If you have not installed Node, do it now!
http://nodejs.org
Ask a staff member if you need help!
Parsnip

Quick Node.js demo
Node.js is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications.
JavaScript
JavaScript Everywhere!
TODAY IS JAVASCRIPT
Node.js Example

Write your own server

// 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);

Running the server

$> node app.js
You!
You! request a page Node.js Server
You! request a page

Node.js Server

HERE IS SOME HTML

<html>
<head>
<title>
... etc
</title>
</head>
</html>
Be Careful!

Client Side JavaScript is **NOT**
Server Side JavaScript
You! request a page Node.js Server

HERE IS SOME HTML
<html>
<head>
<title>
...
</title>
</head>
</html>
request a page

You!

Node.js Server

HERE IS SOME HTML

<html>
<head>
<title>
...
<script>
var i = 1;
i ++;
</script>
</html>

Write Less Code
Node Package Manager (NPM)
Node Package Manager

Bunch of fancy libraries for you to use

Try it! Make sure it’s installed!
Windows: Open Node Command Prompt
Mac: Open Terminal
Type `npm`. You should see a bunch of commands

Now try `npm install -g express`
Windows: You may need to run as administrator (reopen Node Command Prompt except right click run as admin)
Mac, you may need to do `sudo npm install -g express`
package.json

A set of ‘instructions’ that assist your app

{
    "name": "helloworldapp",
    "description": "this is my new app",
    "version": "0.0.1",
    "private": true,
    "dependencies": {
        "express": ">= 3.4.0",
        "hbs": "*"
    }
}
Package.json

`npm install` will look in package.json to make sure you have what you need.

Whenever you have a potentially new/different package.json, always `npm install`
Package.json

`npm install` will look in `package.json` to make sure you have what you need.

JavaScript & all its quirks
JavaScript is Asynchronous

//PHP

echo "hello";
sleep(2);
echo "world";

//JavaScript

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

console.log("hello");

Sitting on a comfortable cloud. A Google cloud
A comfy layer on Google’s JavaScript Engine - Reliable and Supported
Express.js
Express.js

A Web Framework Built On Node.js
Express.js

Let’s Try it Out

Type `express helloexpress`
Express.js

You!

request a page

Here is your HTML

Node.js
Server
Express.js

You!

request a page

Here is your HTML

Express.js

Node.js Server
Express.js

You!

request a page
Here is your HTML

Express.js
app.js  Routes  Views  etc...

Node.js
Server
You request a page

Express.js

app.js  Routes  Views  etc...

Node.js  Server

Here is your HTML

I got this, guys
Demo: A Simple Web Counter
What happens when I restart the server?
Database

MySQL
Database

MySQL     MongoDB
Database

MySQL
MongoDB
Firebase
Database

MySQL   
npm install mysql

MongoDB   
npm install mongodb

Firebase
Database

MySQL

MongoDB

Firebase

npm install mysql

npm install mongodb

npm install firebase
Firebase
Firebase

Data is stored as standard JSON
Firebase

Data is stored as standard JSON

```
{
  movingbox1: 'books',
  movingbox2: 'clothes'
}
```
Data is stored as standard JSON

```json
{
    movingbox1: 'books',
movingbox2: 'clothes'
movingbox3: {
    shoebox1: 'sandals',
    shoebox2: 'boots'
},
}
```
Demo: A better web counter
Holy, that was a lot.
Node.js is Tricky
But not impossible