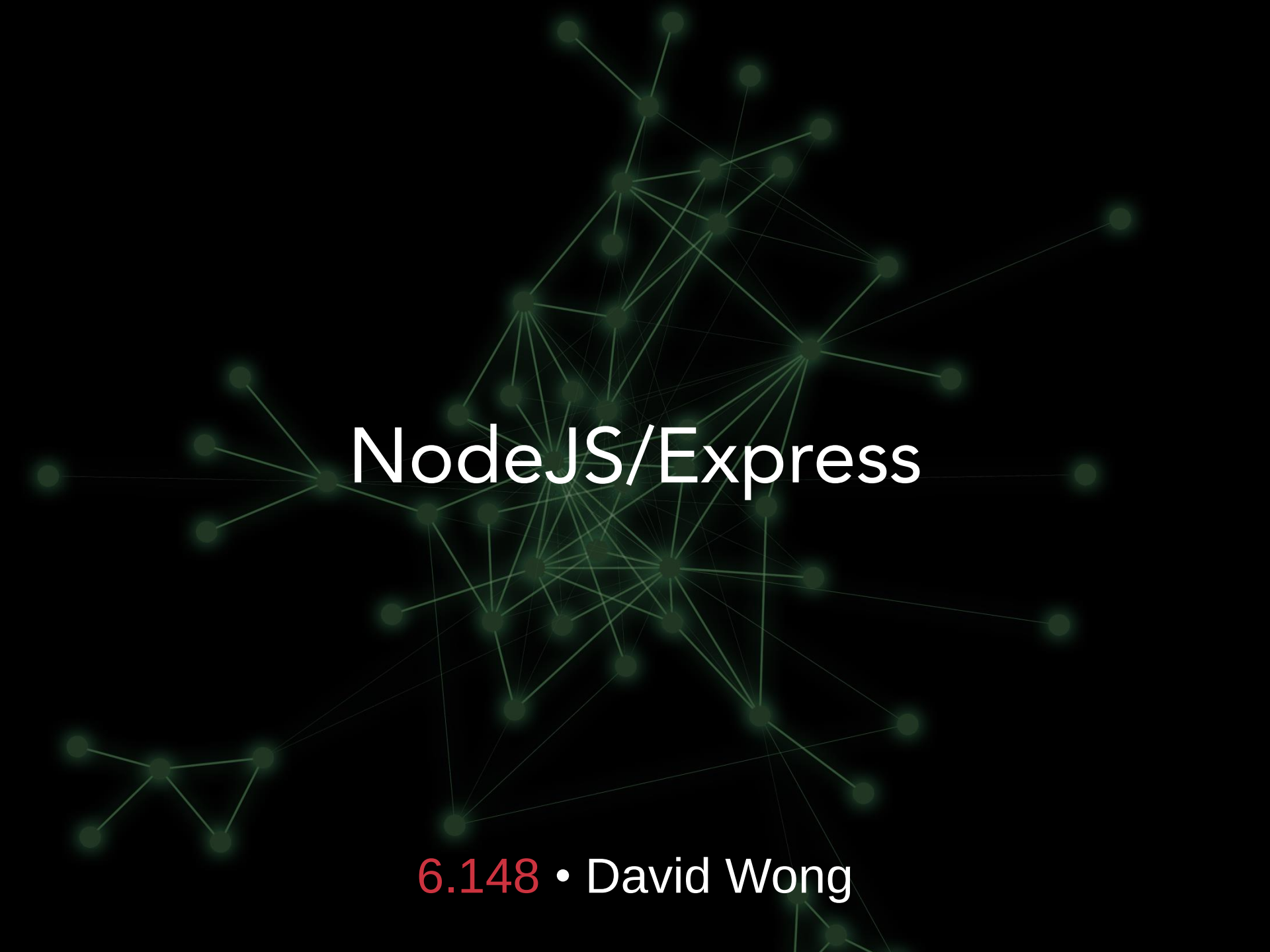


6.148 • David Wong

http://nodejs.org

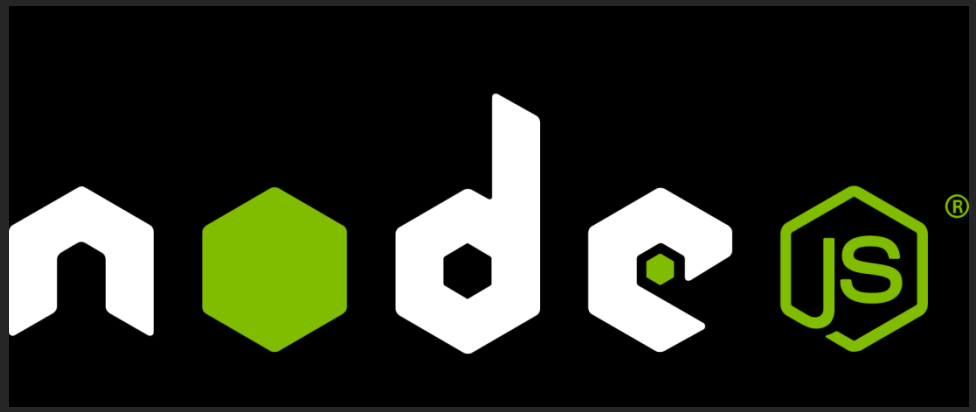
A Quick Experiment

```
//Javascript

setTimeout(function() {
  console.log("world")
}, 2000);

console.log("hello");
```

What is



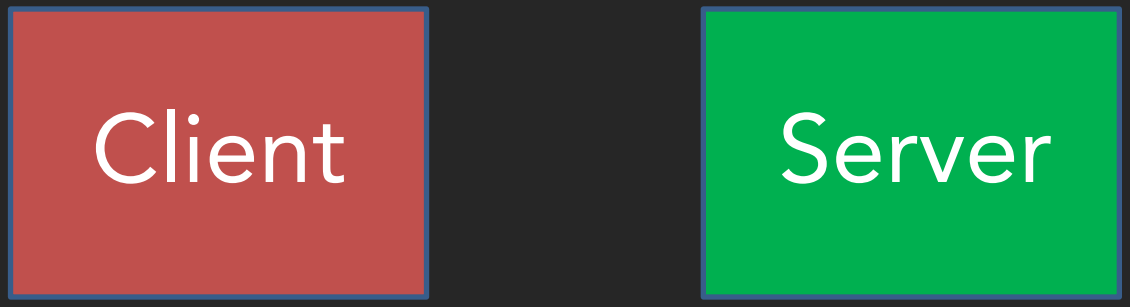
What is NodeJS

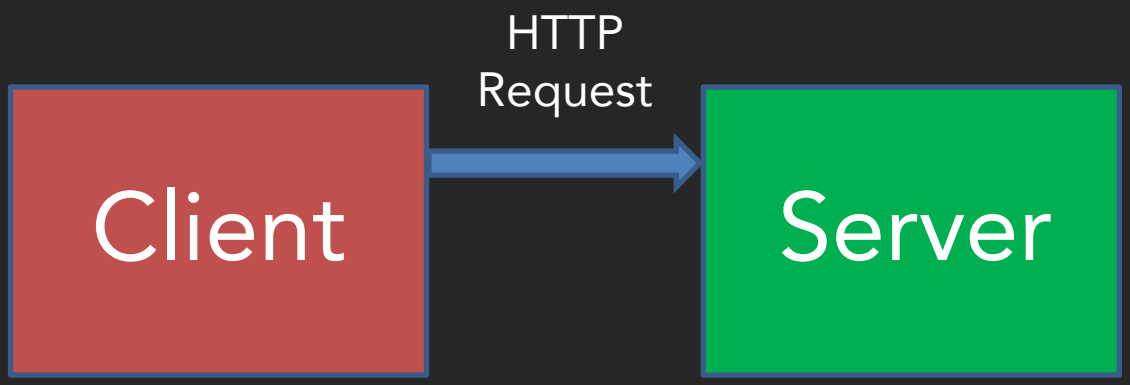
- Platform built on Google's V8 Javascript engine
- Fast and scalable
- Event-driven and non-blocking

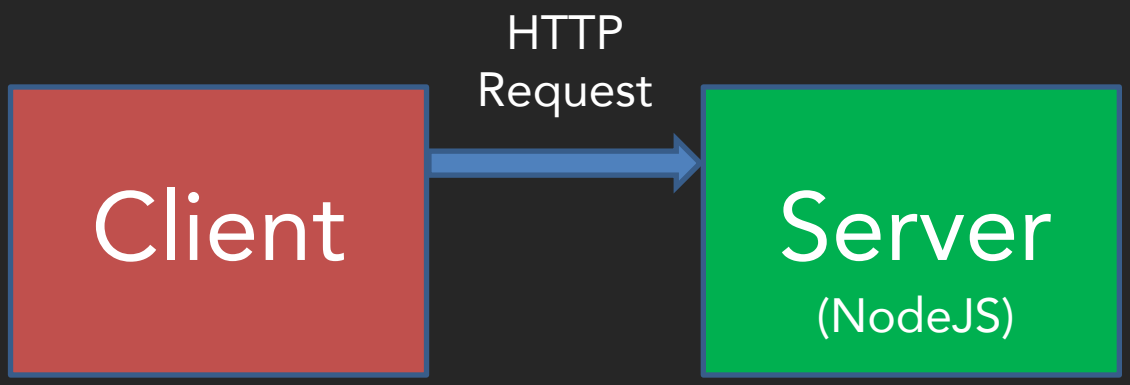
NodeJS is Javascript

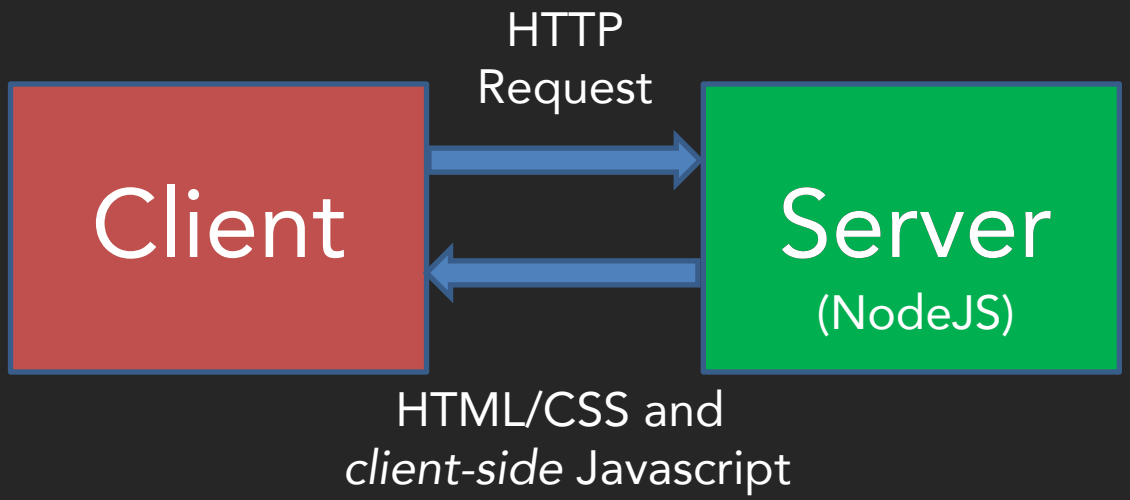
NodeJS is Javascript

(on the server!)


Client
Server


HTTP
Request
Client
Server


HTTP
Request
Client
Server
(NodeJS)


HTTP
Request
Client
Server
(NodeJS)
HTML/CSS and
client-side Javascript

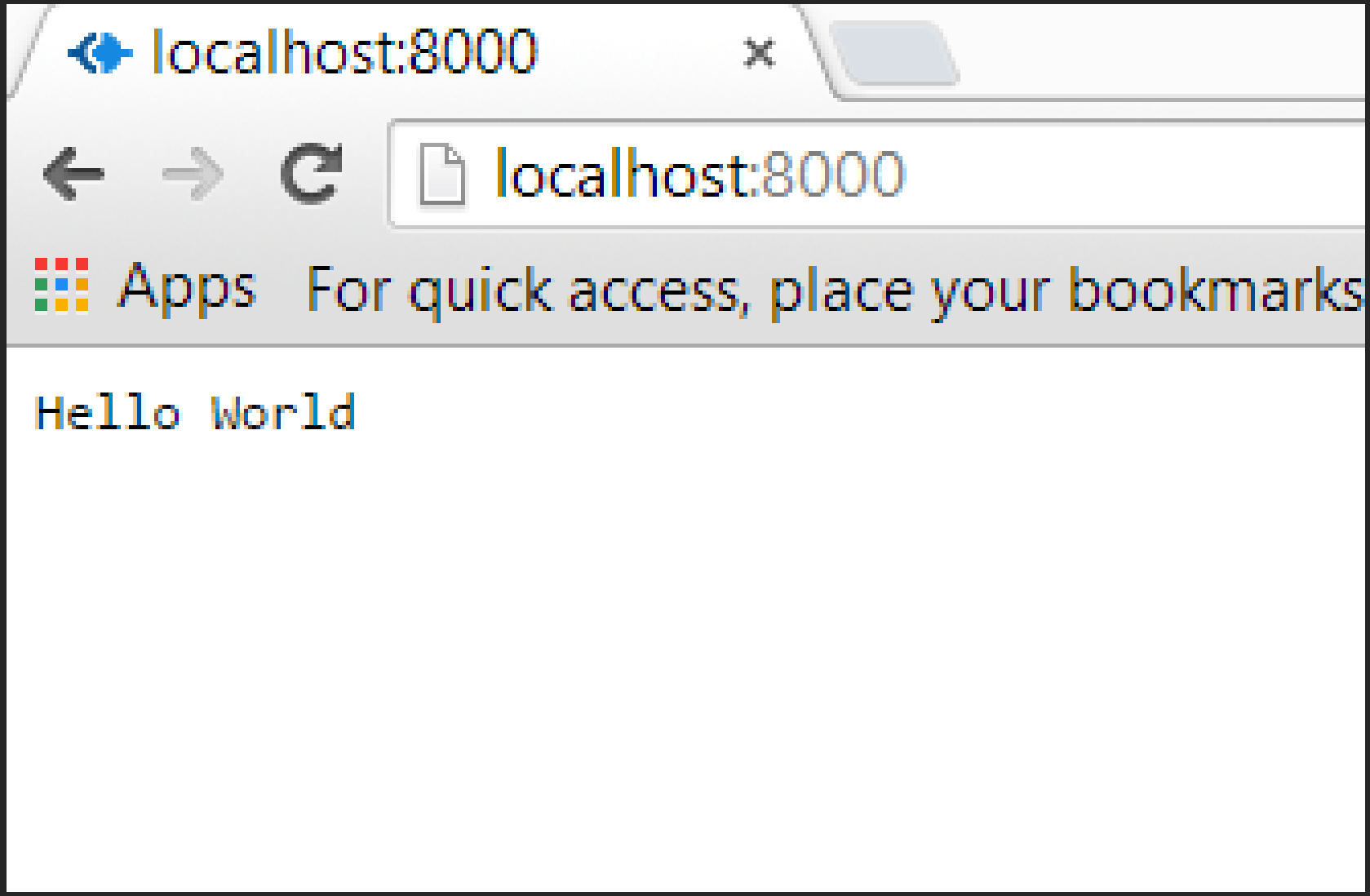
client-side Javascript

$\neq$

server-side Javascript

```
// app.js
var http = require('http');
helloServer = http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type': 'text/plain'});
  res.end('Hello World');
})
helloServer.listen(8000);
```

```
$ node app.js
```


localhost:8000
localhost:8000
Apps
For quick access, place your bookmarks
Hello World

```
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  res.end('Hello World');
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```
$ node app.js
```

```
// app.js
var http = require('http');
helloServer = http.createServer(function (req, res) {
 res.writeHead(200, {'Content-Type': 'text/plain'});
 res.write('some text');
 res.end('Hello World');
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helloServer.listen(8000);
```

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 res.write('some text');
 res.write('some text');
 res.write('some text');
 res.end('Hello World');
})
helloServer.listen(8000);
```

Express!

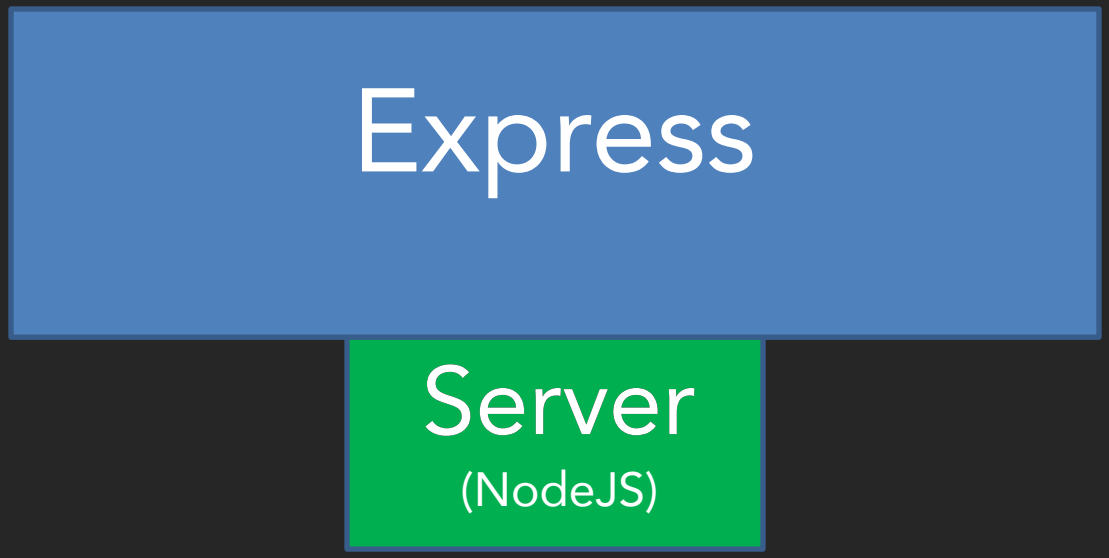
Express?

NPM (Node Package Manager)

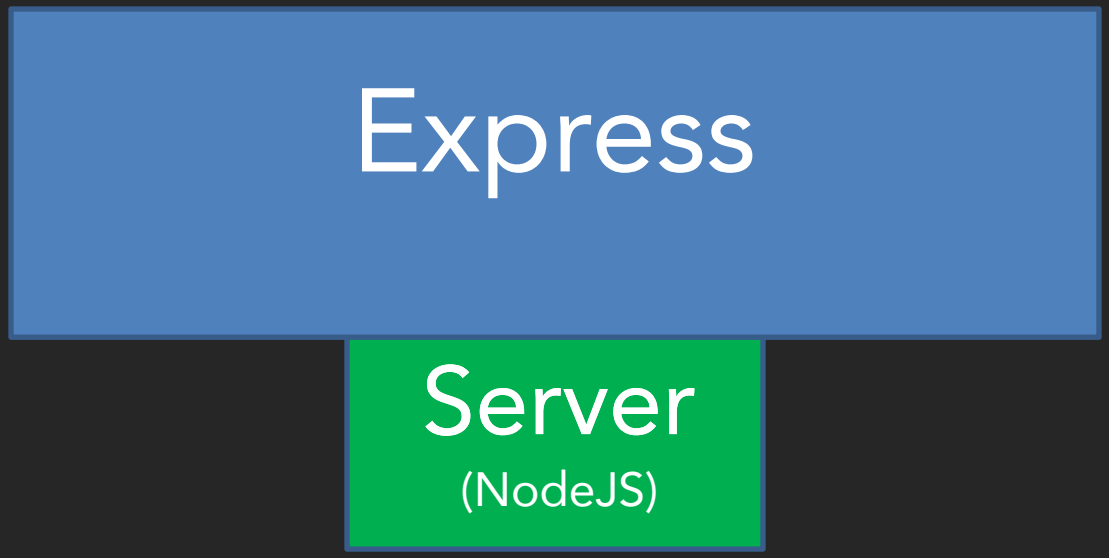
- Check if NPM is installed
  - Windows: open command prompt
  - Mac: open terminal
  - type npm
- Install Express
  - npm install –g express
  - Windows: may need to right click run as admin
  - Mac: may need to type sudo npm install –g express

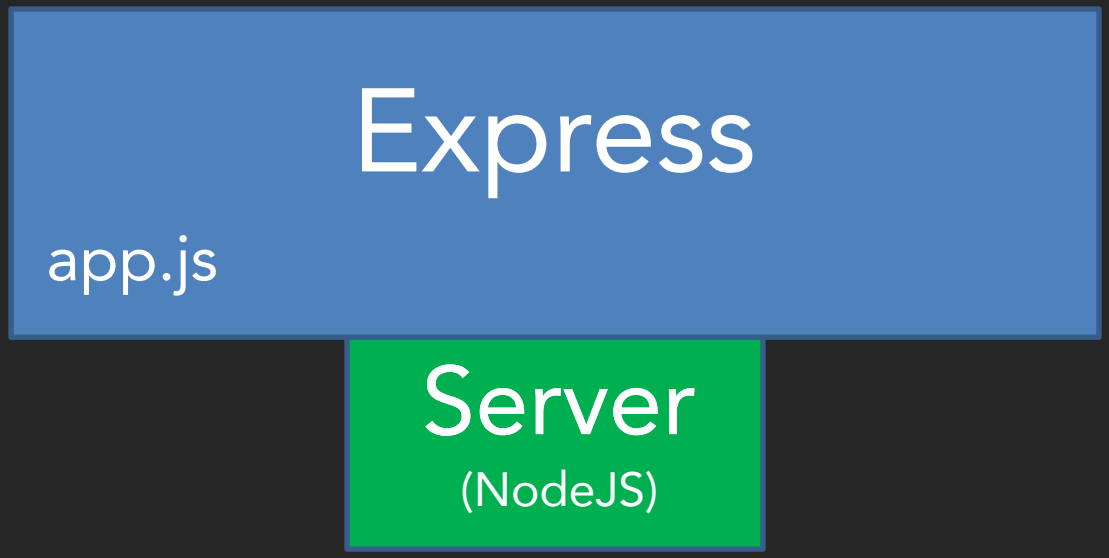
Package.json

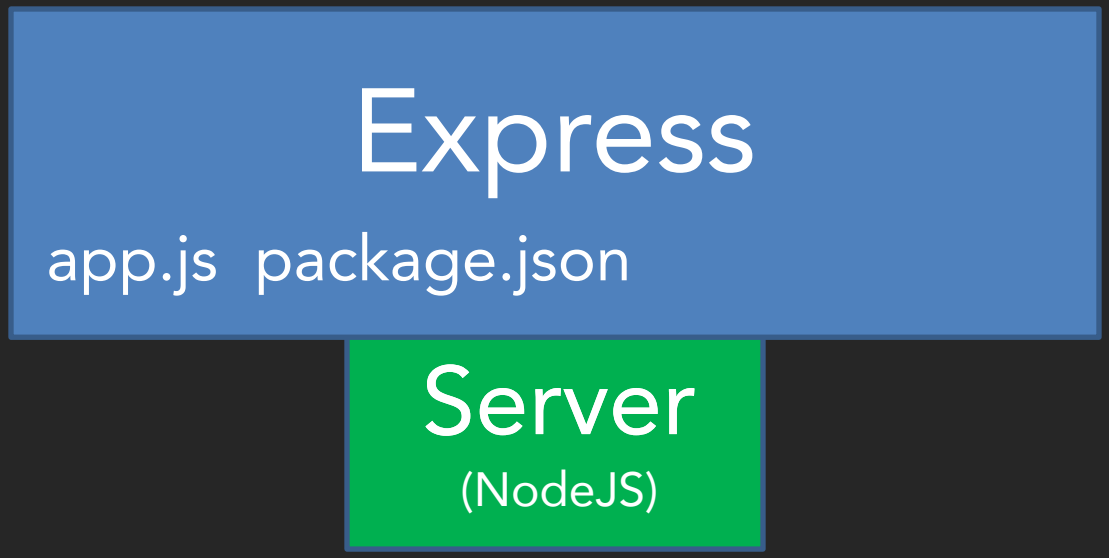
```
{
  "name": "helloexpress",
  "version": "0.0.0",
  "private": true,
  "scripts": {
    "start": "node ./bin/www"
  },
  "dependencies": {
    "express": "~4.9.0",
```

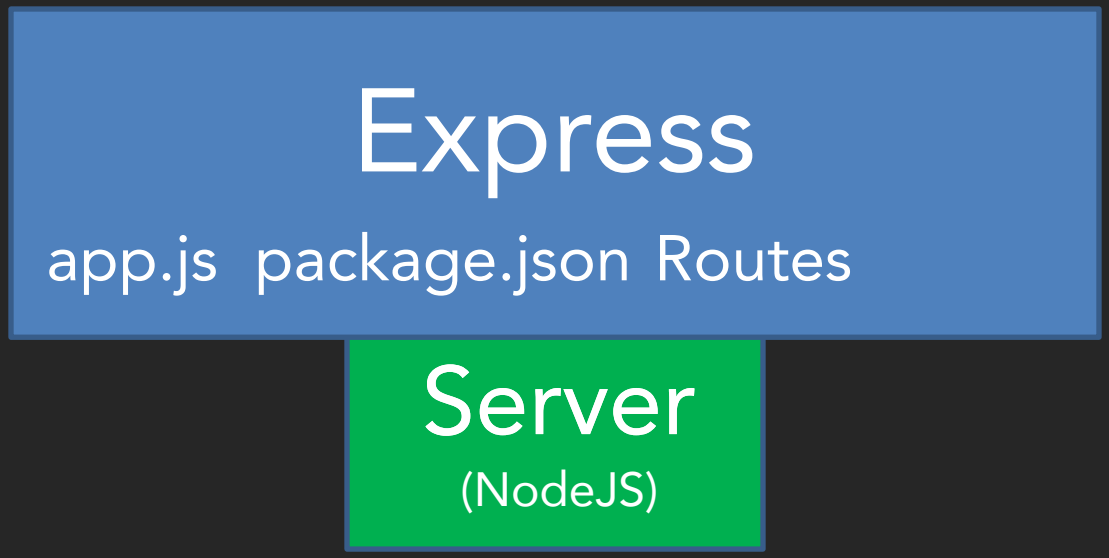

Express
Server
(NodeJS)

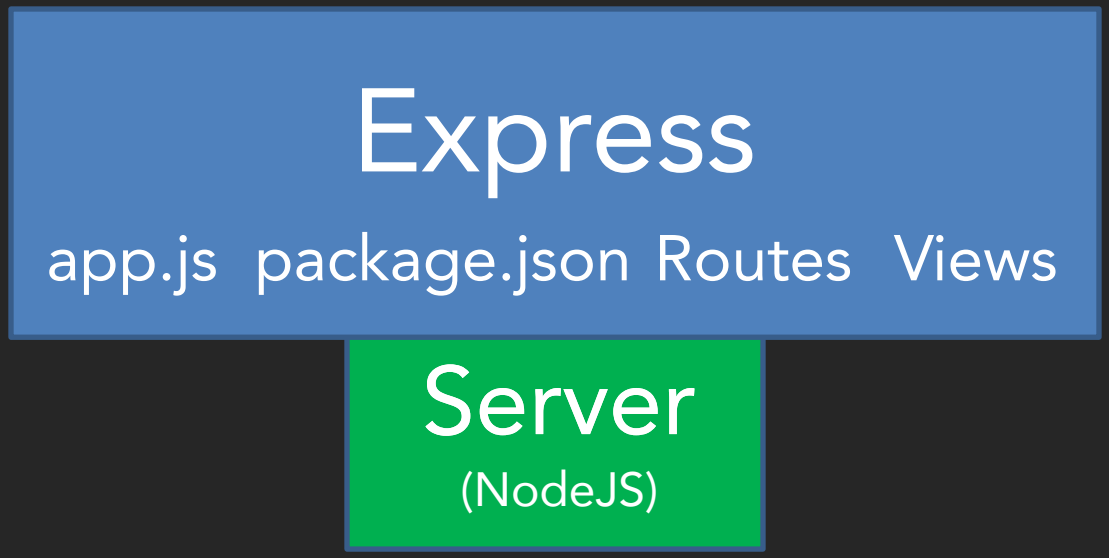
express helloexpress


Express
Server
(NodeJS)


Express
app.js
Server
(NodeJS)


Express
app.js package.json
Server
(NodeJS)


Express
app.js package.json Routes
Server
(NodeJS)


Express
app.js package.json Routes Views
Server
(NodeJS)

Don’t forget to npm install!

Don’t forget to npm install!!

Don’t forget to npm install!!!

package.json

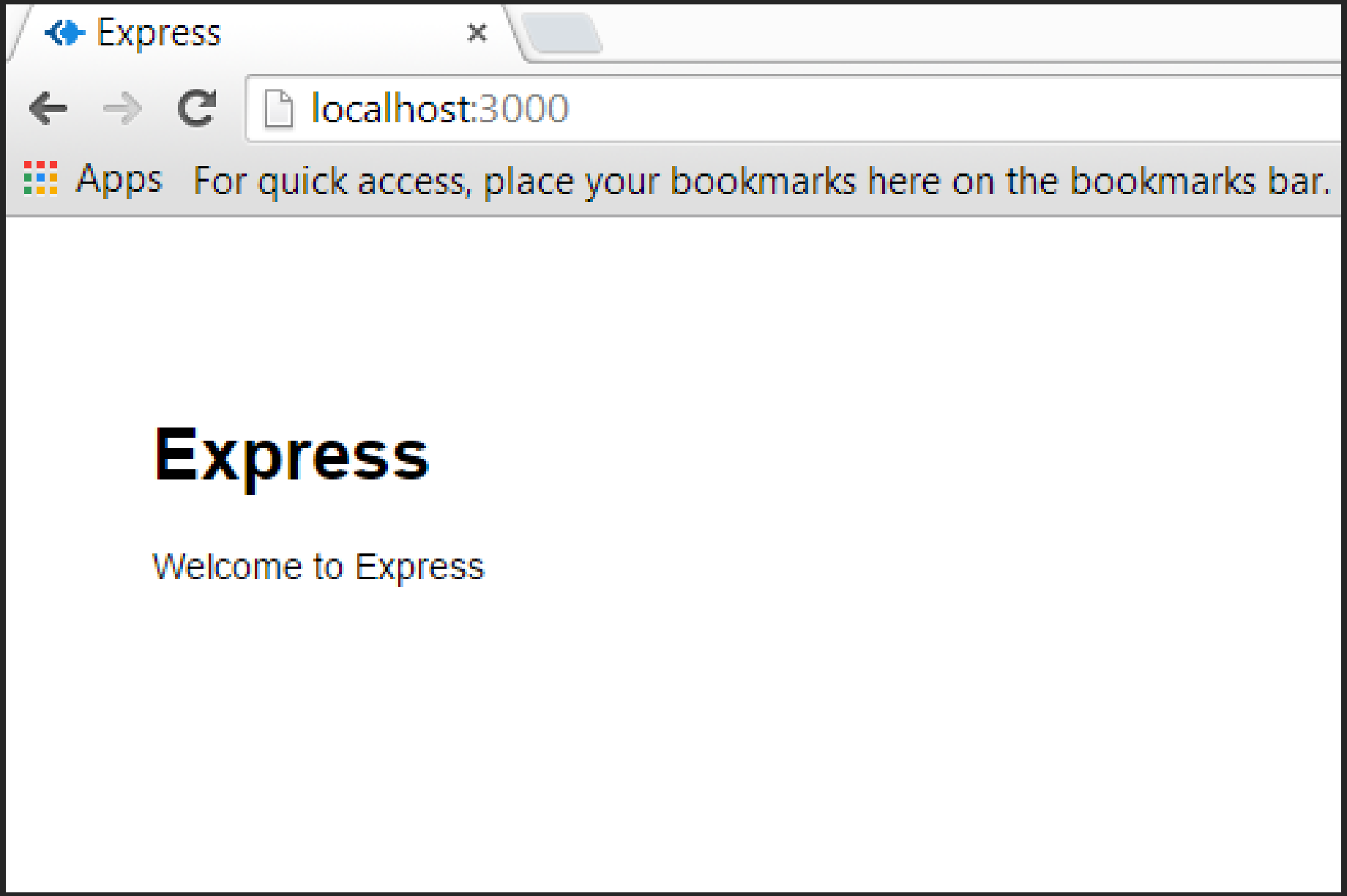
```
"scripts": {
  "start": "node ./bin/www"
},
```

/bin/www

```
var debug = require('debug')('helloexpress');
var app = require('../app');

app.set('port', process.env.PORT || 3000);

var server = app.listen(app.get('port'), function() {
  debug('Express server listening on port ' + server.address().port);
});
```


Express
localhost:3000
Apps
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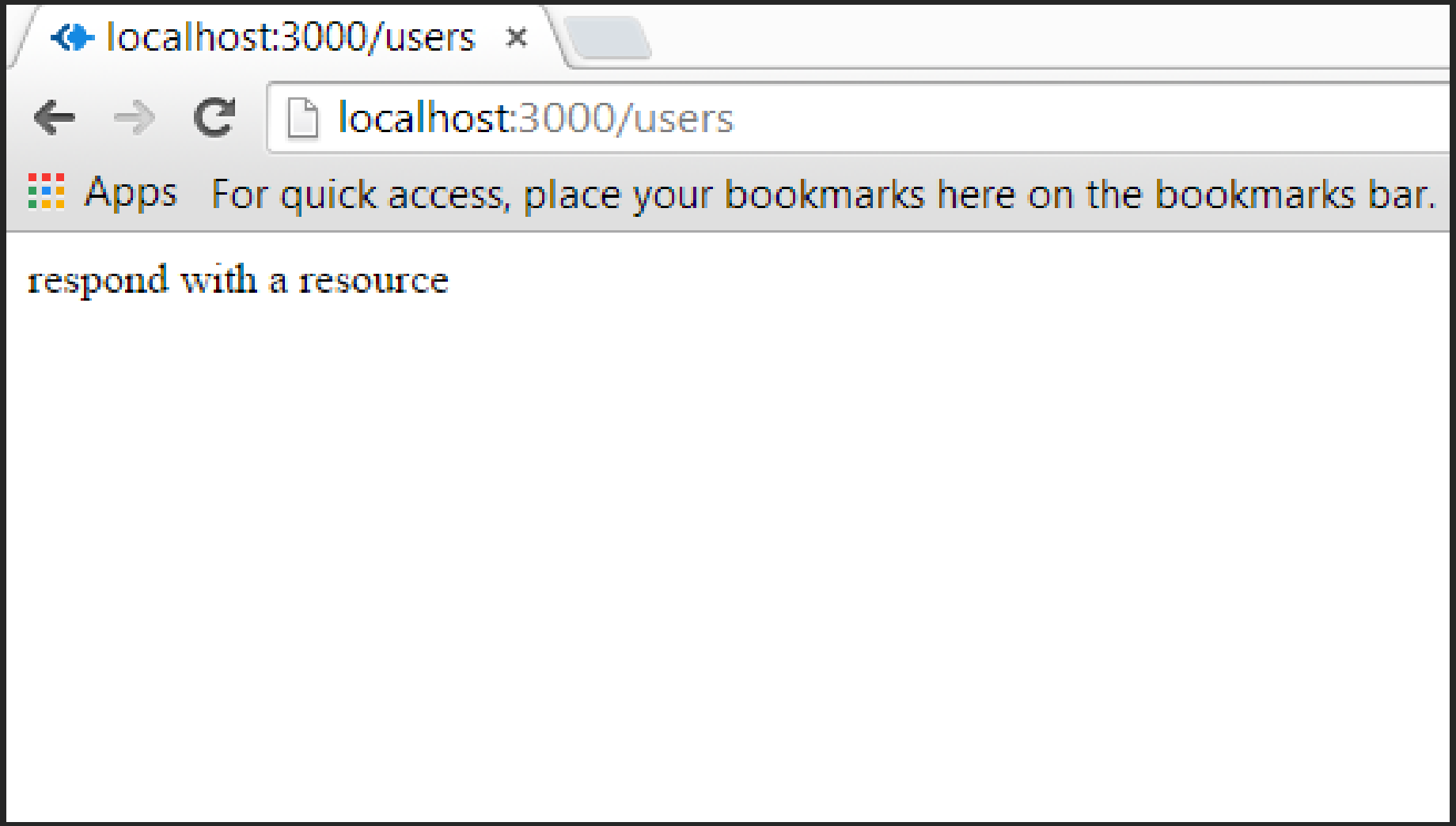
Express
Welcome to Express


localhost:3000/users
localhost:3000/users
Apps
For quick access, place your bookmarks here on the bookmarks bar.
respond with a resource

app.js

```
app.get('/users', function(req, res) {
    res.send('respond with a resource');
});
```

app.js

```
var routes = require('./routes/index');
var users = require('./routes/users');

app.use('/', routes);
app.use('/users', users);
```

users.js

```
router.get('/users', function(req, res) {
  res.send('respond with a resource');
});
```

users.js

```
router.get('/users', function(req, res) {
  res.render('index');
});
```

Questions?