

NODE, NPM AND EXPRESS

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NODE

Node.js is an open-source and cross-platform JavaScript runtime environment. It is a popular tool for almost any kind of project!

HOW TO INSTALL NODE.JS

- Official packages for all the major platforms are available at <https://nodejs.dev/download/>.
- nvm is a popular way to run Node.js. It allows you to easily switch the Node.js version, and install new versions to try and easily rollback if something breaks.

NODE

RUN NODE.JS SCRIPTS FROM THE COMMAND LINE

```
node app.js
```

HOW TO EXIT FROM A NODE.JS PROGRAM

When running a program in the console you can close it with ctrl-C

```
// inside javascript code, 0 means success, other exit codes have different meaning  
process.exit(1);
```

NPM

NPM IS THE STANDARD PACKAGE MANAGER FOR NODE.JS

- Downloads
- Versioning
- Running Tasks

USEFUL COMMANDS

```
// if a project has a package.json file,  
// it will install/update/uninstall everything the project needs, in the node_modules folder  
npm install  
// this command adds <package-name> to the package.json file dependencies  
npm install <package-name>  
npm uninstall <package-name>  
  
npm run <task-name>  
  
// inside package.json  
{  
  "scripts": {  
    "start-dev": "node lib/server-development",  
    "start": "node lib/server-production"  
  }  
}
```

NPM

HOW TO USE OR EXECUTE A PACKAGE INSTALLED USING NPM

```
npm install lodash  
  
// to use it in your code  
const _ = require('lodash');
```

WHAT IF YOUR PACKAGE IS AN EXECUTABLE?

```
npm install cowsay  
  
./node_modules/.bin/cowsay  
npx cowsay take me out of here
```

NODE.JS MODULES

- Module in Node.js is a simple or complex functionality organized in single or multiple JavaScript files which can be reused throughout the Node.js application.
- Each module in Node.js has its own context, so it cannot interfere with other modules or pollute global scope. Also, each module can be placed in a separate .js file under a separate folder.

```
// Loading Core Modules
const module = require('module_name');
const http = require('http');

// Loading Local Module

// inside helloWorld.js file
module.exports = 'Hello world';

// relative import pathing
const helloWorld = require('../helloWorld');

// data.js
module.exports = {
  firstName: 'James',
  lastName: 'Bond'
}

// app.js
const person = require('./data.js');
console.log(person.firstName + ' ' + person.lastName);
```