

Intro to Node.js

Springfield Web

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Agenda

- Intro
- Brief overview of node
- Workshop pt 1.
 - Setting up your environment
 - NPM / packages
- Express overview
- Workshop pt. 2
 - Express routes... hello world!
 - Express views
 - Loading data
 - Control flow
- Discussion



What is node.js?

Node.js


- V8 Running outside of the browser
- libuv
- Event-driven, non-blocking, asynchronous environment
- Single-threaded
- Cross-platform



libuv

Who Uses It?

- Netflix
- Paypal
- Uber
- Trello
- Medium
- Yammer
- Coursera
- Wikipedia
- Fitbit
- ...

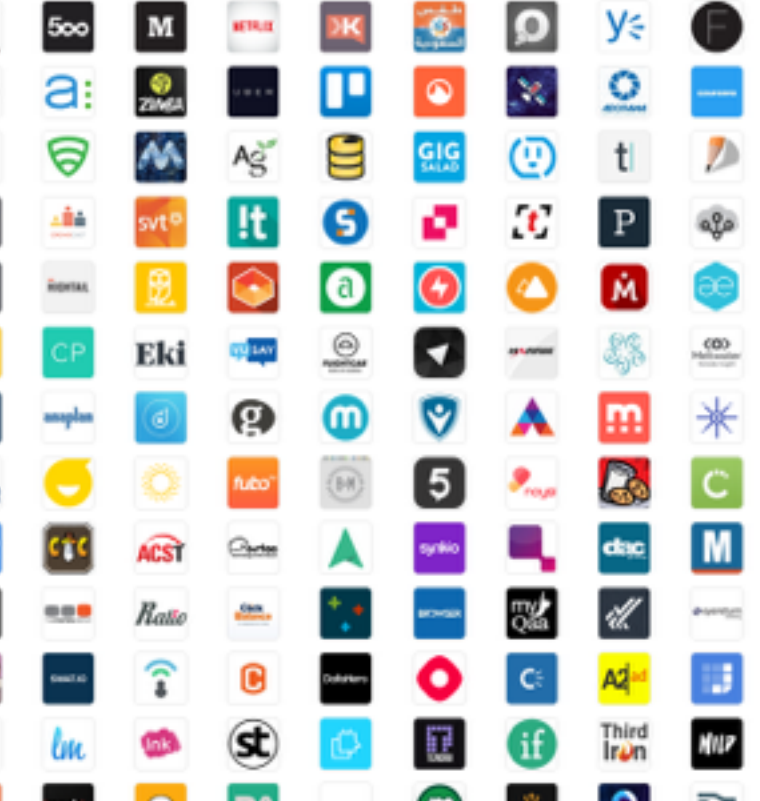


Node.js

Node.js is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications

Votes	Fans	Stacks	Reviews	Integrations
3.24K	1.09K	388	0	0

COMPANIES USING NODE.JS



libuv

- C
- Event loop
- Async TCP / UDP sockets
- Async filesystem operations
- Thread pool



JavaScript

- Asynchronous
- Single-threaded
- Dynamic
- Interpreted (V8 does JIT)
- Untyped



Environment

Browser vs. Operating System



Main difference

- Single event loop handles requests



Development Environment

- Install node / npm
- Choose directory where your project will live
- Initialize your package
- package.json
- node_modules
- .gitignore

```
tree -L 2
.
├── README.md
├── app.js
├── node_modules
│   ├── bluebird
│   ├── chai
│   ├── express
│   ├── jade
│   ├──nock
│   └── request
├── package.json
├── routes
│   ├── home.js
│   ├── index.js
│   └── weather.js
├── services
│   └── open-weather-map.js
├── test
│   ├── fixtures
│   └── open-weather-map.js
└── views
    ├── home.jade
    ├── layout.jade
    └── weather.jade

12 directories, 11 files
```

Packages

- npm is bundled with recent versions of node
- <https://npmjs.com>
- npm init
- npm install



Express

- Well documented
- Well tested
- Scaffolding
- http server
- Routing
- Middleware
- Request
- Response

express

Routing

- get, put, post, delete
- uri
- handler(s)
- Request
- Response

```
var app = express();  
  
app.get('/', function (req, res) {  
  res.send('hello world');  
});
```

Views

- Template engines
 - jade
- res.render
- res.locals



Pulling in Data

- Request module
- Callback
- openweathermap.org

```
{"coord":{"lon":139,"lat":35},
"sys":{"country":"JP","sunrise":1369769524,"sunset":1369821049},
"weather":[{"id":804,"main":"clouds","description":"overcast clouds","icon":"04n"}],
"main":{"temp":289.5,"humidity":89,"pressure":1013,"temp_min":287.04,"temp_max":292.04},
"wind":{"speed":7.31,"deg":187.002},
"rain":{"3h":0},
"clouds":{"all":92},
"dt":1369824698,
"id":1851632,
"name":"Shuzenji",
"cod":200}
```


That's all folks!



slides and examples source code:

github.com/danielpquinn/springfield-web-node