Node 101

Quick intro to Node.js

What's Node?

- Javascript Backend Runtime
- Run's on the server (or local machine)
- Can run in the background
- Has access to the filesystem, hardware etc. through plugins/modules
- Has **no** direct graphic output (only console)

…
Provides a vast ecosystem of software/frameworks/plugins through **NPM**
(nowadays not limited to pure node stuff)

› https://nodejs.org/

What's NPM?

- (Node) Packaging Manager
- Provides all kinds of additional software for modern js based projects
- Simple standardized syntax to handle install, update etc.
- Takes care of versioning(… or tries to) and cross plattform issues

› https://www.npmjs.com/

What's package.json?

- Basic information of your project
- Saves the necessary packages for later install
  > No need to hand over "node_modules"
- Can provide custom script paths to create CLI shortcuts

```json
{
  "name": "basic-node-express-server",
  "version": "0.0.1",
  "description": "simple express serve",
  "main": "server.js",
  "dependencies": {
    "express": "^4.17.1"
  },
  "devDependencies": {},
  ▷ Debug
  "scripts": {
    "test": "test",
    "start": "node server.js"
  },
  "author": "",
  "license": "ISC"
}
```

Command Line

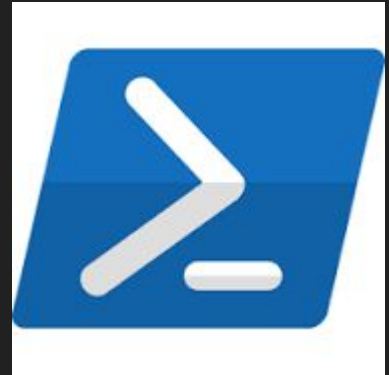To use Node and NPM you need to use a CLI – Command Line Interface

On Mac:
> **Terminal.app**

Windows:
> **Powershell**
> CMD (Win + R > cmd)

Basic CLI Commands / Shortcuts

`cd FOLDER_NAME`

Go into named Folder

`cd ..`

Go back one level (previous folder)

`ls -a`

List all files in current folder

`Press ctrl+c`

Stop current process

Basic Node / NPM Commands

`node SCRIPT_NAME.js`

Run node.js File. Extension not necessary if .js

`npm init`

Create basic package.json file and set up npm for your project

`npm install`

Initial install of all packages defined in package.json

`npm install PACKAGE_NAME`

Add new package

`npm start`

Run predefined start script (defined in package.json)

`npm run SCRIPT_NAME`

Run predefined script (defined in package.json)