



Intro to Node.js

by Minh for FCC



What is Node anyway?

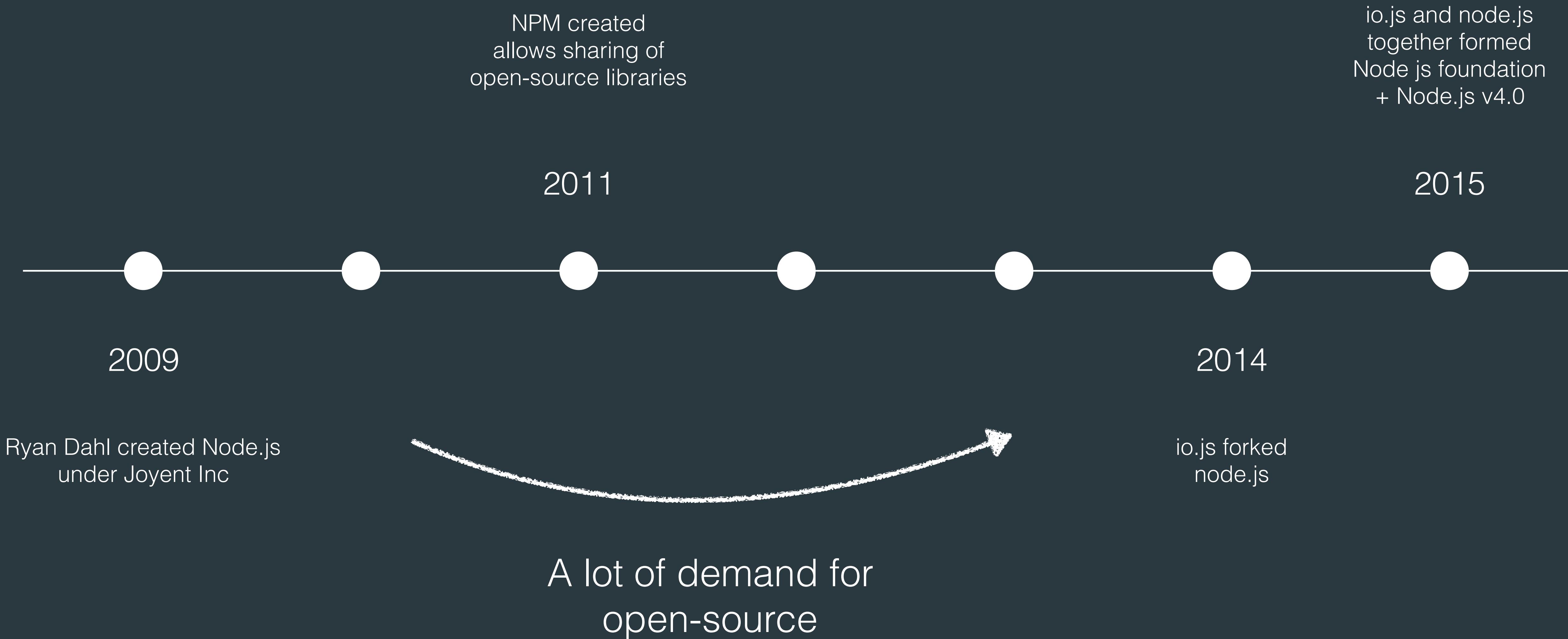
*“Node.js® is a **JavaScript runtime** built on Chrome’s V8 JavaScript engine.”*

- nodejs.org -



*In other words, it is **Javascript that is stripped away from the browser** and put on a computer to script other stuff*

How it came to be



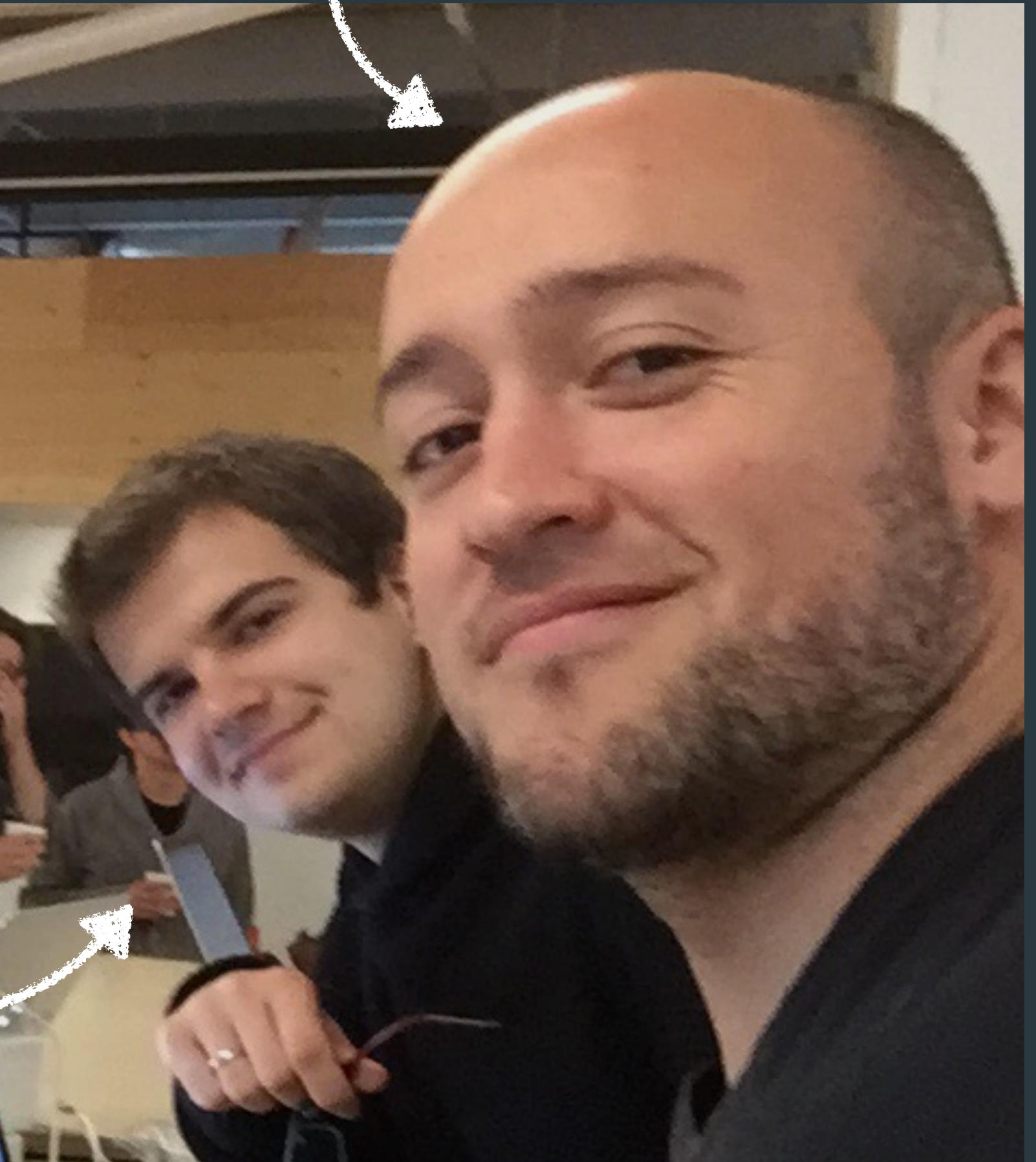
Installing Node.js

Just inSane

Download from: <https://nodejs.org/en/>

or ask
these guys

Alex



Some warm up

Executing JavaScript with Node.js

Executing
JS code from
command line

```
minh@Minhs-MacBook-Pro ~ $ node
> console.log('hello world!!!')
hello world!!!
undefined
>
```

Executing
JS code from
files

Index.js

```
5   console.log('hello world!!!')
```

Terminal

```
minh@Minhs-MacBook-Pro dragons (master) $ node index.js
hello world!!!
```

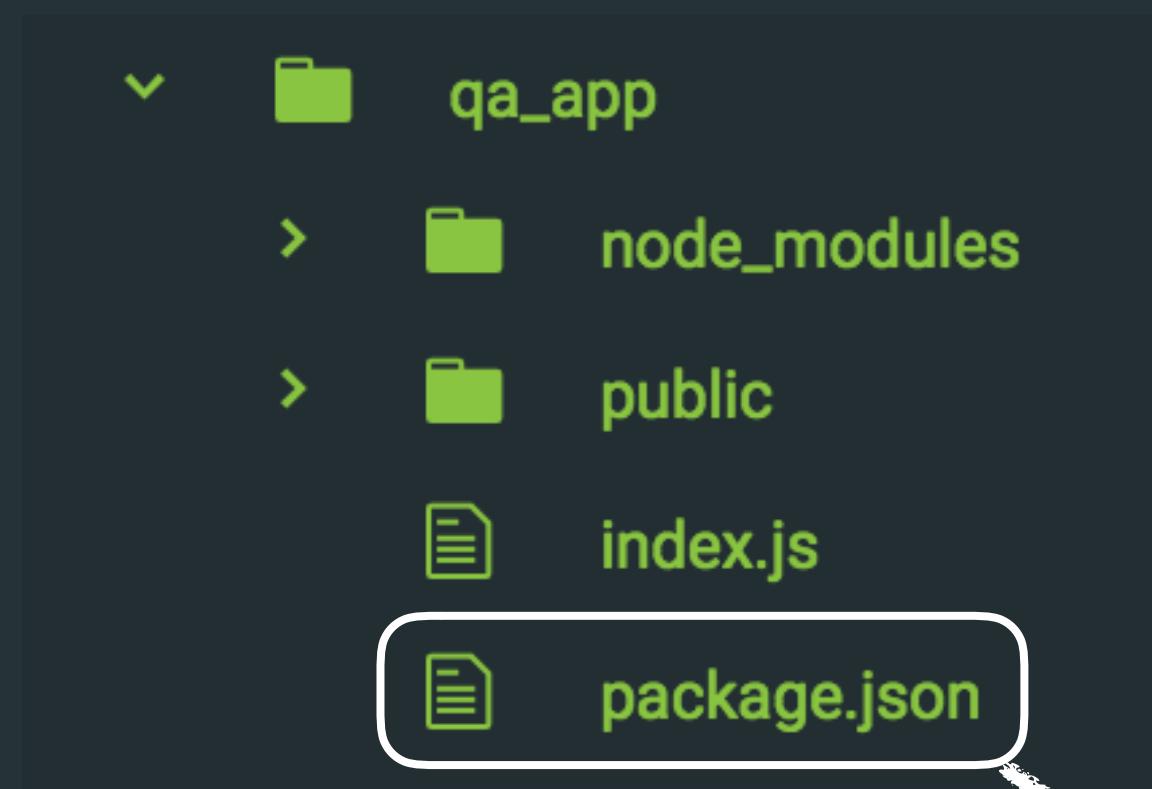
NPM - Setting up a project

Node Package Manager:

- The default **Package Manager** for node.
- Accessible through a Command Line Interface (CLI)

① npm init

Initializes a new project with a package.json, containing information about the project



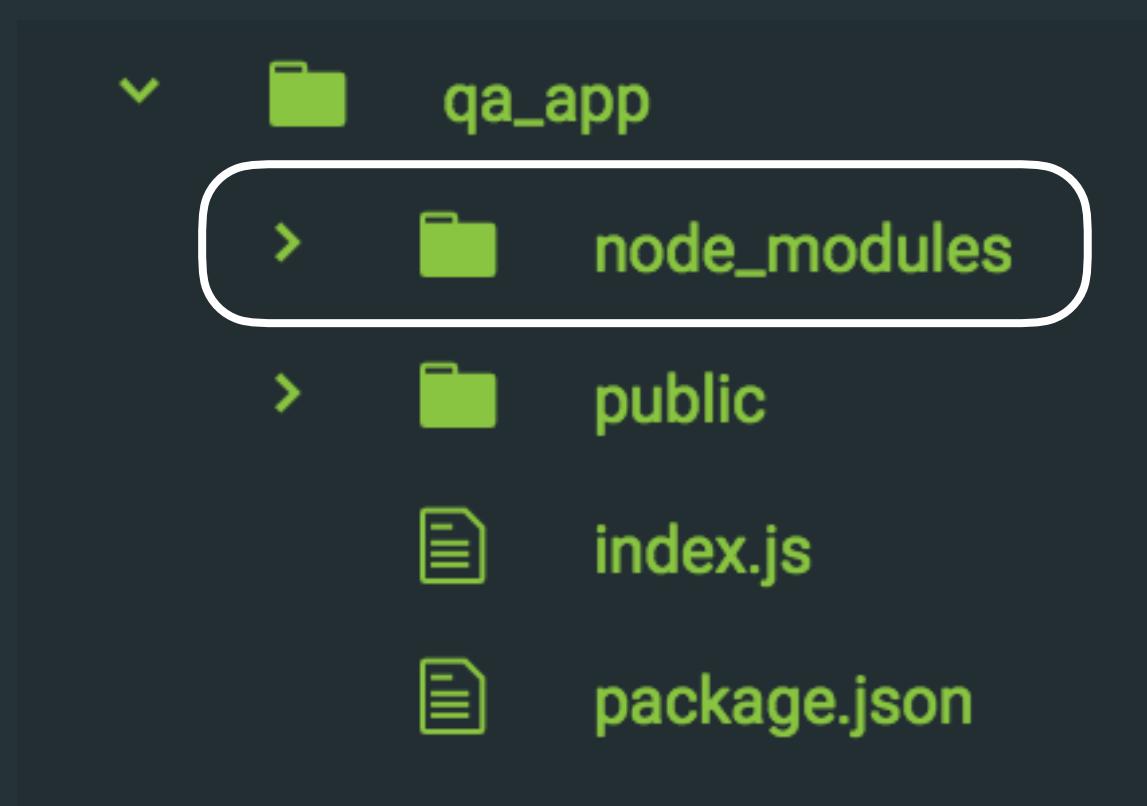
```
3  {
4    "name": "qa_app",
5    "version": "1.0.0",
6    "description": "",
7    "main": "index.js",
8    "scripts": {
9      "test": "echo \\\"Error: no test specified\\\" && exit 1"
10    },
11    "author": "",
12    "license": "ISC",
13    "dependencies": {
14      "express": "^4.15.3"
15    }
16 }
```

NPM - Installing dependencies

② `npm install --save <package>`

ex: `npm install --save express`

Installs and save package as project dependency



Installed packages are saved in `node_modules` directory

```
3  {
4    "name": "qa_app",
5    "version": "1.0.0",
6    "description": "",
7    "main": "index.js",
8    "scripts": {
9      "test": "echo \\\"Error: no test specified\\\" && exit 1"
10     },
11    "author": "",
12    "license": "ISC",
13    "dependencies": {
14      "express": "^4.15.3"
15    }
16 }
```

“`--save`” registered to project as dependency

registered dependencies can be installed all at once by running

`npm install`

without specifying any option

NPM - Installing dev dependencies

③ npm install --save-dev <package>

```
2 {  
3   "name": "dragons",  
4   "version": "1.0.0",  
5   "description": "",  
6   "main": "index.js",  
7   "scripts": {  
8     "test": "echo \"Error: no test specified\" && exit 1",  
9     "start": "nodemon ."  
10    },  
11   "author": "",  
12   "license": "ISC",  
13   "dependencies": {  
14     "body-parser": "^1.17.2",  
15     "express": "^4.15.3"  
16   },  
17   "devDependencies": {  
18     "nodemon": "^1.11.0"  
19   }  
20 }
```

--save-dev

Installs and save package as development dependency (i.e, things that are needed just during development but not needed for project to work)

Dev dependencies are installed separately from project dependencies.

NPM - Setting up scripts

Aliases for commonly used CLI commands can be set up through the package.json's **script** property

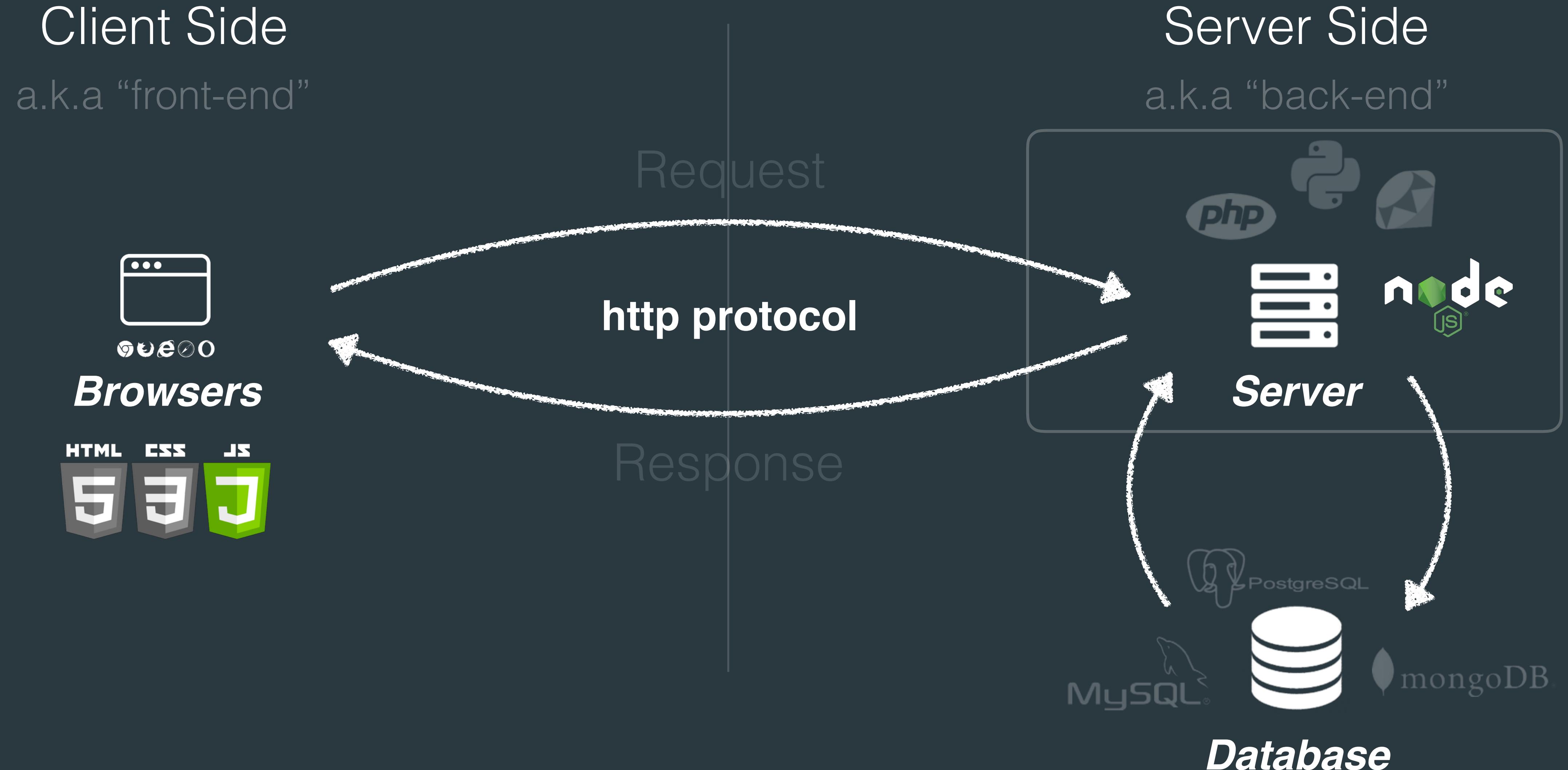
```
3  {  
4    "name": "dragons",  
5    "version": "1.0.0",  
6    "description": "",  
7    "main": "index.js",  
8    "scripts": {  
9      "test": "echo \"Error: no test specified\" && exit 1",  
10     "start": "nodemon .",  
11     "addDragon": "node ./scripts/addDragon.js"  
12   },  
13   "author": "",  
14   "license": "ISC",  
15   "dependencies": {  
16     "body-parser": "^1.17.2",  
17     "express": "^4.15.3"  
18   },  
19   "devDependencies": {  
20     "nodemon": "^1.11.0",  
21     "prompt": "^1.0.0"  
22   }  
23 }
```

Accessible through the CLI with:

npm run addDragon

Server-side scripting

A Typical CRUD* Web App



*CRUD (Create, read, update and delete): the four basic functions of persistent storage

Dragon Challenge Set

DRAGON MASTER				
				REFRESH
Dragon Name	Age	height	CanFly	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<button>ADD</button>
Justin	3000	20	true	<button>edit</button>
Shawna	250	20	true	<button>edit</button>
Andrew	2	9001	false	<button>edit</button>
Minh	234	5	true	<button>edit</button>
Alex	234	5	true	<button>edit</button>

alex	234	2	true	<button>edit</button>
minh	234	2	true	<button>edit</button>

Challenges

- ① We lost all the dependencies. Someone help!!!
- ② Jon is joining the league of Dragons, we need to be able to add him.
- ③ Andrew is growing, we have to be able to keep updating his info!
- ④ Justin betrayed us, we have to delete him from the list!
- ⑤ Make it RESTful! Is it even saving to our database?
- ⑥ Anyone can modify the list, we gotta fix that...
- ⑦ Let's migrate to a real database