



Node.js RESTful API



For mobile





Narongrit Kanhanoi
(HEART)

- 2004 Game Developer (Flash Actionscript)
- 2008 Robot live radio online at GMM Grammy
- 2009 Facebook Game developer at M-interaction GroupM
- 2011 Co-Founder 3DS interactive Mobile App Developer



Node.js Original Author



Ryan Dahl

ปัจจุบันอายุ 38 ปี

First release : 27 May 2009

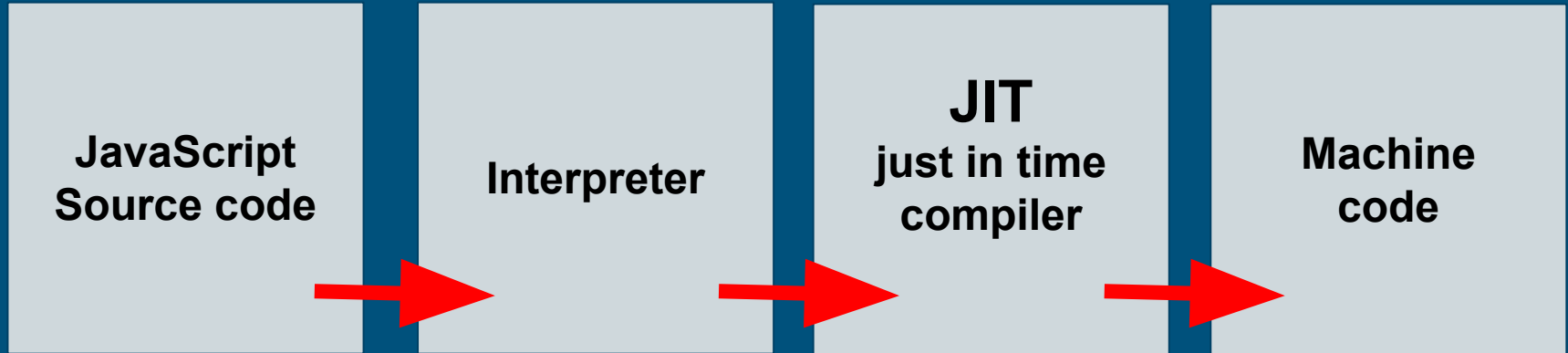
Stable release : 4 June 2019

Write in C, C++

JavaScript



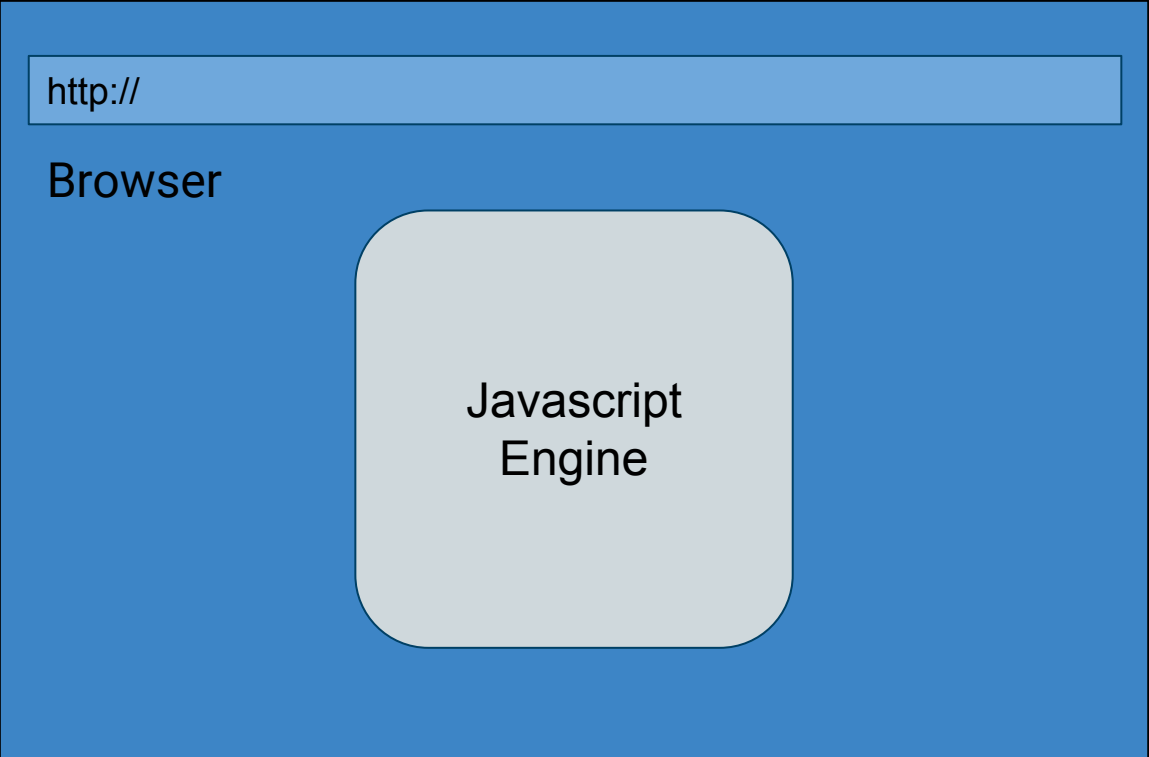
How Javascript work



http://

Browser

Javascript
Engine

A diagram of a browser window. The window has a light blue header bar at the top containing the text "http://". Below the header, the word "Browser" is written in the top-left corner. In the center of the window is a light gray rounded rectangle containing the text "Javascript Engine".

JavaScript Engine บน browser



Chakra



Spider
Monkey

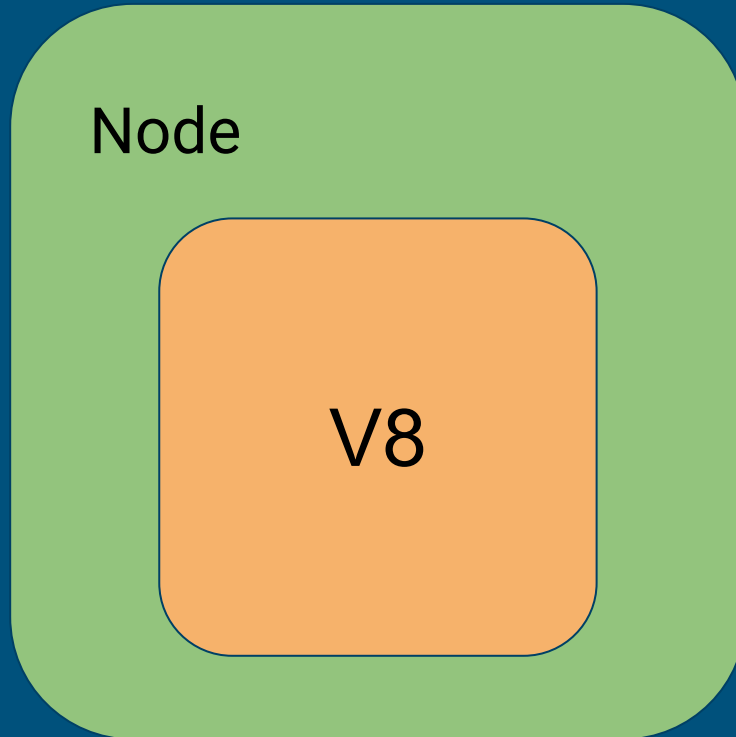


V8



Javascript
Core

Node.js using V8 engine



What is Node.js

~~Framework ?~~

~~Programming Language ?~~

JavaScript Runtime environment



Node is Async by default

Asynchronous I/O VS Synchronous I/O

Input / output

MAIN System

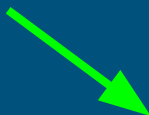
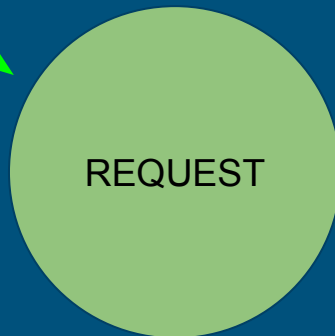
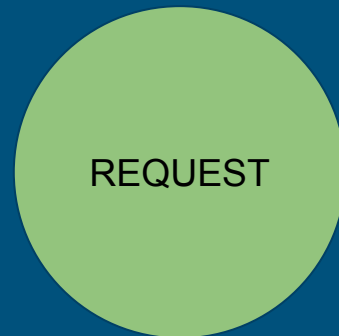
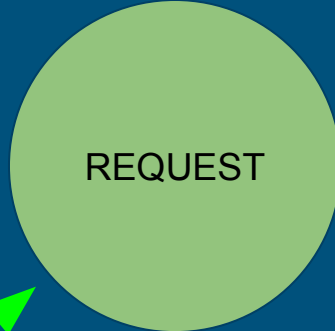
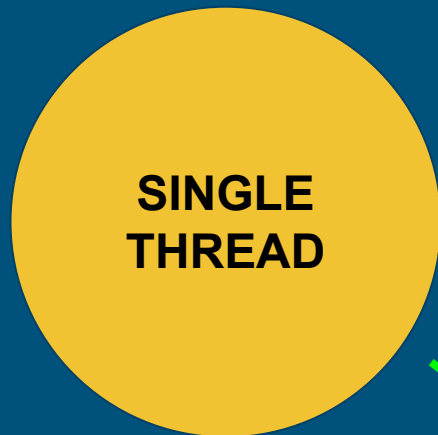
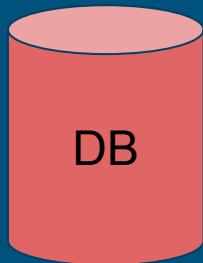


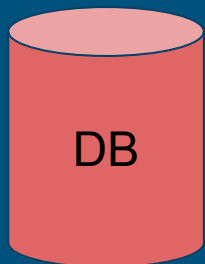
Database

File
Storage

Heavy
Process

Event Queue





**SINGLE
THREAD**

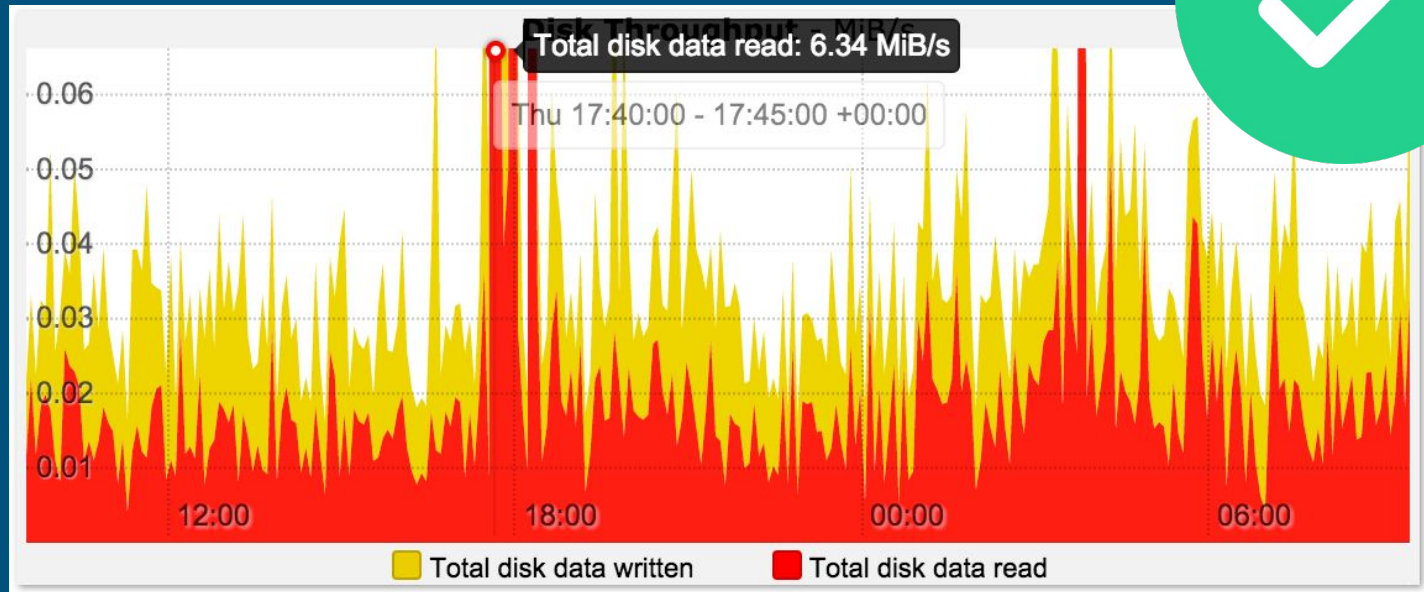


REQUEST

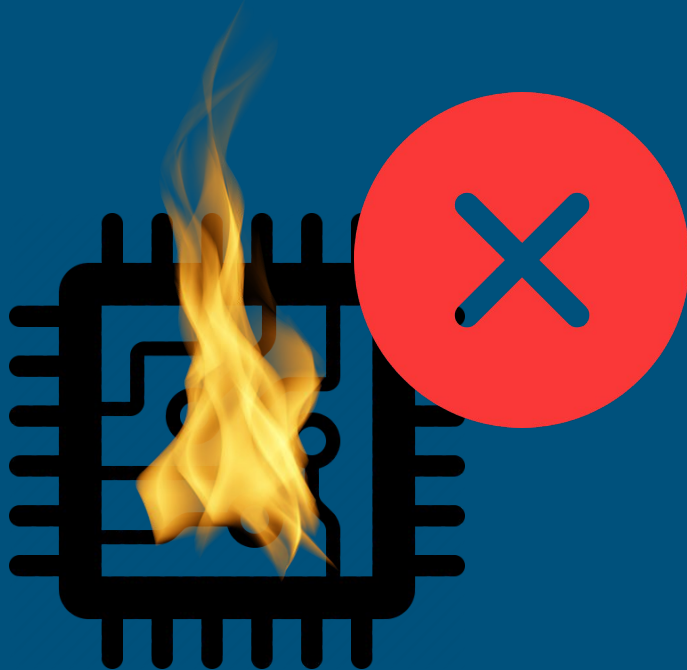
REQUEST

REQUEST

Use node for I/O intensive app



Don't use Node for CPU intensive app





RESTful API



คืออะไร ?



REST = Representational State Transfer

ว่าด้วยการใช้งาน และโครงสร้างของ web service ที่ทำงานบน HTTP

โดยใช้ http methods เช่น GET, POST, PUT, DELETE



HTTP Request/Response



HTTP Request/Response

Requests

POST / HTTP/1.1

Host: localhost:8000

User-Agent: Mozilla/5.0 (Macintosh;...) ...Firefox/51.0

Accept: text/html, application/json

Accept-Language: en-US,en;q=0.5

Accept-Encoding: gzip, deflate

Connection: keep-alive

Upgrade-Insecure-Requests: 1

Cookie: session_id=x34dds532EAxy&user=admin

Content-Type: application/json **boundary=-12656974**

Content-Length: 345

-12656974

{ "message": "hello",

.....>

..... }

Response

HTTP/1.1 200 OK

Server: Nginx

Content-Type: application/json; charset utf-8

Date: Wed, 10 Aug 2018 09:01:30 GMT+7

Keep-Alive: timeout=5, max=1000

Connection: Keep-Alive

Age: 3464

Content-Length: 300

{ "response_message": "hello from server",

.....

.....

..... }

HTTP Methods

GET = ขออ่านข้อมูล

POST = ขอสร้างข้อมูลใหม่

PUT = ขอแทนที่ข้อมูลเดิม

PATCH = ขอแก้ไขข้อมูลบางส่วน

DELETE = ขอลบข้อมูล

Let write some code



2 รูปแบบของการ ออกแบบ API

ยึดตาม Resource

GET /product/10

POST /product

DELETE /product

ยึดตาม Action

POST /createProduct

POST /genreport

GET /available_report



Test your code



Unit testing & integration testing



Unit test cheat sheet

<code>.toEqual</code>	Object match
<code>.toBeNull</code>	matches only null
<code>.toBeUndefined</code>	matches only undefined
<code>.toBeDefined</code>	is the opposite of <code>toBeUndefined</code>

Unit test cheat sheet

`.toBeTruthy` matches true

`.toBeFalsy` matches false

`.toBeGreaterThan(3);` > 3

`.toBeGreaterThanOrEqual(3.5);` > 3.5

`.toBeLessThan(5);` < 5

Unit test cheat sheet

`.toBeLessThanOrEqual(4.5);`

`.toBeCloseTo(0.3)` เช็ค ทศนิยมป้องกัน Error

`.toMatch(/!/)`ตรวจสอบ Regular expression

`.toContain('beer')` ตรวจสอบ Array ว่ามีไหม

Unit test cheat sheet

`.toThrow();` ตรวจสอบว่ามี throw ไหม

`.toThrow('err msg');` ตรวจสอบว่ามี throw ไหม