Installation instructions - MacOS	<p>Use Homebrew to install.</p> <ol style="list-style-type: none"> <li>1. Type these two commands</li> </ol> <pre>brew tap mongodb/brew brew install mongodb-community</pre>
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 mongod</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 mongo</li> <li>7. You'll see a command prompt. Type in show dbs</li> <li>8. You should see a database called "local"</li> <li>9. Type in use local</li> <li>10. Type in show collections</li> <li>11. You should see a collection called "startup_log" in the list</li> <li>12. Type in db.startup_log.find()</li> <li>13. If you see any output other than an error message, MongoDB is installed properly.</li> </ol>
Troubleshooting notes	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• If the install just fails with no explanation, try disabling your anti-virus/firewall software during install.</li> </ul>