Installation Manual

Installing Node.js

It's time to follow along and install and configure all your build tools. Let's start by heading to the Node.js website, `https://nodejs.org`, and downloading Node.js:

> **Note**
>
> Node is a JavaScript runtime that uses Google Chrome's V8 JavaScript engine. What that means is that Node is a JavaScript-based web server that you can run locally or in production. It includes an event-driven, non-blocking I/O model which is easy to use and lightweight. Node comes with a built-in package manager called `npm` which includes the largest ecosystem of open source libraries on the Web.

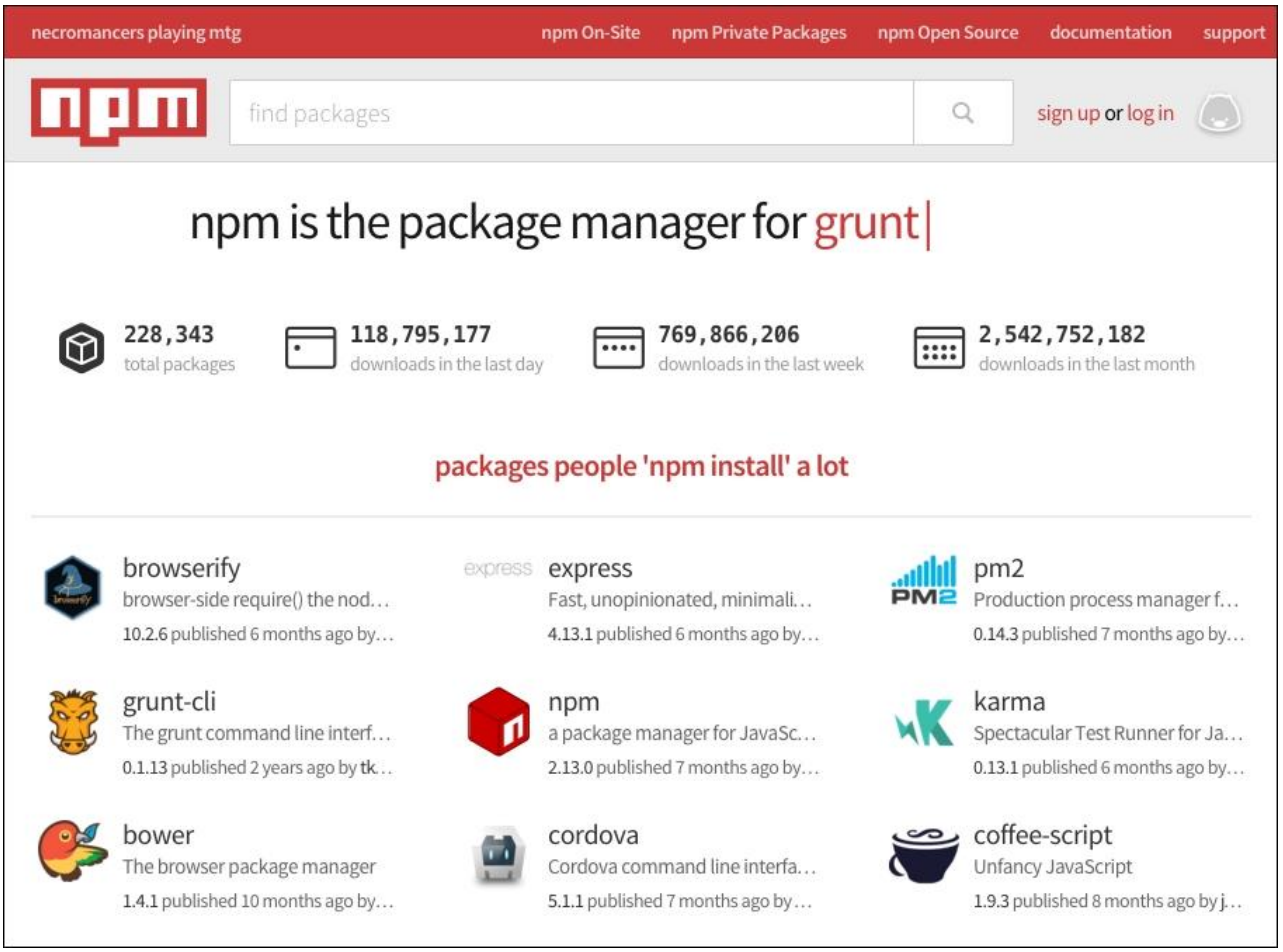
Follow the installation instructions on the Node.js website and once you're done, open up a command-line application such as Terminal or Cygwin. Run the following command:

```
$ node -v
```

This will print out the Node.js version number that you installed and will confirm that it worked.

Updating npm

Now that Node is installed, let's ensure that the latest version of `npm` is also installed. `npm` is a package manager for Node and allows you to install useful tools such as Grunt, which we'll do in our next step.



To make sure the latest version of `npm` is installed, run the following command in the Terminal:

```
npm update -g npm
```

> **Note**
>
> You may need to include `sudo` before this command in some cases.
>
> Once the update is complete, we can safely start to install the other packages we'll need for our Bootstrap development environment.

Installing Grunt

Grunt is a JavaScript task runner and it's the tool that will do the actual compiling and building of the development Bootstrap files into the production versions.

Grunt provides automation and allows you to chain together repetitive tasks such as compiling, minification, linting, and unit testing. Therefore, it's commonly used in frameworks such as Bootstrap to build the source files into production. To install Grunt, run the following command in the Terminal:

```
npm install -g grunt-cli
```

If you receive any errors, you may need to add `sudo` to the beginning of the preceding command. After finishing your installation, run the following command to check the Grunt version number and confirm that everything is working properly:

```
$ grunt -v
```

You should expect to see something like this printed out in the Terminal:

```
grunt-cli v0.1.13
```

Installing Ruby

Another tool you need to work with the Bootstrap source files is Ruby. In Bootstrap, Ruby is used to run the documentation website and to compile the core Sass files into regular CSS. For the Bootstrap documentation, you can always visit `http://getbootstrap.com/`. However, in some cases, you may find yourself offline, so you might want to install a local version of the docs that you can use. Let's first start by installing Ruby before we get to the documentation.

Install Ruby and install Bundler with `gem install bundler`, and finally run `bundle install`. This will install all Ruby dependencies, such as Jekyll and plugins

Now you can run the documentation locally by running the following command from the `root /bootstrap` directory in your console:

```
bundle exec jekyll serve
```

After the preceding step, the documentation and examples are available at `http://localhost:/9010`.

The Bootstrap documentation website will load up and now you have a local version of the documentation! To quit out of the server, hit *Ctrl* + *C* and you will exit.

Installing Bootstrap

In order to compile source files into production, you now need to download the Bootstrap source files and install them on our local machine. In this course, we've used Bootstrap 4.0.0-alpha 2 version. The downloaded Bootstrap file is available in the code bundle.

Once you've got the file, unzip the package and move the directory to where you want it to live on your computer. If you just want to leave it on the desktop for now, that is fine. You can safely move the project around before or after editing it. The next thing you need to do is install the project dependencies. First, navigate to the root of the download package in the Terminal. Once you are there, run the following command to install the files:

```
$ npm install
```

If you get any type of error, try including `sudo` at the beginning of the command.

Using Bootstrap CLI

Instead of using Bootstrap's bundled build process, you can also start a new project by running the Bootstrap CLI.

Bootstrap CLI is the command-line interface for Bootstrap 4. It includes some built-in example projects, but you can also use it to employ and deliver your own projects.

You'll need the following software installed to get started with Bootstrap CLI:

- Node.js 0.12+
- Grunt or Gulp
- Git

The Bootstrap CLI is installed through `npm` by running the following command in your console:

```
npm install -g bootstrap-cli
```

This will add the Bootstrap command to your system.

Installing Harp.js

If you are on a Mac, run the following command to install Harp:

```
$ sudo npm install -g harp
```

If you happen to be on a Windows machine, you'll need to enter a slightly different command, which is as follows:

```
$ npm install -g harp
```

After the installation completes, run the following command to get the Harp version number, which will also confirm that the installation was successful:

```
$ harp version
```