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

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

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)

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

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

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

* fa18bec - create express app & a few routes

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

* bbcfe37 - move routes into swagger

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

* da90031 - serve swagger-ui

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

```
>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

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)

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)

```
>pgrep node
>sudo kill -9 pid
```

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

```
>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

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

* cc4d738 - add grunt & jshint

```
>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

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

$:

- Node In Action
- codeschool.com

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