Node.JS

Server side using Javascript

How are we doing?

General

- How the web works?
- Git
  - GitHub
  - Bitbucket
  - SourceTree
- Deployment
- Chrome dev tools
- Bonus: latest trends

Client side

- HTML5: What's new?
- CSS3 (Advanced selectors)
- Web layout with Flexbox
- Javascript & jQuery

Server side

- NodeJS
- NPM (and such)
- Express
- MongoDB
- MongoChef

What is Node.JS?

Open Source
server side
runtime environment

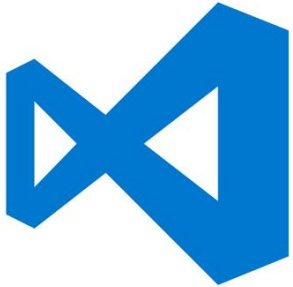
Truly cross platform

Uses JavaScript as its language!

Our stack

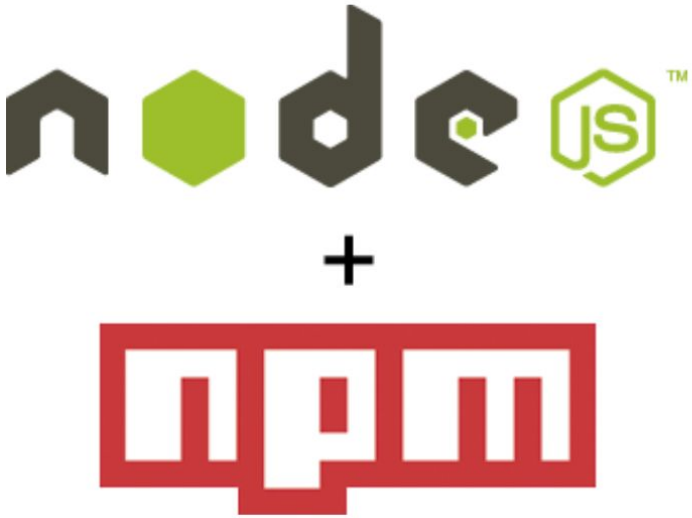

node JS
+
Web Development Framework
npm
Unopinionated & minimalist
+
express

Pick your editor



What is NPM?

Package Management
for Node.js



Easy Updates and
Version Management

Let's get started

1. Install Node.JS
2. New repository (reminder)
3. Create & Run *helloWorld.js*
4. Use NPM to get a package
5. What is .gitignore?
6. Use an NPM pacakge
7. Commit & Push

One more thing..

Writing asynchronous code is different

A typical approach

```
var conn = getDbConnection(connectionString);
var stmt = conn.createStatement();
var results = stmt.executeQuery(sqlQuery);
for (var i=0; i<results.length; i++) {
  // print results[i];
}
```

Anonymous Functions and Closures

For simple callbacks, anonymous functions are more common

```
getStuff(inputParam, function(error, results) {
  // if error is undefined…
  // do something with the results
});
```

… and closures are your friend!

```
someOtherFunction(function(err, stuffToGet) {
  var foo = 23;
  getStuff(stuffToGet, function(error, results) {
    // if error is undefined…
    // do something with the results (and foo)
  });
});
```

Coding for asynchrony with callbacks

Asynchronous functions with callbacks

② Error is first parameter to callback function

```
var handleResults = function(error, results) {
  // if error is undefined…
  // do something with the results
}

getStuff(inputParam, handleResults);
```

① Callback is last parameter in async function call

Too much of a good thing...

Beware of the "Christmas tree" effect!

```
asyncFunction1(inputParam, function(err, results1) {
  asyncFunction2(results1, function (err, results2) {
    asyncFunction3(results2, function (err, results3) {
      asyncFunction4(results3, function (err, results4) {
        asyncFunction5(results4, function (err, results5) {
          // and so on…
        });
      });
    });
  });
});
```