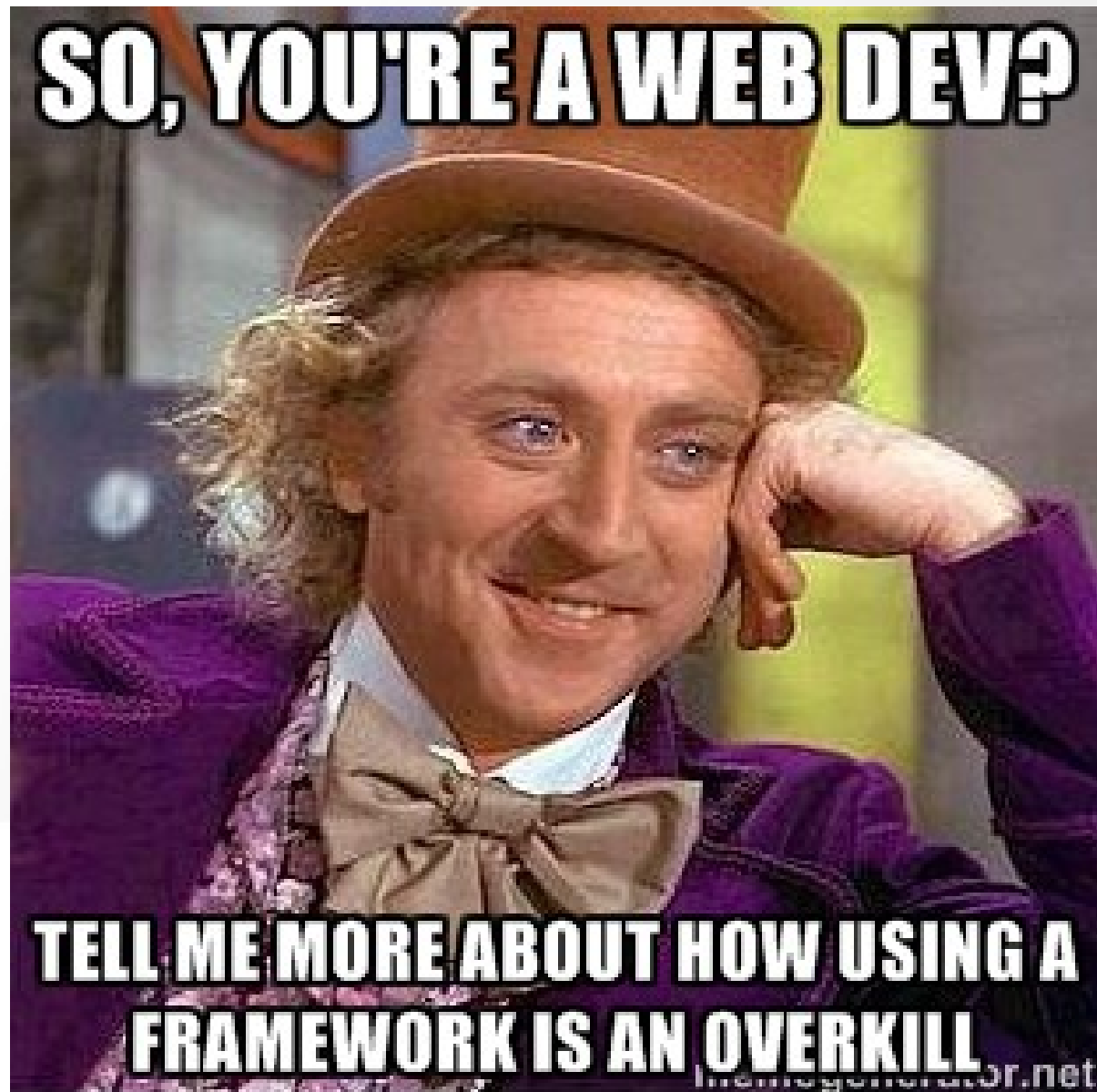# Getting started with

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Yo, what's the agenda?

- What is a MEAN stack?
- MongoDB
- Express
- AngularJS
- Node.js

- Q & A

I'm a old school web dev – what does that even MEAN?

LAMP stack

- Linux server on which you're running an

- Apache web server with

- MySql as a database and

- PHP as the backend language

Ingredients for a decent Web App

- HTML and CSS is a must
- JavaScript (jQuery) is expected
- PHP
- SQL

One language to rule them all

JS devs unite

- Full-stack JavaScript developer
- Frontend and backend devs now work in conjunction using the same language across all layers

What is MEAN, and why it's GOOD?

- MongoDB as the database
- Express as the web framework
- AngularJS as the frontend framework, and
- Node.js as the server platform

Advantages of the MEAN stack

- Single language is used in the whole application
- Support for the MVC pattern
- JSON is used for transferring data
- Node.js's huge module library
- Open source

We now know what is a MEAN stack, lets go home

- how to put it all together
- how to install all the 4 parts of the MEAN stack
- basic usage of all 4 of them
- https://hackhands.com/how-to-get-started-on-the-mean-stack/ has instructions for Mac OS, Windows and Linux

MongoDB

- MongoDB (from "hu**mongo**us")
    - open-source document database
    - JSON-style documents
    - leading NoSQL database

Installing MongoDB

- https://www.mongodb.org/downloads
- download and extract the archive file to **C:\mongodb**
- create the folder (**C:\data\db**) to store the database files
- make sure port 27017 is free to use

Running MongoDB and using the MongoDB shell

- running directly and as a service
- mongod & mongo binaries
- show dbs
- use db
- show collections
- db.todos.insert({title: "MEAN"})
- db.todos.find()
- http://try.mongodb.org/

Node.js

- Invented by Ryan Dahl in 2009
- platform built on Chrome's JavaScript runtime called V8
  - compiles JavaScript code to native machine code before executing it
  - event-driven
  - non-blocking I/O model is perfect for real-time applications that run across distributed devices
- https://hackhands.com/delving-node-js-express-web-framework/

Installing Node.js

- http://nodejs.org/download/

- Windows and Mac OS

    - run the installer, Next, Next, Next, Finish type of installation

- Linux

    - configure, make, make install

Running Node.js

- Node.js CLI
- console.log('We're MEAN');
- node mean.js
- NPM (node package manager)
  - comes with Node.js installation
  - registry for public packages (100k+)
  - local and global installation mode
  - npm install <package>
  - npm install <package> -g

Simplest Web server ever

```
var http = require('http');
http.createServer(function (req, res) {
  res.writeHead(200, {'Content-Type':
'text/plain'});
  res.end('Hello World\n');
}).listen(1337, '127.0.0.1');
console.log('Server running at
http://127.0.0.1:1337/');
```

Installing Express

- Web application framework for Node.js
- npm init
- package.json
- npm install express --save

Simplest web server ever, part #2

```javascript
var express = require('express');
var app = express();

app.get('/', function (req, res) {
  res.send('We are MEAN!');
})

var server = app.listen(1337, function () {
  console.log('App @ http://127.0.0.1:1337')
})
```

AngularJS

- Frontend JavaScript framework
  - Single-page applications
  - MVC architecture
  - built and maintained by Google
- Few of the cool features are:
  - two-way data binding
  - extended HTML w/ attributes
  - improved code structure
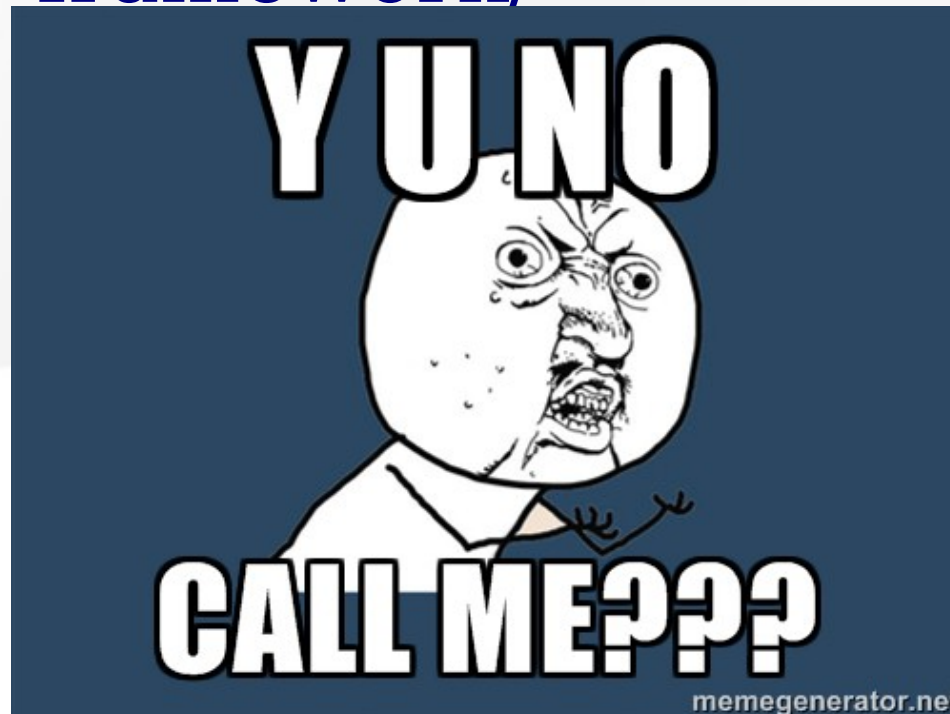 - easier testing through dependency injection

Downloading AngularJS

- https://angularjs.org/

- <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.3.0-rc.4/angular.min.js"></script>

- We can do better with Bower

  - npm install bower -g

  - Git dependency (http://git-scm.com/, great tutor https://try.github.io/)

  - bower install angular

  - bower_components folder

  - bower.json

Testrun AngularJS

```html
<!doctype html>
<html ng-app>
  <head>
    <script src="
https://ajax.googleapis.com/ajax/libs/angularjs/1.3.0-rc.4/angular
.min.js
                    "></script>
  </head>
  <body>
    <div>
      <label>Name:</label>
      <input type="text" ng-model="yourName"
            placeholder="Enter a name here">
      <hr>

      <h1>Hello {{yourName}}!</h1>
    </div></body>
</html>
```

CALL ME MAYBE?

- https://hackhands.com/hitman666/

- https://hackhands.com/how-to-get-started-on-the-mean-stack/

- https://hackhands.com/delving-node-js-express-web-framework/

Le questions???