Javascript

Scope

```
var x = 10;
function y() {
        var x;
        x = 20;
}
y();
console.log(x);
```

“this”

```
function bowBow() {
        console.log(this);
};
var Balla = {};
Balla.bowBow = function() {
        console.log(this);
}

//execute
bowBow();
Balla.bowBow();
Balla.bowBow.call({});
```

Hoisting

```
sayHello();
sayWorld();

function sayHello(){
        console.log("Hi!");
}

var sayWorld = function() {
        console.log("World");
};
```

Closures

```
function makeArmy() {
    var shooters = [];
    for(var i=0; i<10; i++) {
        var shooter = function() {
            console.log(i);
        }
        shooters.push(shooter);
    }
    return shooters;
}

var army = makeArmy();
army[0]();
army[1]();
```

Inheritance

```
function Mother(){}
Mother.prototype.say = "Hey! I'm the Mother.";
Mother.prototype.talk = function(){
    return this.say;
};

function Son(){}
Son.prototype = Mother.prototype;

var siripala = new Son();
siripala.say = "I'm Siripala";
console.log(siripala.talk());
delete siripala.say;
console.log(siripala.talk());
```

Strict Mode

```
function foo() {
    "use strict"
    x = 3;
}
foo();
console.log(x);
```

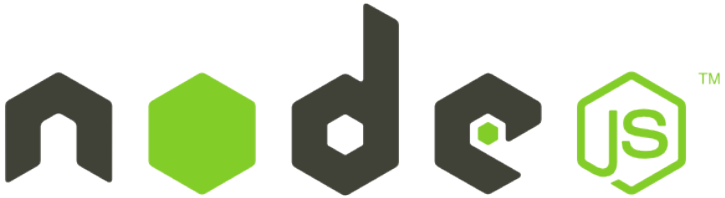
Rules of Strict Mode

- Syntax Errors throw exceptions
- value of this will not be auto-coerced to an object
- No Implicit globals
- arguments.caller and arguments.callee banned

The Good parts

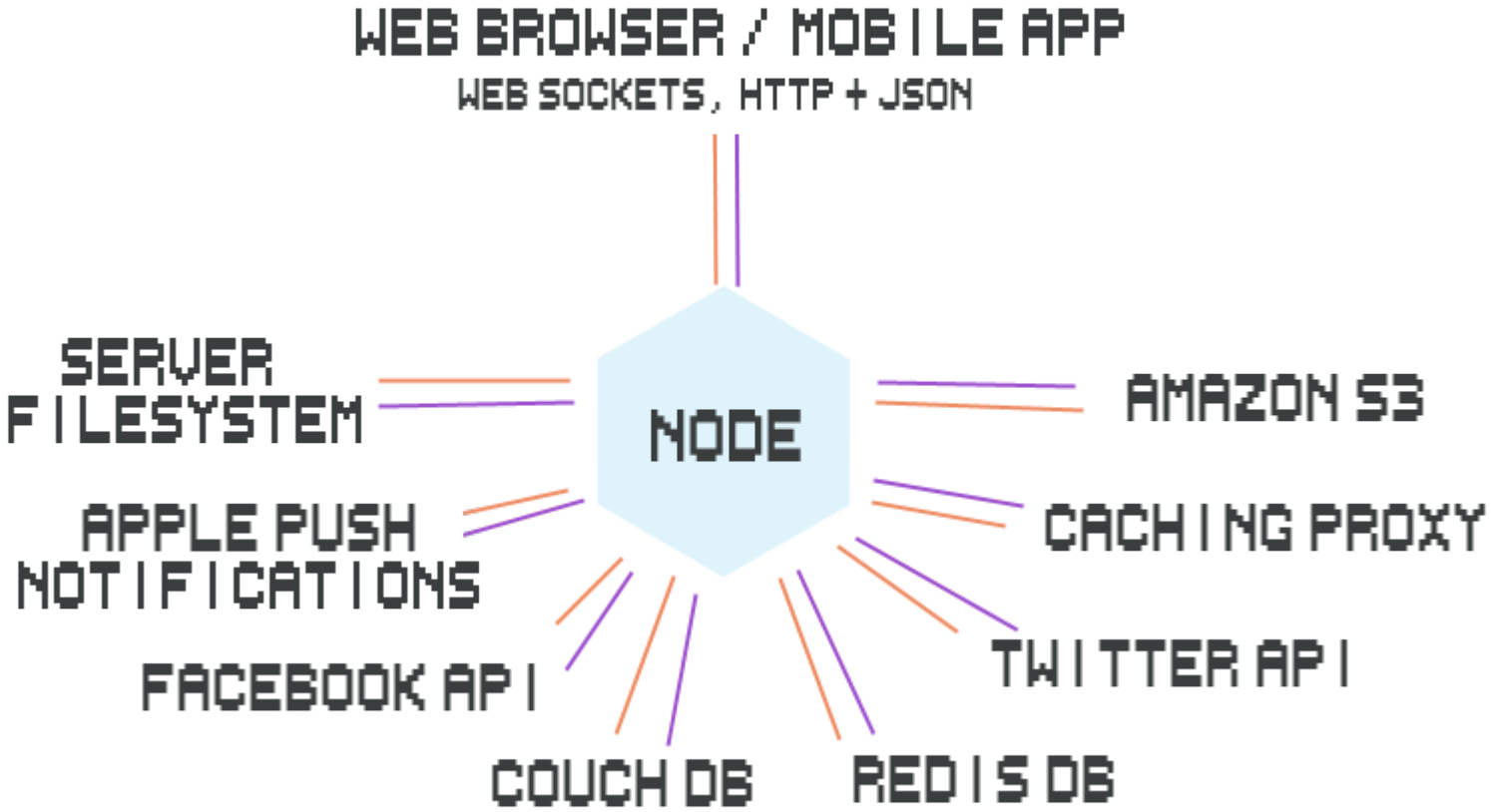
- Learn properly
- Variable Scope
- Closures
- Event driven
- Ajax
- Universal - it’s everywhere
- JSON

Node.js



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

Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.”


WEB BROWSER / MOBILE APP
WEB SOCKETS, HTTP + JSON
SERVER FILESYSTEM
NODE
AMAZON S3
APPLE PUSH NOTIFICATIONS
CACHING PROXY
FACEBOOK API
TWITTER API
COUCH DB
REDIS DB

- I/O Based

  Databases (e.g. MySQL, PostgreSQL, MongoDB, Redis, CouchDB)

  APIs (e.g. Twitter, Facebook, Apple Push Notifications)

  HTTP/WebSocket connections (from users of a web app)

  Files (image resizer, video editor, internet radio)

- Node is asynchronous (non blocking)

Example 1

Callbacks

Example 2

NPM

Node Packaged Modules

- Search - *npm search modulename*
- Install *- npm install --save modulename*
- Installs node modules to local folder

require(“modulename”)

1. if a file called modulename.js exists in the current folder node will load that, otherwise:
2. node looks in the current folder for a node_modules folder with a “modulename” folder in it
3. if it doesn't find it, it will go up one folder and repeat step 2

Node

the next step

MEAN

MongoDB is the leading NoSQL database, empowering businesses to be more agile and scalable.

Express is a minimal and flexible node.js web application framework, providing a robust set of features for building single and multi-page, and hybrid web applications.

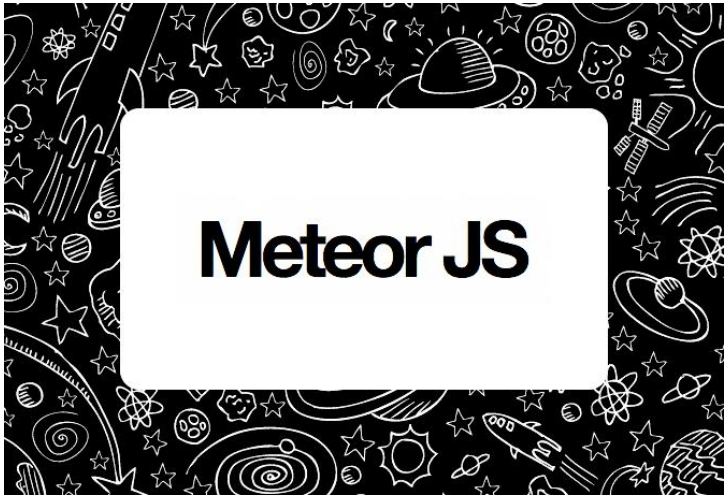
AngularJS lets you extend HTML vocabulary for your application. The resulting environment is extraordinarily expressive, readable, and quick to develop.

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

http://www.mean.io/

Install - Example 3

1. *sudo npm install -g meanio*
2. *mean init sampleCMS*
3. *npm install*
4. *grunt*


Meteor JS

Meteor

Meteor is a JavaScript framework, built around many small packages

1. Meteor is "Realtime by Design"
2. "Database Access" from the Client
3. "Latency Compensation"

Meteor : deploy

- *meteor deploy cmstodo.meteor.com*

Or

- *meteor bundle cmstodo.tar.gz*

Tools

Yeoman - *scaffolds out a new application*

Yeoman is used to scaffolding workflows for creating modern webapps, while at the same time mixing in many of the best practices that have evolved within the industry.

Grunt - *The JavaScript Task Runner*

Grunt manages repetitive tasks like minification, compilation, unit testing, linting, etc

Bower - *A package manager for the web*

Bower is used for front-end dependency management, so that you no longer have to manually download and manage your scripts.

Learn More..

Learn You The Node.js

```
# install
npm install learnyounode -g
# start the menu
learnyounode
```

http://nodeguide.com/

http://code.tutsplus.com/tutorials/node-js-for-beginners--net-26314

https://vimeo.com/18077379