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EP 1 : Node.js, Express.js and JavaScript

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Node.js คืออะไร ?

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Javascript Runtime Library
ที่สร้างด้วย Chrome V8 engine

เพื่อใช้งานฝั่ง Server Side เป็นหลัก

ทำไมต้อง Node.js?

- ใช้ Javascript ในการเขียน
- เร็วและง่ายต่อการเรียนรู้
- มีไลบรารี่ เครื่องมือ และ คอมมิวนิตี้ที่ใหญ่ที่สุดในโลก
- เหมาะสำหรับสร้าง Real-Time Application
- สามารถขยายโปรเจค (scaling) ได้ง่าย
- มีความต้องการในตลาดแรงงานสูง

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ติดตั้ง Node.js

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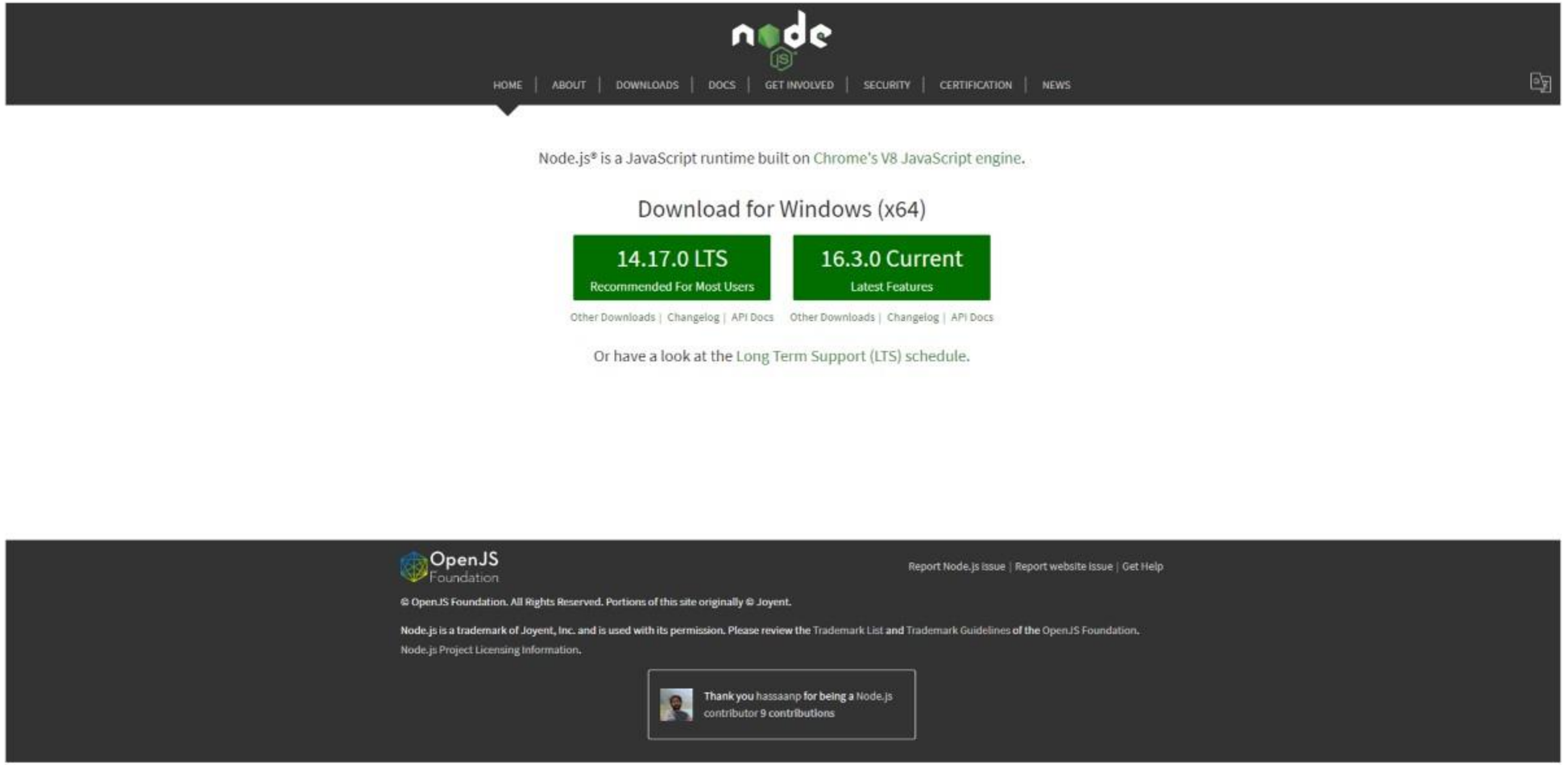
https://nodejs.org/en/



‘Hello world’ in Node.js

server.js > ...

```
1   const HTTP = require('http')
2   const PORT = process.env.PORT || 3030
3
4   const app = HTTP.createServer((request, response) => {
5     response.statusCode = 200
6     response.setHeader('Content-Type', 'text/plain')
7     response.end('Hello World')
8   })
9
10  app.listen(PORT, () => {
11    console.log(`server is running on port ${PORT}`)
12  })
13
```

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Express JS

Express.js คืออะไร ?

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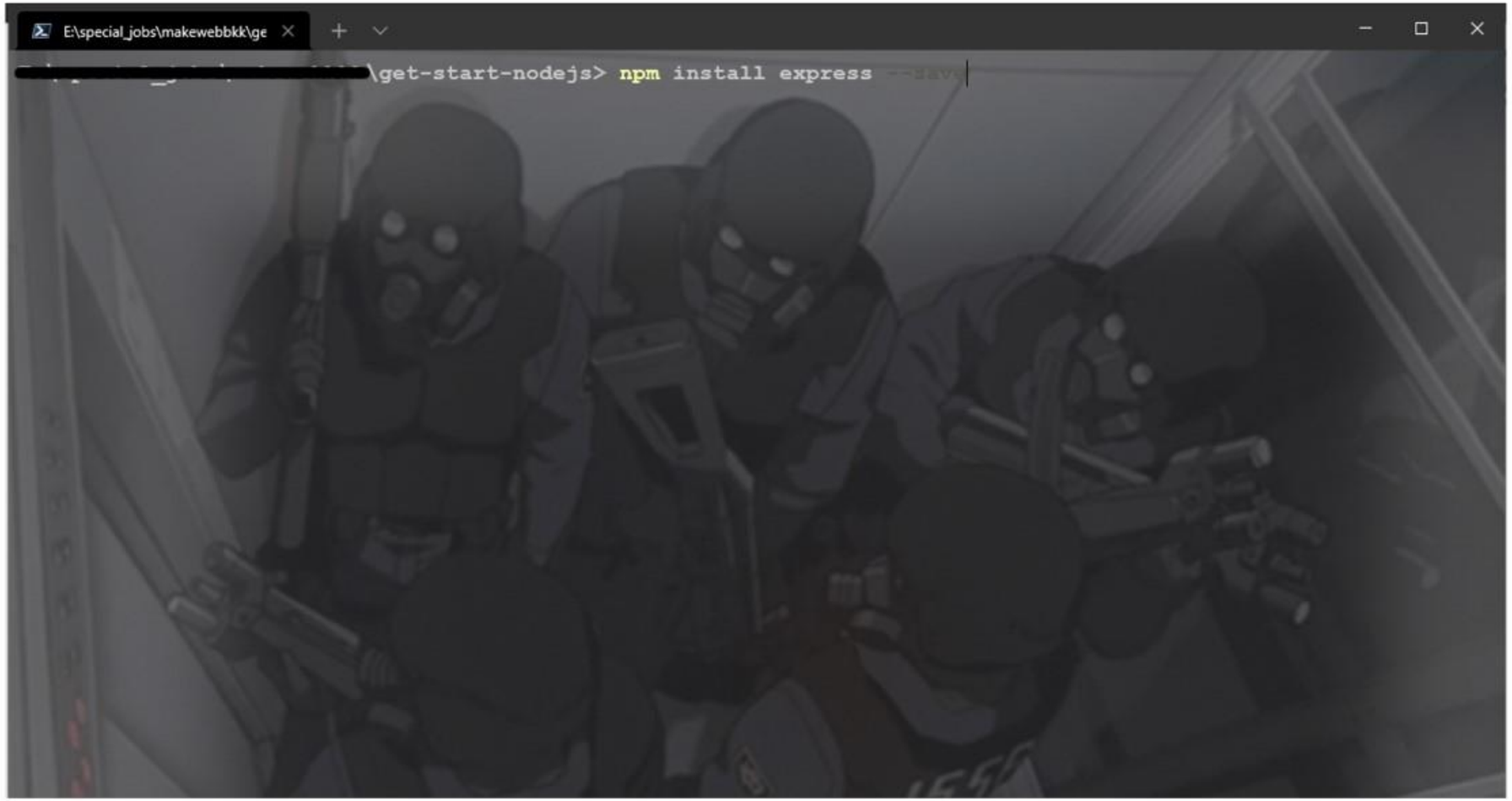
Node.js light-weight web application framework
เพื่อช่วยจัดการเรื่องโครงสร้างสำหรับโปรเจค Node.js

ติดตั้ง Express

ใช้คำสั่ง npm install express –save ที่ไดเรคทอรี่โปรเจคของเรา



‘Hello world’ in Node.js with Express

JS server-with-express.js > ...

```
1   const express = require('express')
2   const app = express()
3
4   app.get('/', (request, response) => {
5     response.send('Hello World').status(200)
6   })
7
8   const PORT = process.env.PORT || 3030
9   app.listen(PORT, () => {
10    console.log(`server is running on port ${PORT} ...`)
11  })
12
```

ตัวเลือกอื่นๆที่ทำงานได้เหมือน Express.js

EJS

<% Embedded JavaScript %>

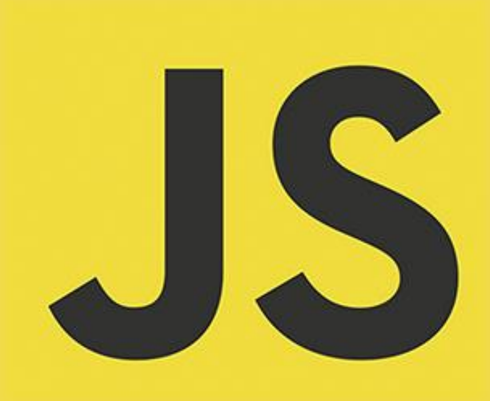
Templating: Node, Express, EJS

JADE

NODE TEMPLATE ENGINE

fastify

Fast and low overhead web framework, for Node.js


JS

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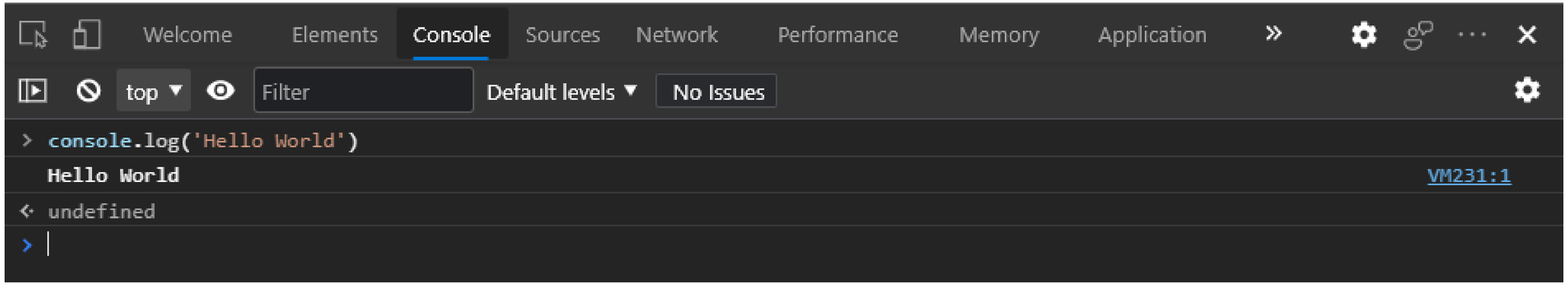
JavaScript Crash Course


Welcome
Elements
Console
Sources
Network
Performance
Memory
Application
top
Filter
Default levels
No Issues
console.log('Hello World')
Hello World
VM231:1
undefined

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- Variable Types
- Variables
- Objects
- Arrays
- String Methods
- Functions

Primitives / Value Types

- String
- Number
- Boolean
- undefined
- null

Reference Types

- Object
- Array
- Function

JS variables is a Dynamically-typed that mean no type assigned

string name = ‘Foon’ 👉 let name = ‘Foon’

keyword	const	let	var
global scope	NO	NO	YES
function scope	YES	YES	YES
block scope	YES	YES	NO
can be reassigned	NO	YES	YES

รูปจาก www.constletvar.com

Object

```
1  const name = 'Peter Quil'
2  const age = 28
3  const gender = 'male'
4  const married = false
5
6
7
```



```
1  const person = {
2    name: 'Peter Quil',
3    age: 28,
4    gender: 'male',
5    married: false
6  }
7
```

Using Object

```
1  const person = {
2    name: 'Peter Quil',
3    age: 28,
4    gender: 'male',
5    married: false
6  }
7
8
9  // Dot Notation
10 person.name = 'Matthew Murdok'
11
12 // Bracket Notation
13 person['age'] = 32
14
15 //using
16 console.log(`My name is ${person['name']}, I'm ${person.age} years old`)
17
```

Object vs JSON

Object

```
1
2  const person = {
3    name: 'Richard Rider',
4    age: 14,
5    gender: 'male',
6    married: false
7  }
8
9
10
```

JSON

```
1  {
2    "person": {
3      "name": "Carol Danvers",
4      "age": 32,
5      "gender": "female",
6      "married": false
7    }
8  }
9
10
```

Array

```
1   const colors = ['red', 'green', 'blue']
2
```

Defined by Index

```
1   const colors = ['red', 'green', 'blue']
2
3   console.log(colors[0]) // red
4
```

Assign an Element

```
1   const colors = ['red', 'green', 'blue']
2   colors[3] = 'yellow'
3
4   console.log(colors) // ['red', 'green', 'blue', 'yellow']
5
```

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Array Methods

- array.push()
- array.pop()
- array.map()
- array.filter()
- array.splice()
- array.find()
- array.findIndex()
- array.reduce()
- array.sort()
- Etc.

See more : js-array-playground.firebaseapp.com

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String

String is a group of character

- string.length
- string.indexOf()
- string.lastIndexOf()
- string.search()
- string.slice()
- string.substring()
- string.replace()
- string.concat()
- string.toUpperCase()
- Etc.

Function

```
1  function sayHi () {
2      console.log('Hello')
3  }
4
5  sayHi() // Hello
6
```

Function with Parameters

```
1  function sayHi (name) {
2    console.log('Hello' + name)
3  }
4
5  sayHi('Frank Castle') // Hello Frank Castle
6
```

Types of Function

```
1
2   // Performing a task
3   function sayHi (name) {
4     console.log('Hello' + name)
5   }
6
7   // Calculating a value
8   function addition(number1, number2) {
9     return number1 + number2
10  }
11
12  sayHi('Frank Castle') // Hello Frank Castle
13
14  const summary = addition(2, 3)
15  console.log(summary) // 5
16
```

Next, We will see about

API, Rest And Postman

SEE YOU SOON ...