Basic Webapps with Node.js

What is Node.js?

- A JavaScript runtime for the server - just like the browser
- It reads in JavaScript code and executes it
- Also provides a host of libraries for file system interaction, sockets, HTTP, etc
- We'll use the HTTP libraries to create a server

Why Node?

- Lots of people get their start building simple web pages
- JavaScript is the heart of modern web interfaces
- What about the server side? I want to create a full webapp!
- A way to take JavaScript knowledge and apply it to the server side

The most basic Node.js site (no tools needed)

Let's build a website

- We need some tools. Get Node.js, which ships with a package manager called npm.
- npm serves the same purpose as tools for other languages like Maven, Bundler, etc - it says what your project depends on

What about some routing and API interaction?

- Could just test the route and HTTP method (GET, POST, etc)
- Tedious - there are routing frameworks

Making websites with Node and Express.js

- So we have node installed
- Let's make a new directory, call it whatever you want
- Now, run "npm init"
  - Pick "app.js" as your main class
- Now, npm install express --save
- Then, make an app.js file

Basic Express Example

An example project

Baltimore City provides API access to its non-emergency reporting service, called 311.

You submit requests to 311 either by phone, smartphone app, or online.

These can be complaints about trash in the street, parking violations, bulk trash pickup, and a host of other non-emergency requests

We'd like to see if anyone is reporting things about our address, so we make an app to just show requests with our address

Walkthrough

https://github.com/booz-allen-hamilton/hophacks2016