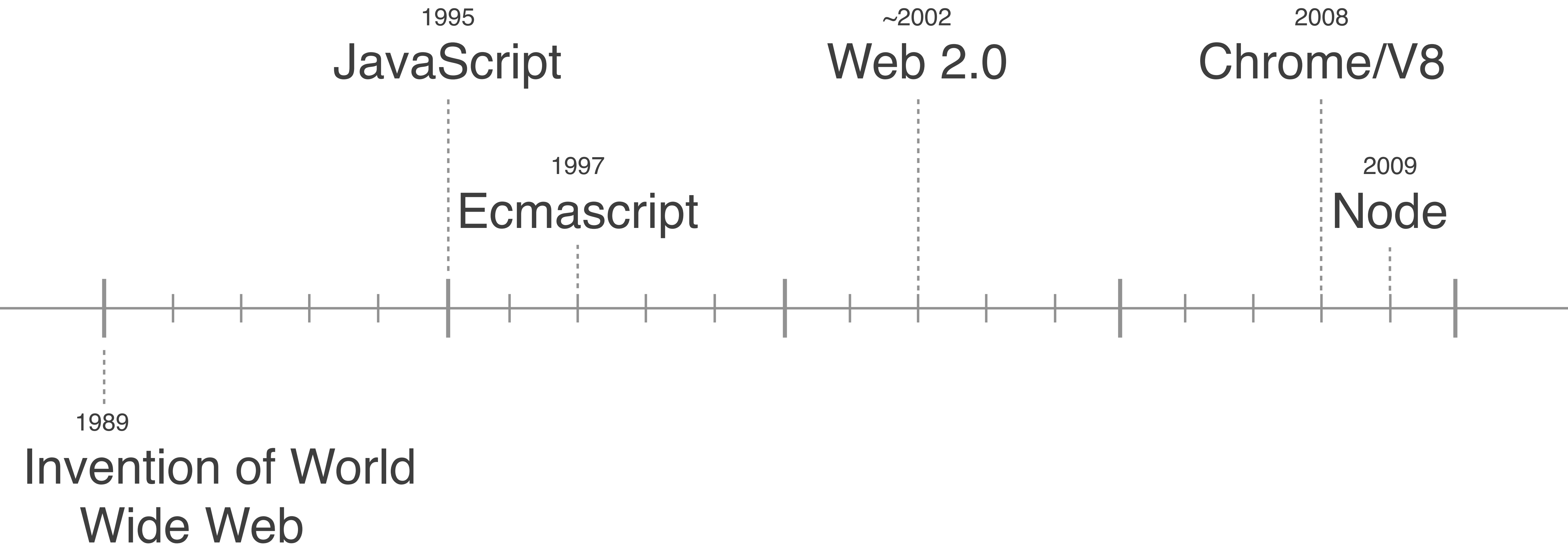


```
NODE.INTRO((err, ideas) => {  
  if (err) throw new Question(err)  
  else understand(ideas)  
})
```

# BACKGROUND



# TIMELINE



**What is node?**

**That doesn't help**

**What does  
it do?**

**A JavaScript runtime  
environment**

**...a tool**

**It executes JavaScript on  
an operating system, instead  
of in a web browser**

files (e.g. app.js)



fs

process

net

`<script></script>`s



window

history

document

*“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.”*

– NODEJS.ORG.



# WHY CARE?

***If you want to create a server and know JavaScript***



# WHY CREATE A SERVER?

*If you want to create a custom website or webapp*





# SERVER

- **A program running on a computer connected to the internet**
- **Serves content requested by remote clients**

# IF PROGRAMMING WERE COOKING...

# Program vs. Process

"recipe"

- Program is data
  - machine code (pre-compiled)
  - bytecode (re-compiled by a VM)
  - text file (can be interpreted)
- Inert — not doing anything
- Ready to be run as a process

Process is execution "cooking"

- memory allocated
- CPU performing steps
- "Live"
- Produces results
- Interactive
- Can be started/stopped
- Multiple processes from one program...



# COOKING METAPHOR

	(term)	(metaphor)
<code>log( 'hi' );</code>	program	recipe
JavaScript	programming language	recipe language
V8	engine/VM/interpreter	chef
Node	runtime environment	kitchen
Sierra	operating system	building (restaurant?)

# MODULES AND THE NODE ENVIRONMENT

# GLOBAL VARIABLES

**Every module in Node has access to the same set of global variables**

`process`

`global`

`console`

`setTimeout/clearTimeout`

`setInterval/clearInterval`

# “MODULE” VARIABLES

- **Every module in Node has its OWN set of “module” variables that are available in the default scope**

```
__dirname  
__filename  
module  
require
```



# module

- **Object**
- **Represents the module itself**
- **Most importantly, has a property called `exports`**



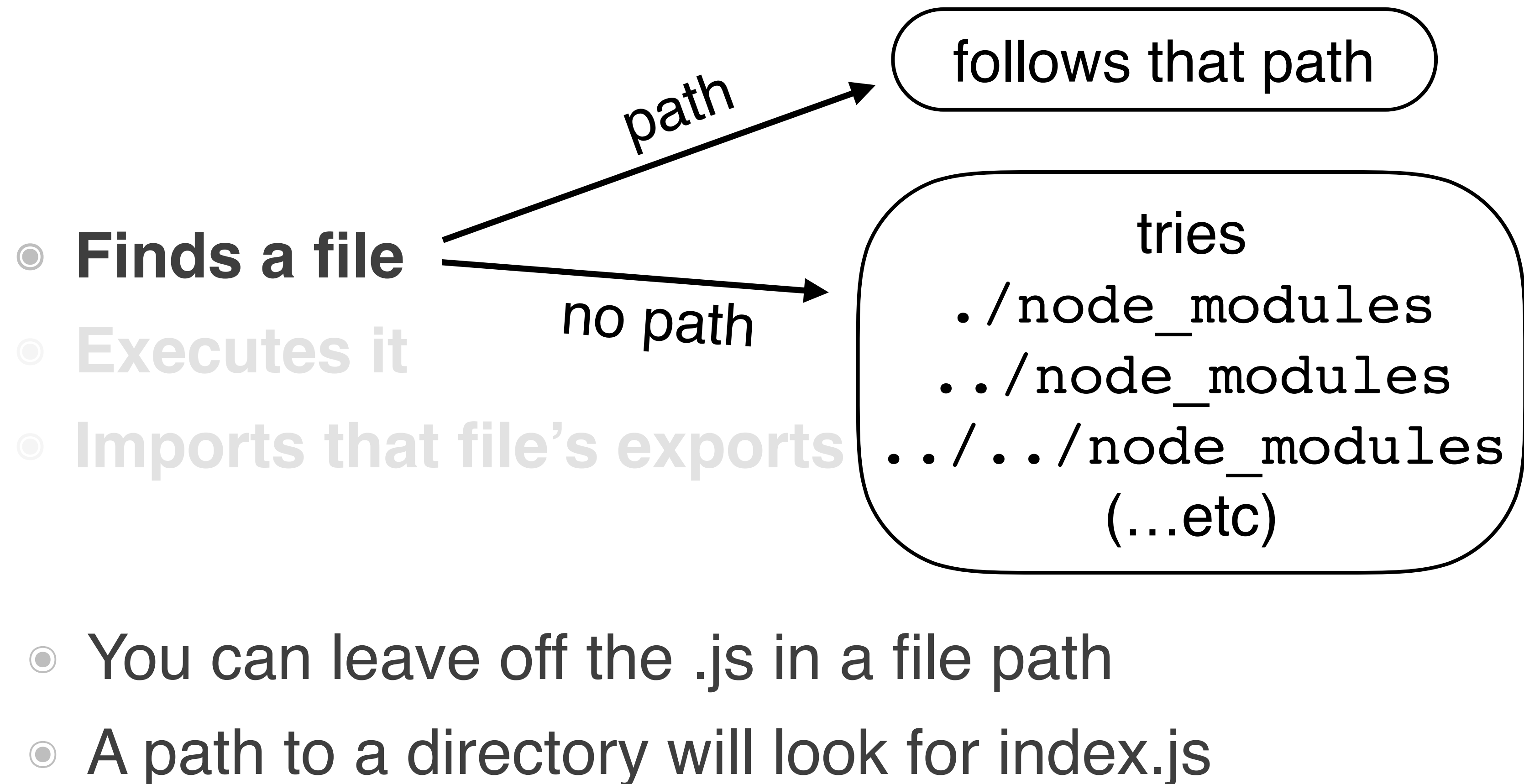


# `module.exports`

- ◉ Initially an empty object
- ◉ Assign it the data you want to expose
- ◉ **A** `require` of this file (“module”) will return its `module.exports`



# require



# DEMO



# NPM

- **n**ode **p**ackage **m**anager
- **Command line tool**
- **Can find libraries of code online**
- **Downloads them locally or globally (into `node_modules` directory)**
- **Keeps list of project dependencies in `package.json`**



# `package.json`

***Describes your project, e.g. its dependencies...***

- **Collaboration within your team**
- **Sharing within the node community**



# SUMMARY

- **Node allows for server-side JavaScript**
- `require` **pulls in what** `module.exports` **exposes**