



Node JS

Introduction

JS Runtime

Non-blocking

Asynchronous

Real Time Web

What can you do with Node?

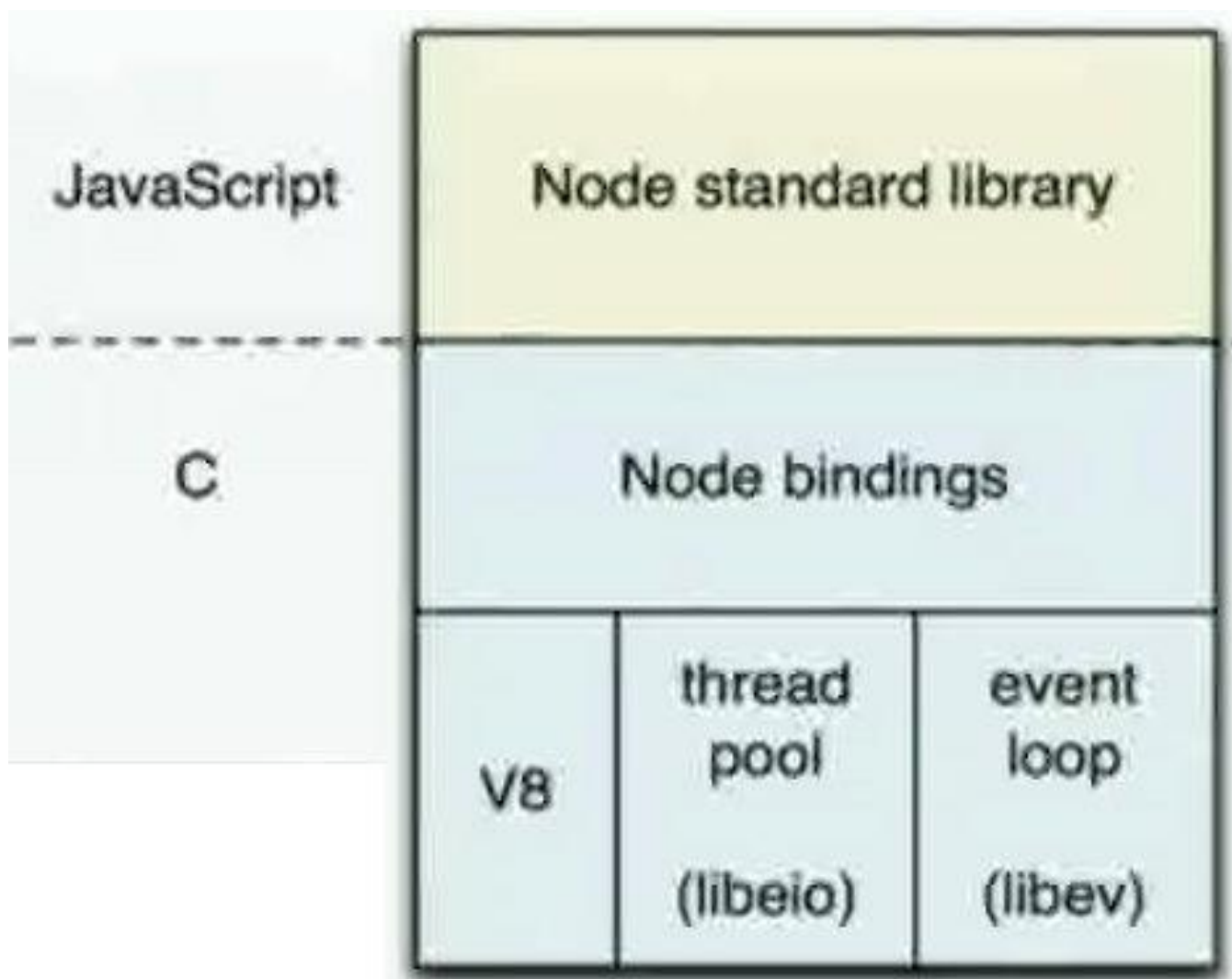
Node

So what is Node?



Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.

Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient.



node.js architecture

Real fast server implementation.

Developer Tools - file:///F:/work/_Trainings/PayPal/JS_Code/attrib/index.html

Elements Console Sources Network Timeline Profiles Application Security Audits

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>
    <h2>JavaScript HTML attributes Demo</h2>
    <p>Change the src (source) attribute of an image.</p>
    <button onclick="document.getElementById('myImage').src='with.jpg'">With Makeover</button>
    
    <button onclick="document.getElementById('myImage').src='without.jpg'">Without Makeover</button>
    <br>
    <br>
    <br>
    <br>
    <br>
    <div>...</div>
    <div>...</div>
  </body>
</html>
```

Styles Computed Event Listeners DOM Breakpoints >>

Filter show .cls +

```
element.style {
}
body {
  display: block;
  margin: 8px;
}
```

margin: 8px; border: 1px solid black; padding: 8px; 1247.200 x 625.513

html body

Console

top Preserve log

Window

```
Window {stop: function, open: function, alert: function, ...}
  alert: function alert()
  applicationCache: ApplicationCache
  atob: function atob()
  blur: function ()
  btoa: function btoa()
  caches: CacheStorage
  cancelAnimationFrame: function cancelAnimationFrame()
```

MINGW64:/

```
Dev1@XTRig2 MINGW64 /
$ node
> global
{
  DTRACE_NET_SERVER_CONNECTION: [Function],
  DTRACE_NET_STREAM_END: [Function],
  DTRACE_HTTP_SERVER_REQUEST: [Function],
  DTRACE_HTTP_SERVER_RESPONSE: [Function],
  DTRACE_HTTP_CLIENT_REQUEST: [Function],
  DTRACE_HTTP_CLIENT_RESPONSE: [Function],
  COUNTER_NET_SERVER_CONNECTION: [Function],
  COUNTER_NET_SERVER_CONNECTION_CLOSE: [Function],
  COUNTER_HTTP_SERVER_REQUEST: [Function],
  COUNTER_HTTP_SERVER_RESPONSE: [Function],
  COUNTER_HTTP_CLIENT_REQUEST: [Function],
  COUNTER_HTTP_CLIENT_RESPONSE: [Function],
  global: [Circular],
  process:
    process {
      title: '',
      version: 'v7.4.0',
      moduleLoadList:
        [ 'Binding contextify',
          'Binding natives',
```

NodeJS

What NodeJS is not?



What NodeJS is not

A web framework (RoR, Django)

Non-blocking

Asynchronous

Real Time Web

What can you do with Node?

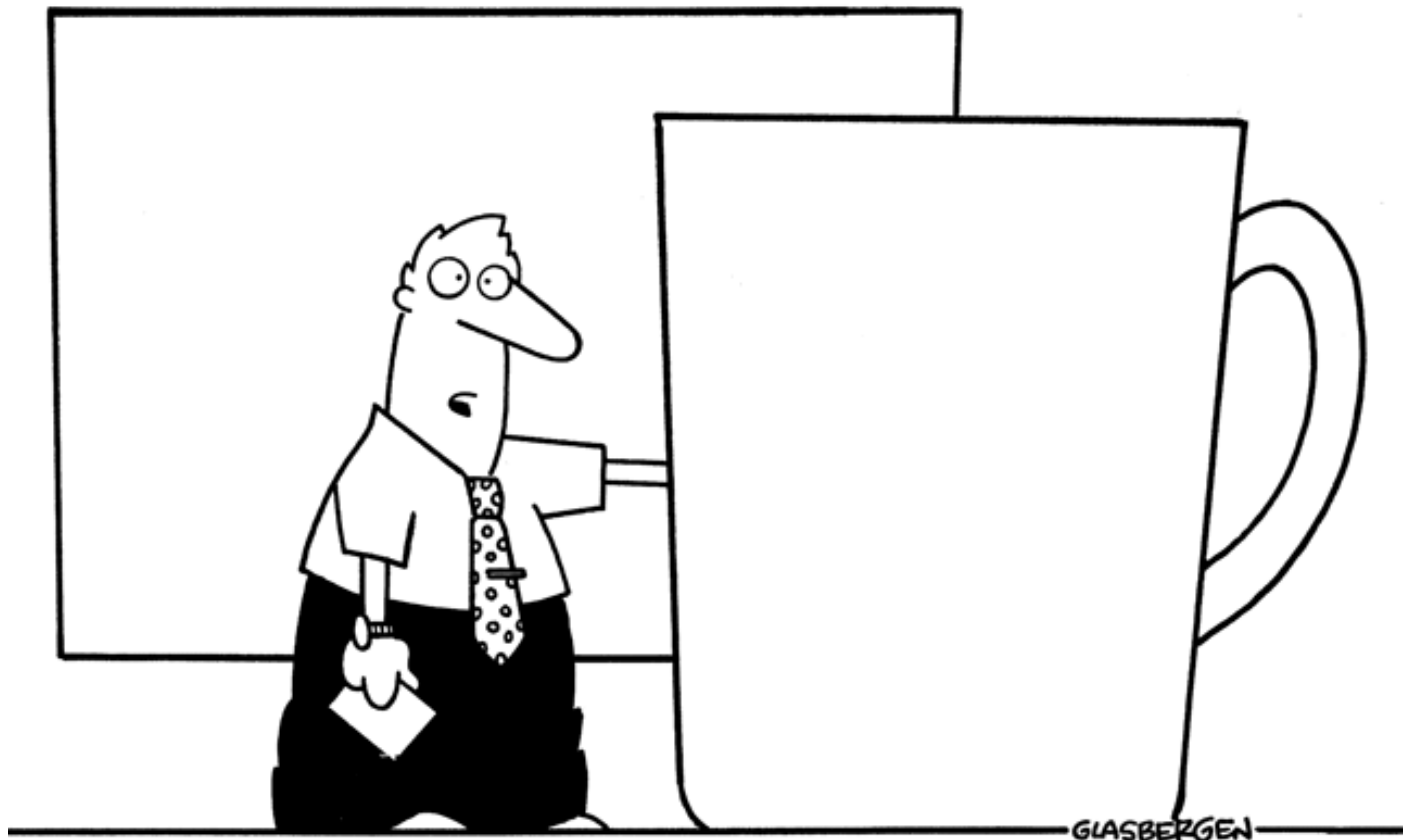
History in brief

- 2009** Ryan Dahl develops Node.JS
- 2010** NPM released
- 2011** MS helps build native Node.JS
- 2015** Node v4.0 released



Tools of the Trade

© Randy Glasbergen / glasbergen.com



**“Before we begin our Productivity Seminar,
did everyone receive a free coffee mug?”**

Node / NPM

Cross-Platform
JS Run Time Environment
Powerful
Extensible



Node

<https://nodejs.org/en/>



Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, **npm**, is the largest ecosystem of open source libraries in the world.

Download for Windows (x64)

v6.10.2 LTS
Recommended For Most Users

v7.9.0 Current
Latest Features

[Other Downloads](#) | [Changelog](#) | [API Docs](#) [Other Downloads](#) | [Changelog](#) | [API Docs](#)

Or have a look at the [LTS schedule](#).

Node / NPM

Which Node to Use?

Depending on what you want
to do!





```
$node -v
```

```
$npm -v
```



[HOME](#) | [ABOUT](#) | [DOWNLOADS](#) | [DOCS](#) | [FOUNDATION](#) | [GET INVOLVED](#) | [SECURITY](#) | [NEWS](#)

Node.js® is a JavaScript runtime built on [Chrome's V8 JavaScript engine](#). Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient. Node.js' package ecosystem, [npm](#), is the largest ecosystem of open source libraries in the world.

Download for Windows (x64)

v6.9.5 LTS

Recommended For Most Users

v7.5.0 Current

Latest Features

[Other Downloads](#) | [Changelog](#) | [API Docs](#) [Other Downloads](#) | [Changelog](#) | [API Docs](#)

Or have a look at the [LTS schedule](#).

Editor

Several choices

VS Code – For this course



VS Code

Visual Studio Code Docs Updates Blog Extensions FAQ

Search Docs

Download

Version 1.8 is now available! Read about the new features and fixes in November.

Code editing. Redefined.

Free. Open source. Runs everywhere.

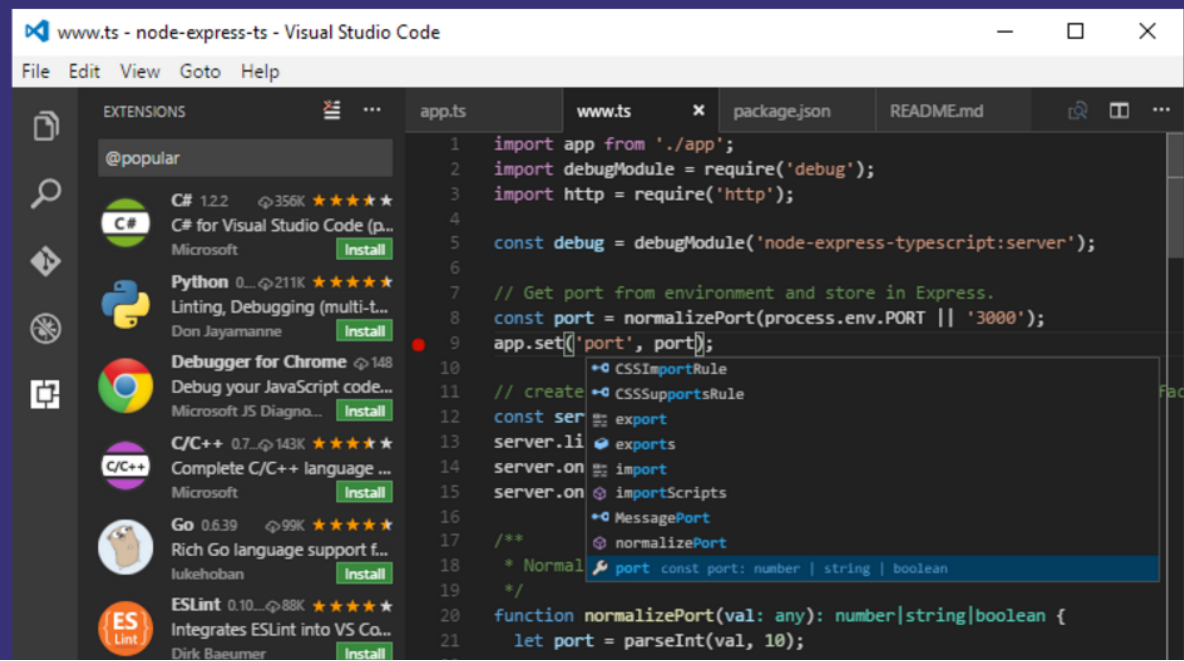
Download for Windows

Stable Build

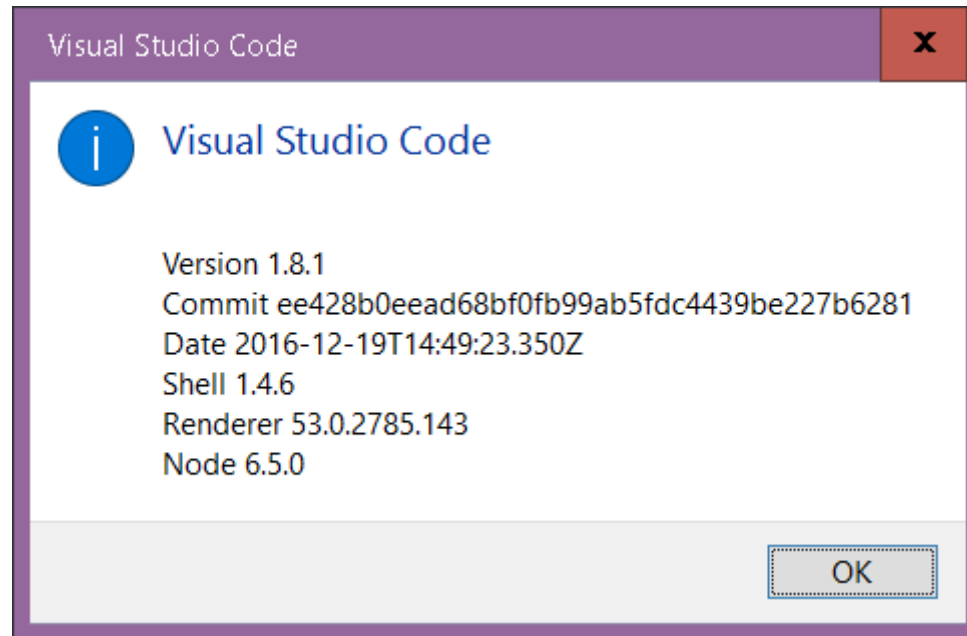


Other platforms and Insiders Edition

By using VS Code, you agree to its
license and privacy statement.



VS Code



VS Code

The "*emacs*" of Web World!

Intellisense

Zen coding

IDE

VS Code – Zen Coding

div.row

Browser

Several Choices

Chrome Recommended



Accessories

Shell

Git

Unit-Test

Functional Testing

CI/CD

Thank You!

