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Building and testing a self-documented, functional REST api with node.js, mocha, grunt, & swagger

Nathan Abraham

<https://github.com/nabraham/node-demo>





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What is node and why to use it

- yet another webapp framework
- server side javascript
- built on Google Chrome V8 engine (c++)
- large open source community (npmjs.org)
- modules to help with javascript's scoping "issues"
- no need for additional software (tomcat, etc)





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```
>git clone empty_repo  
>npm init
```

* **f4810c0** - init node app, add express & swagger dependencies





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```
>npm install  
>node app.js
```

* **fa18bec** - create express app & a few routes





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```
>npm install --save  
swagger-node-express  
>npm install --save  
express-json
```

* **bbcfe37** - move routes into swagger





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```
>mkdir public
```

```
>ln -s ../node_modules/swagger-  
ui/dist public/swagger
```

* da90031 - serve swagger-ui





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```
>npm install --save winston  
express-winston
```

* **e9a0b36** - move swagger resources to own file; add winston logging





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```
>npm install --save-dev -g  
jscoverage mocha  
>npm install --save-dev mocha-lcov-  
reporter  
>jscoverage lib lib-cov  
>mocha test/**/*.js -R html-cov >  
coverage.html
```

* **b422c7a** - add mocha tests





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async - a flow control library

```
var task1 = function(cb) {  
    setTimeout(1000, cb(null, 'yo'));  
}  
  
var task2 = function(cb) {  
    setTimeout(2000, cb(null, 'adrian'));  
}  
  
var onFinish = function(err, results) {  
    console.log(results.join(' '));  
}
```

* [9f1b46b](#) - async examples (using moment, minimist, & colors)





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async - a flow control library

```
async.parallel([task1, task2], onFinish); //2 seconds  
async.series([task1, task2], onFinish);   //3 seconds
```

- waterfall is other main pattern
- helps avoid callback hell:

```
    });  
  });  
});  
});  
});
```

* **9f1b46b** - async examples (using moment, minimist, & colors)





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```
>pgrep node
```

```
>sudo kill -9 pid
```

* 8c64702 - use cluster to take advantage of extra cpus





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```
>ln -s ../node_modules/terminal-bar/examples/example.js  
examples/terminal_bar.js  
>node examples/terminal_bar.js
```

Modules can be hosted in git repos if no npm server available

```
git://github.com/user/project.git#commit-ish  
git+ssh://user@hostname:project.git#commit-ish  
git+ssh://user@hostname/project.git#commit-ish  
git+http://user@hostname/project/blah.git#commit-ish  
git+https://user@hostname/project/blah.git#commit-ish
```

<https://docs.npmjs.com/files/package.json>

* c289a9d - add github dependency





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```
>npm install --save-dev grunt
grunt-contrib-jshint
>npm install --save-dev -g grunt-
cli
>grunt
```

* **cc4d738** - add grunt & jshint





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```
>npm install --save -g picture-tube  
>./examples/picture_tube.sh  
>node examples/picture_tube.js
```



Yeoman - a scaffolding tool that creates project templates (grunt file, test directories/scripts, dependencies)

foreverjs - a utility to run a node program as a process, restarting automatically on detected crashes

* 3bd1fd1 - picture-tube examples





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Free:

- <http://nodeschool.io/>
- M101JS - MongoDB dev course
- Most good packages' readme.md

\$:

- Node In Action
- codeschool.com

* 9f1b46b - async examples (using moment, minimist, & colors)

