**Task 1**

**Project Initialization**

What is npm?

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npm is two things: first and foremost, it is an online repository for the publishing of open-source Node.js projects; second, it is a command-line utility for interacting with said repository that aids in package installation, version management, and dependency management. A plethora of Node.js libraries and applications are published on npm, and many more are added every day. These applications can be searched for on <https://www.npmjs.com/>. Once you have a package you want to install, it can be installed with a single command-line command.

Let's say you're hard at work one day, developing the Next Great Application. You come across a problem, and you decide that it's time to use that cool library you keep hearing about - let's use Caolan McMahon's [async](http://github.com/caolan/async) as an example. Thankfully, npm is very simple to use: you only have to run npm install async, and the specified module will be installed in the current directory under ./node\_modules/. Once installed to your node\_modules folder, you'll be able to use require() on them just like they were built-ins.

Let's look at an example of a global install - let's say coffee-script. The npm command is simple: npm install coffee-script -g. This will typically install the program and put a symlink to it in /usr/local/bin/. This will then allow you to run the program from the console just like any other CLI tool. In this case, running coffee will now allow you to use the coffee-script REPL.

Another important use for npm is dependency management. When you have a node project with a [package.json](https://nodejs.org/en/knowledge/getting-started/npm/what-is-the-file-package-json/) file, you can run npm install from the project root and npm will install all the dependencies listed in the package.json. This makes installing a Node.js project from a git repo much easier! For example, vows, a Node.js testing framework, can be installed from git, and its single dependency, eyes, can be automatically handled:

Example:

git clone https://github.com/cloudhead/vows.git

cd vows

npm install

After running those commands, you will see a node\_modules folder containing all of the project dependencies specified in the package.json.