Node.js

Article Talk

From Wikipedia, the free encyclopedia

Node.js is a cross-platform, open-source JavaScript runtime environment that can run on Windows, Linux, Unix, macOS, and more. Node.js runs on the V8 JavaScript engine, and executes JavaScript code outside a web browser.

Node.js lets developers use JavaScript to write command line tools and for server-side scripting. The ability to run JavaScript code on the server is often used to generate dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm,[6] unifying web-application development around a single programming language, as opposed to using different languages for the server- versus client-side programming.

Node.js has an event-driven architecture capable of asynchronous I/O. These design choices aim to optimize throughput and scalability in web applications with many input/output operations, as well as for real-time Web applications (e.g., real-time communication programs and browser games).[7]

The Node.js distributed development project was previously governed by the Node.js Foundation,[8] and has now merged with the JS Foundation to form the OpenJS Foundation. OpenJS Foundation is facilitated by the Linux Foundation's Collaborative Projects program.[9]

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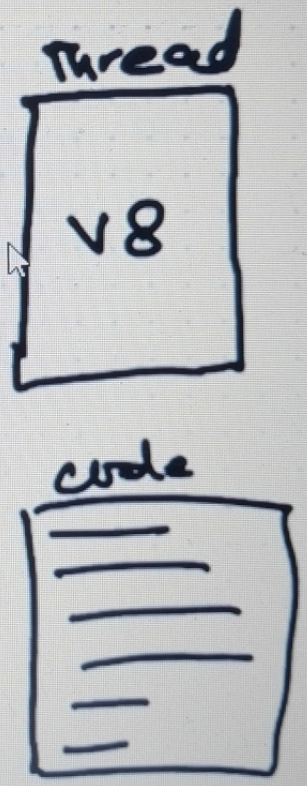
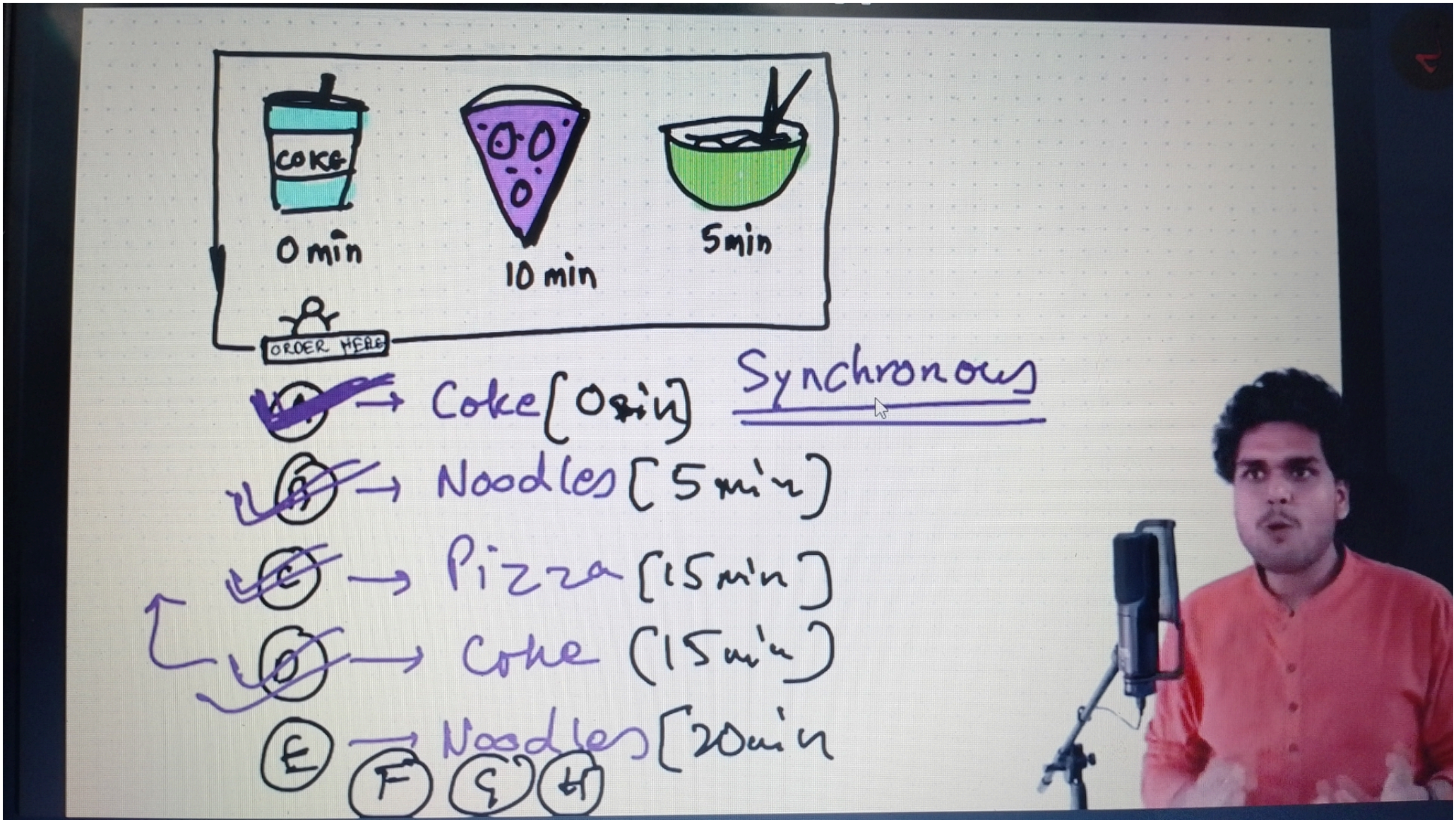
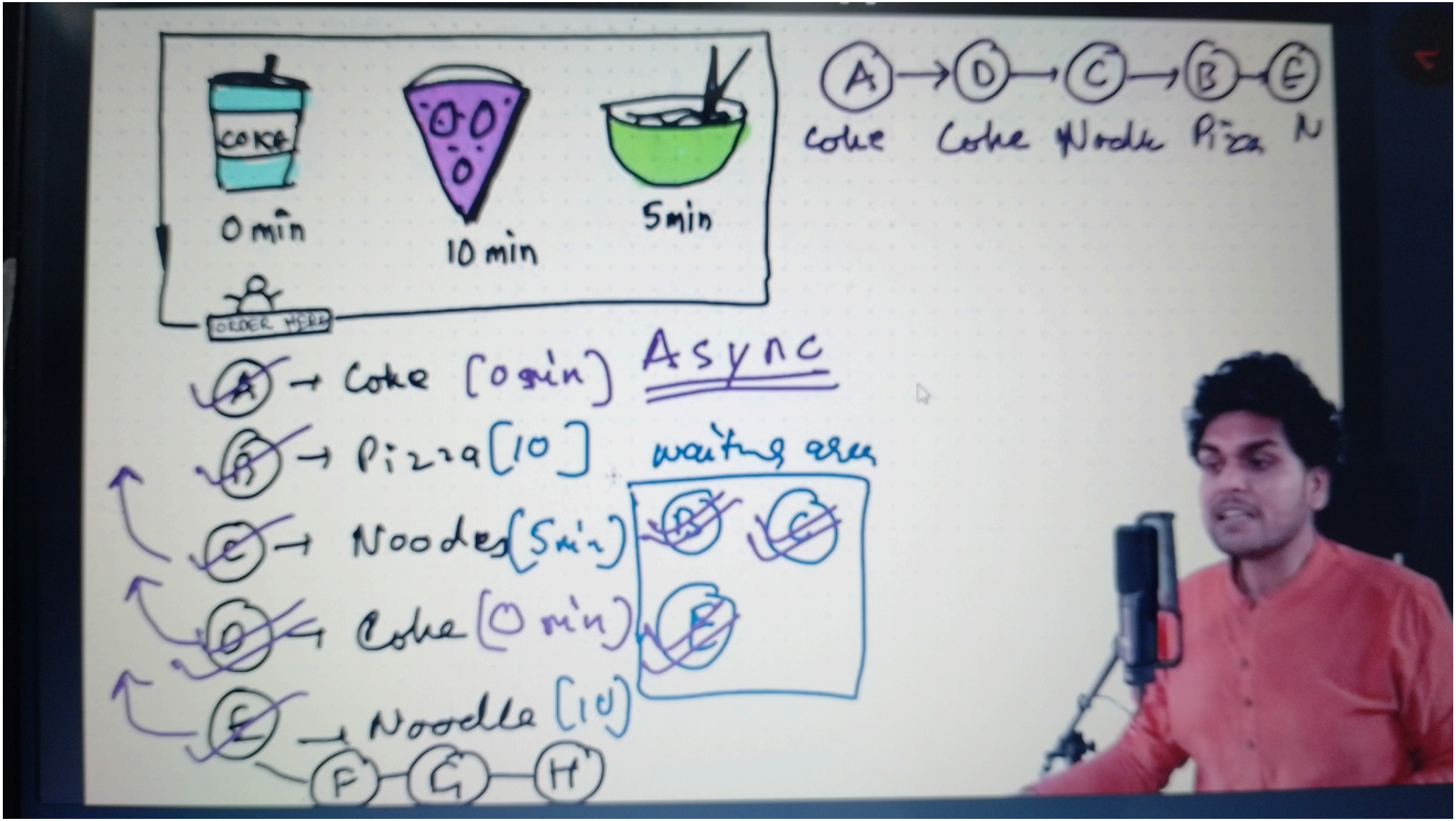
JS → synchronous
single threaded




COKE
0 min
10 min
5min
ORDER HERE
Coke [0min]
Noodles [5min]
Pizza [15min]
Coke [15min]
Noodles [20min
Synchronous


COKE
0 min
10 min
5min
ORDER HERE
A → D → C → B → E
Coke Coke Noodle Pizza N
A → Coke [0 min]
Async
B → Pizza [10]
waiting area
C → Noodles [5 min]
D → Coke [0 min]
E → Noodle [10]
F → G → H

Synchronous

```
var a = 1078698;
var b = 20986;

function multiplyFn(x, y) {
  const result = a * b;
  return result;
}

var c = multiplyFn(a, b);
```

Asynchronous

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https.get("https://api.fbi.com", (res) => {
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fs.readFile("./gossip.txt", "utf8", (data) => {
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These tasks can execute immediately

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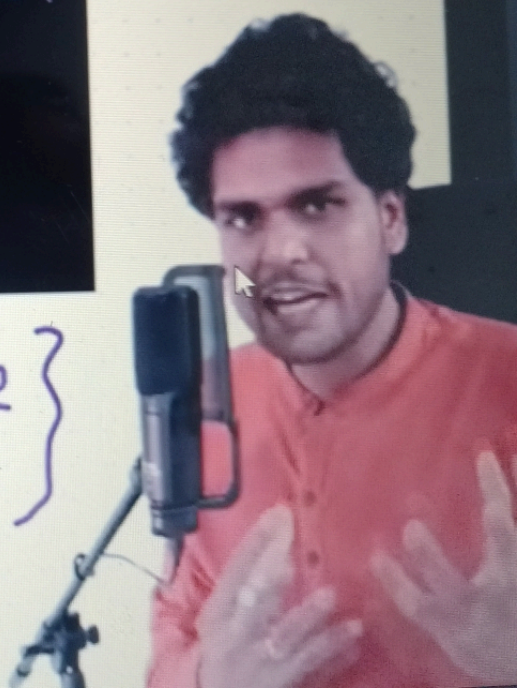
These task take time to execute



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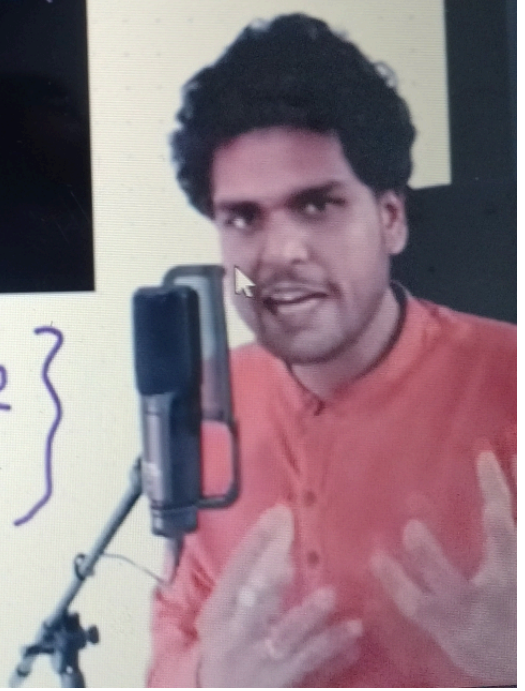

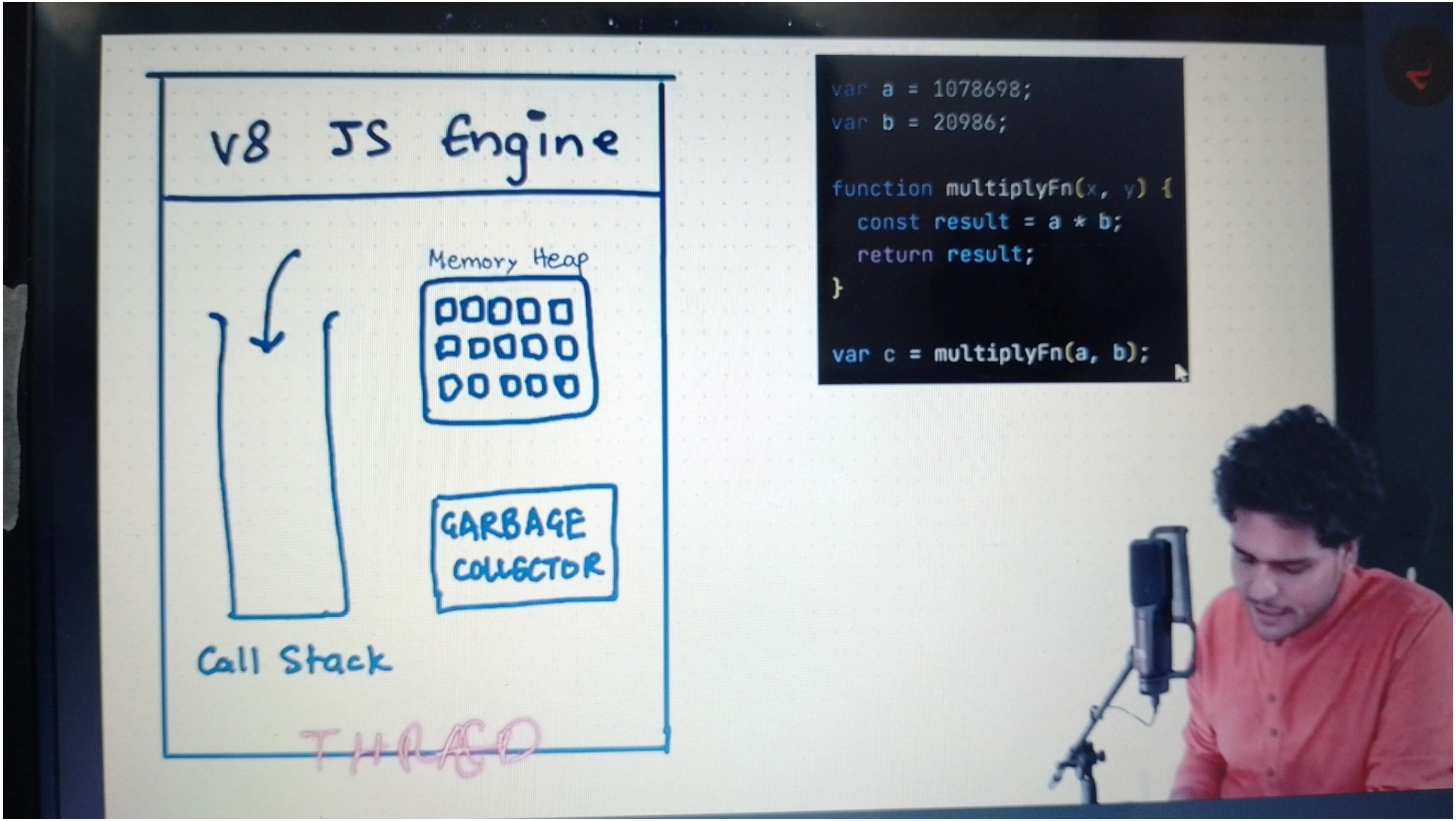
V8 JS Engine
Memory Heap
GARBAGE COLLECTOR
Call Stack
THREAD
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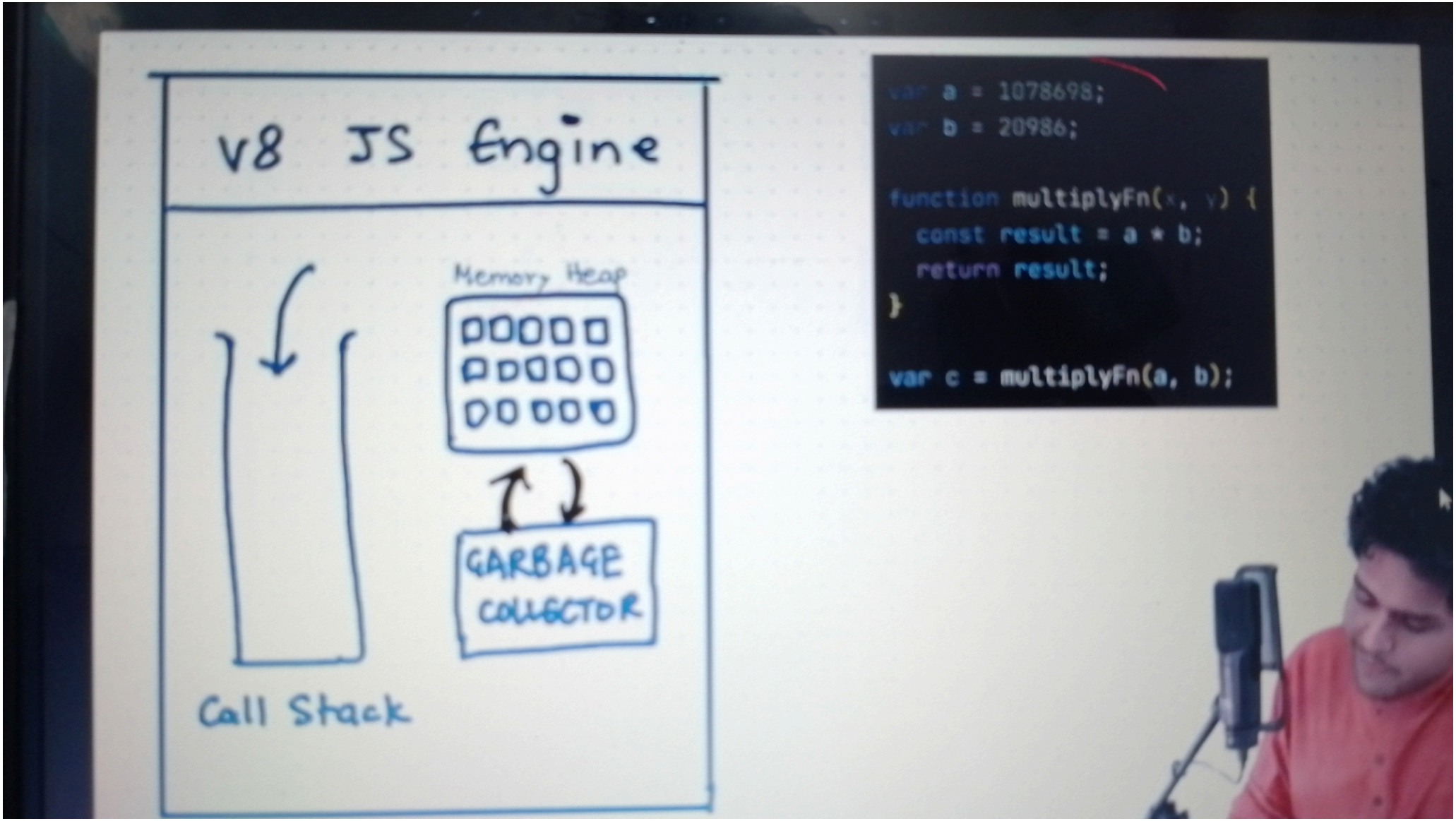
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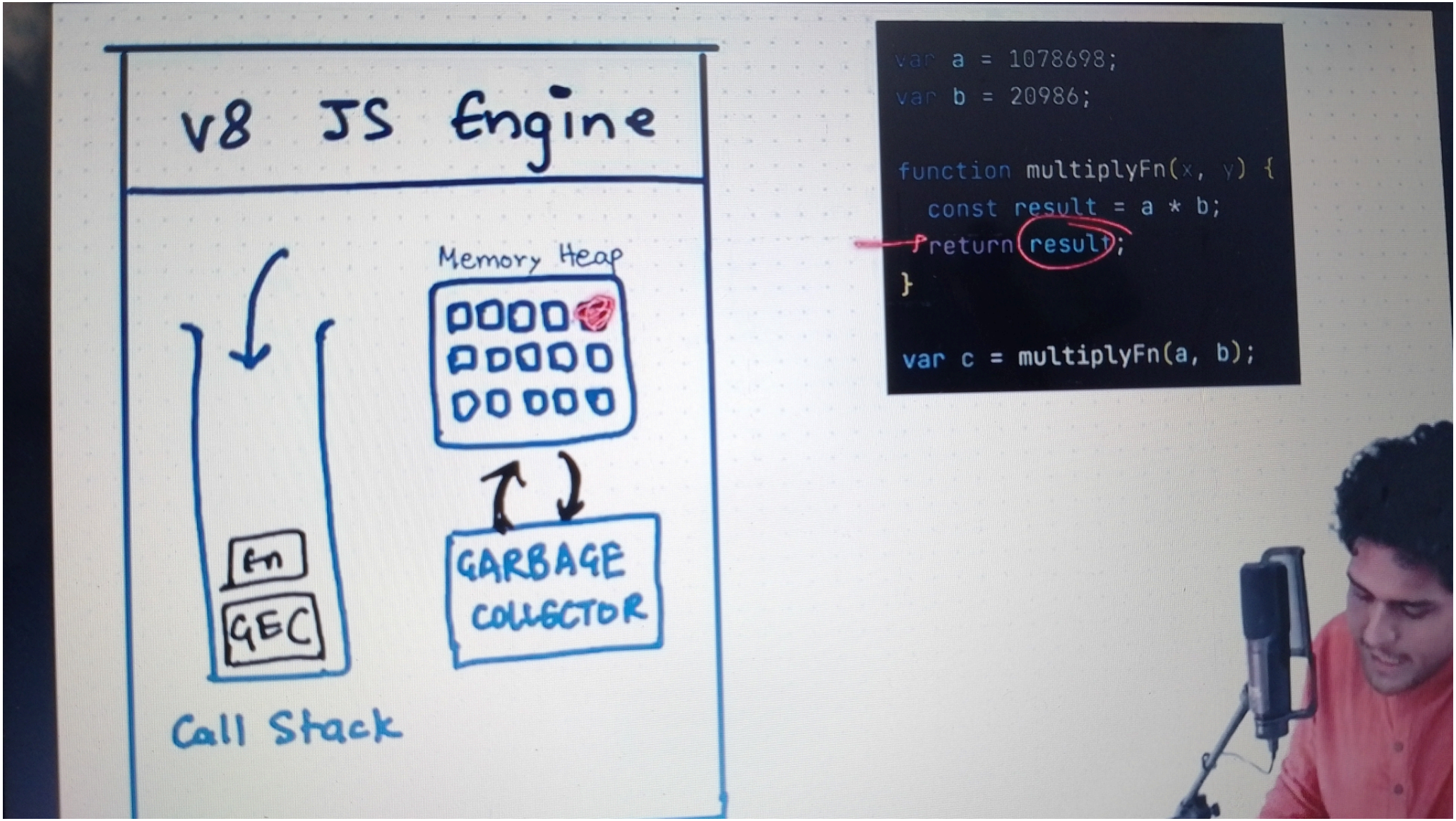
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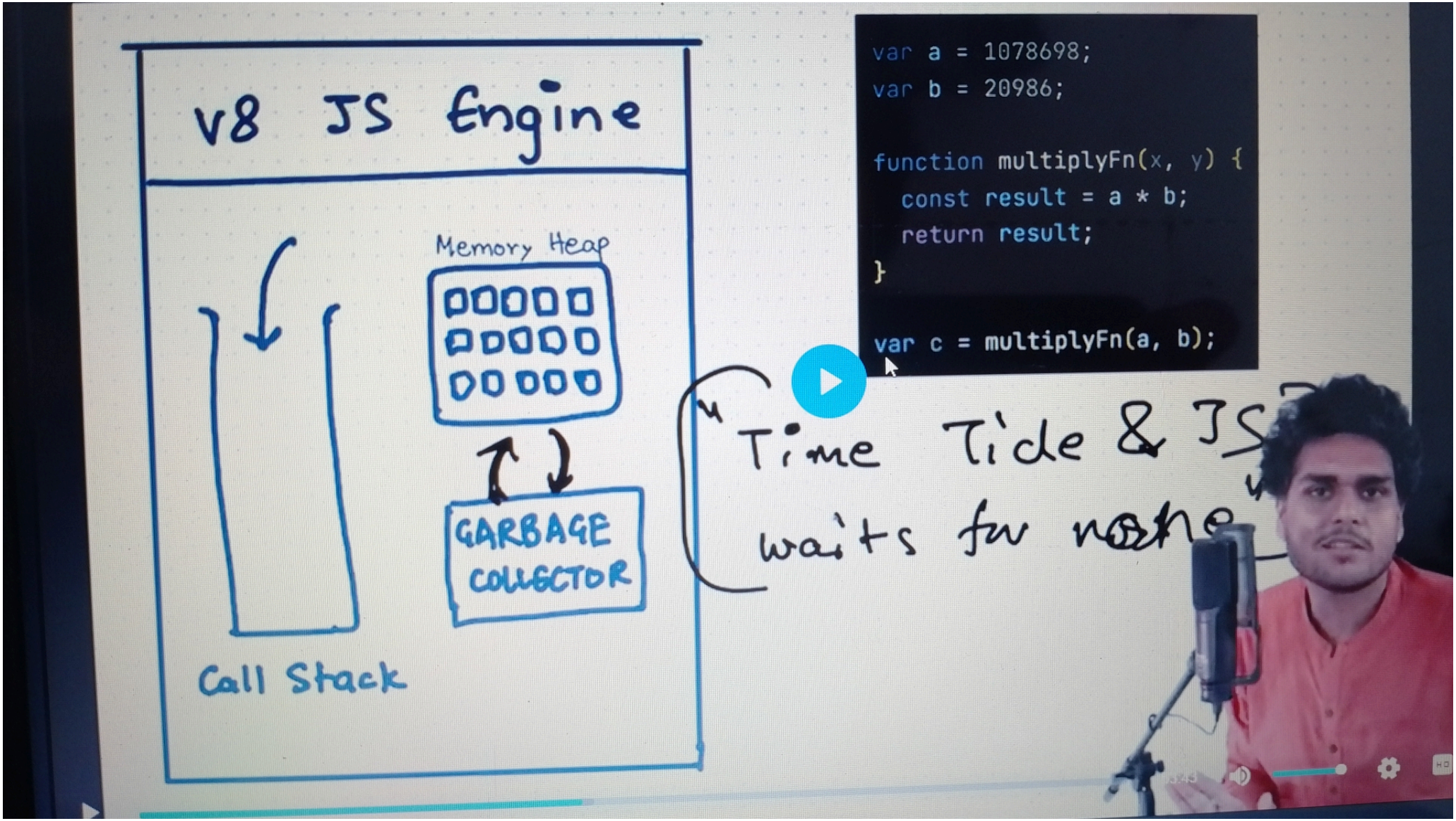
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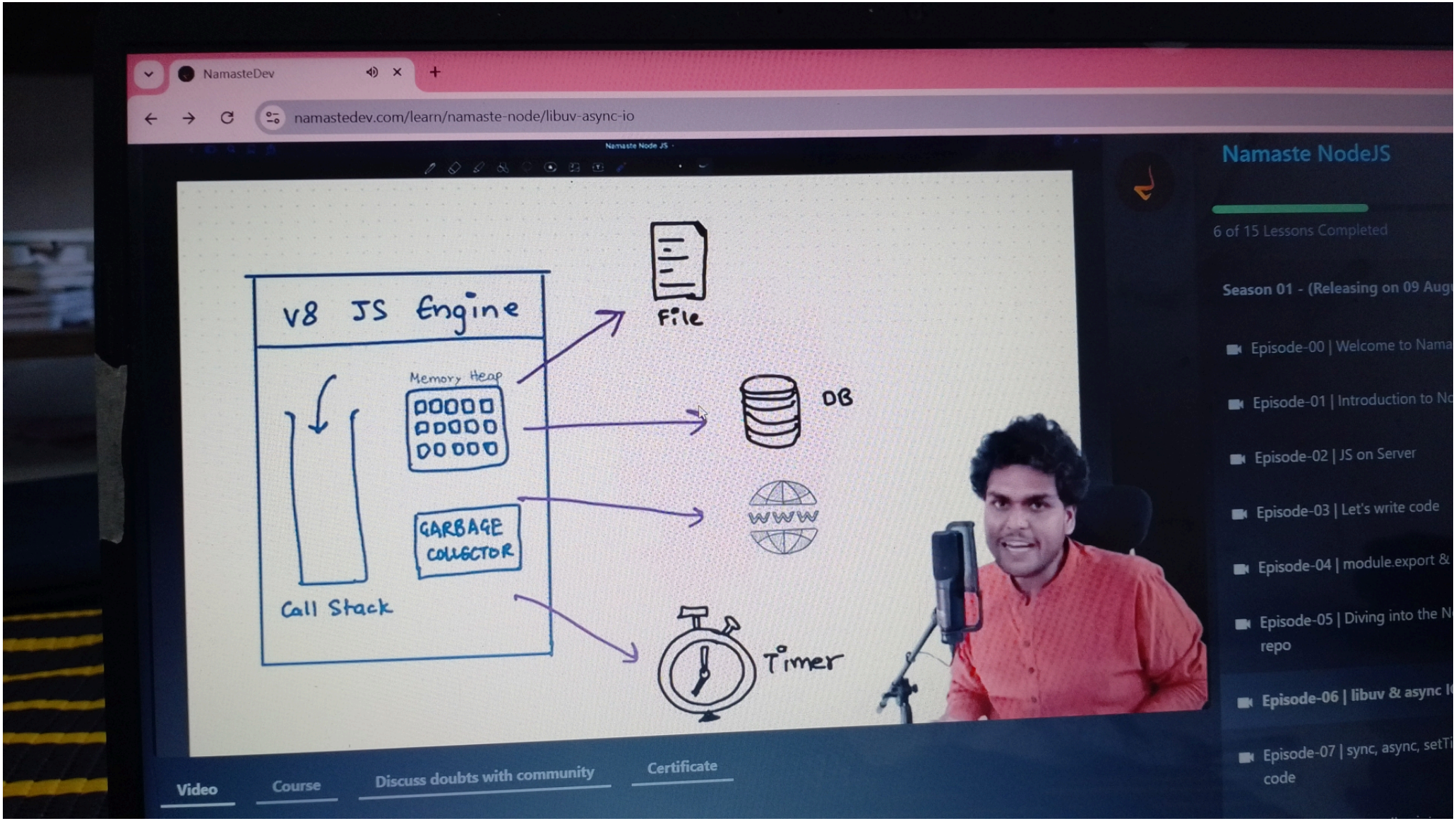
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Episode-02 | JS on Server
Episode-03 | Let's write code
Episode-04 | module.export &
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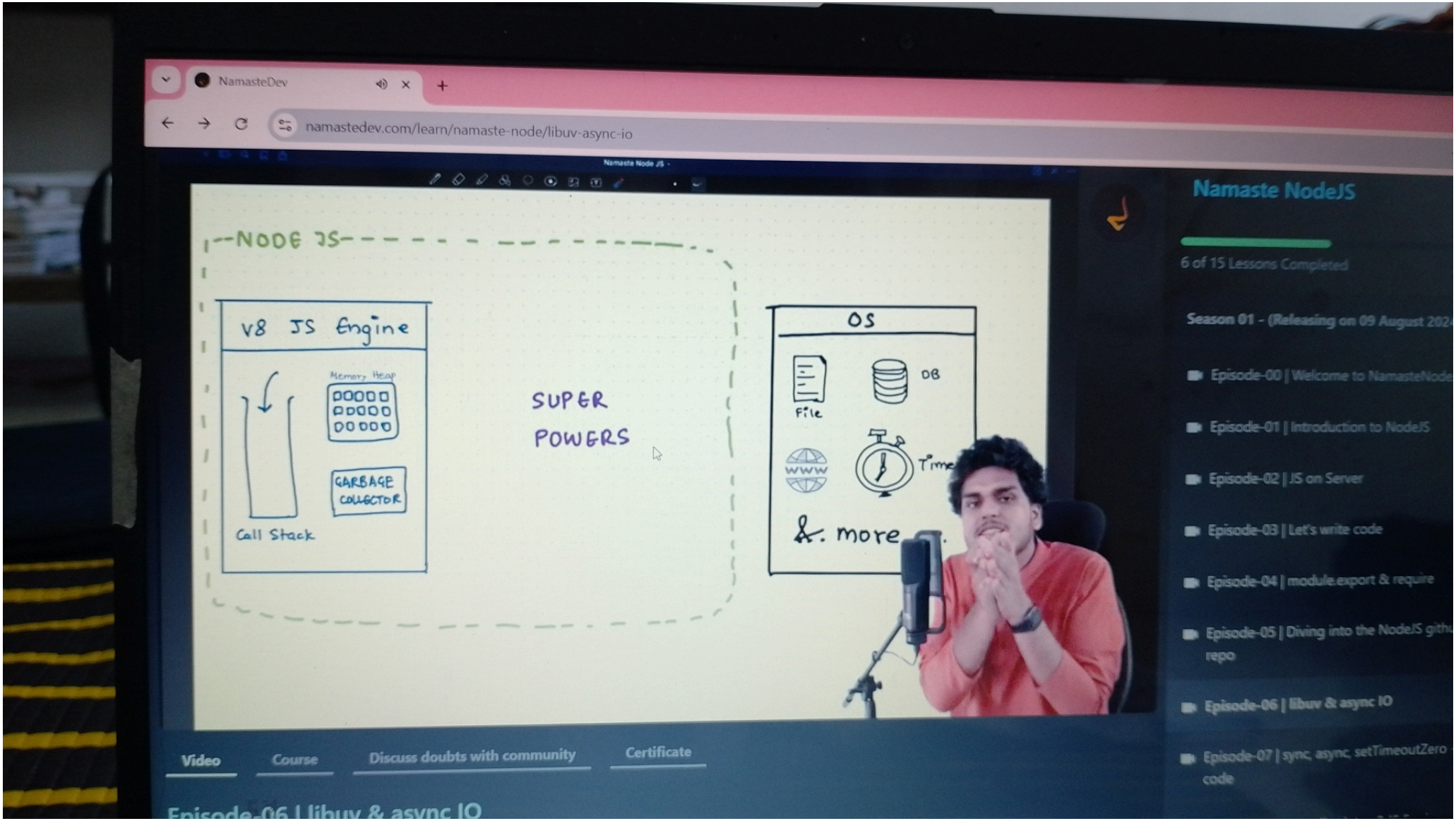
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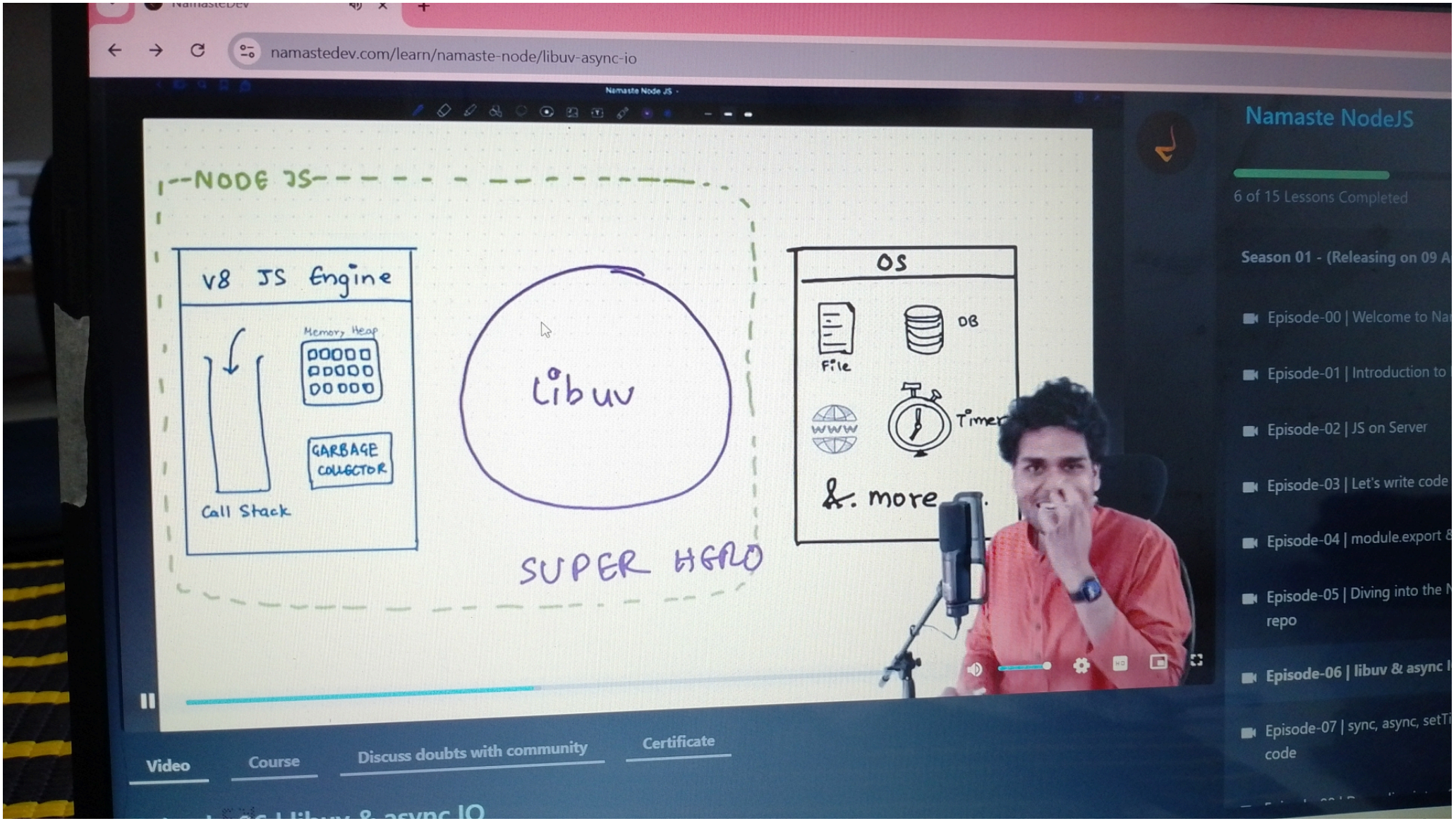
Episode-06 | libuv & async IO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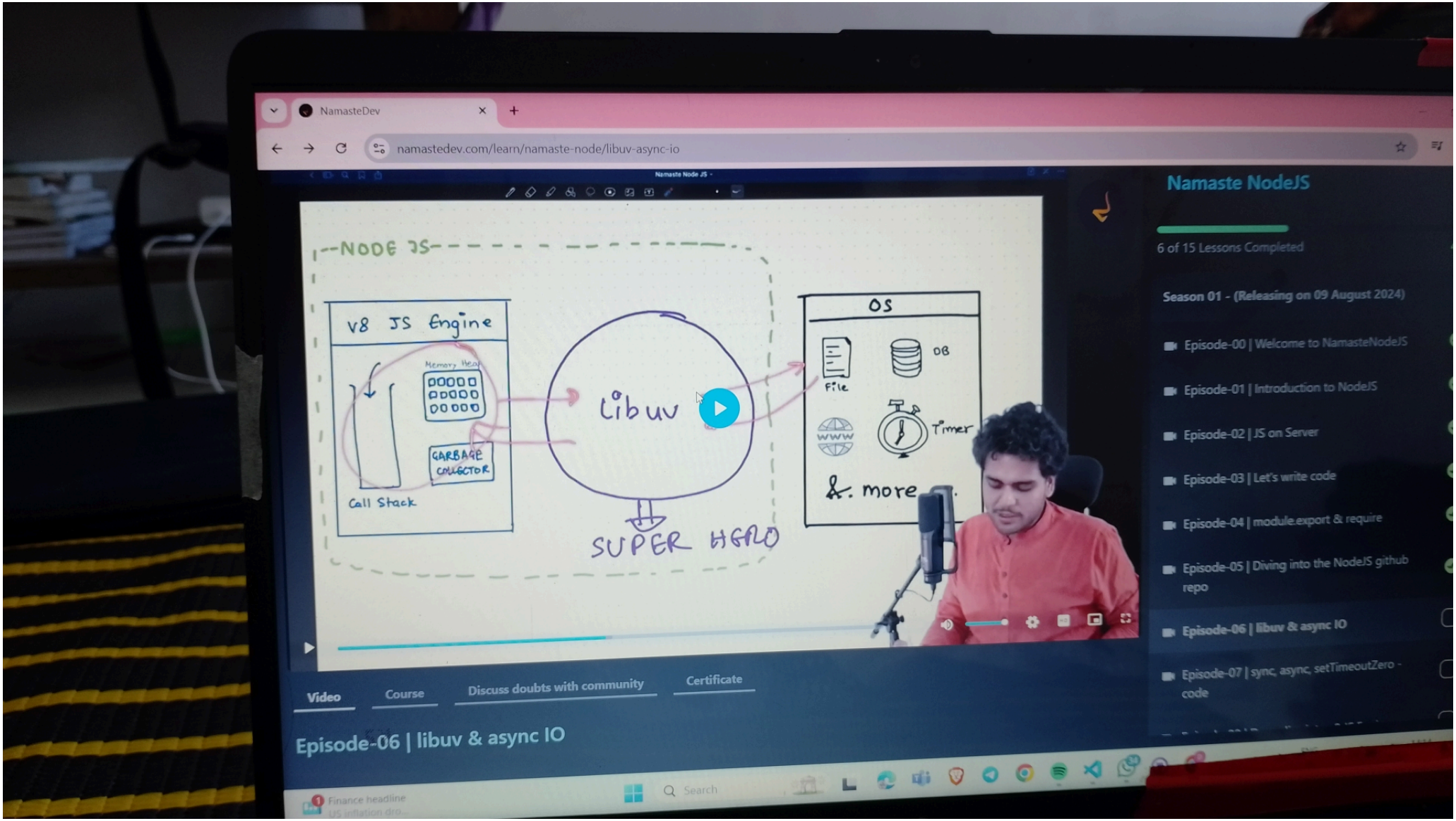
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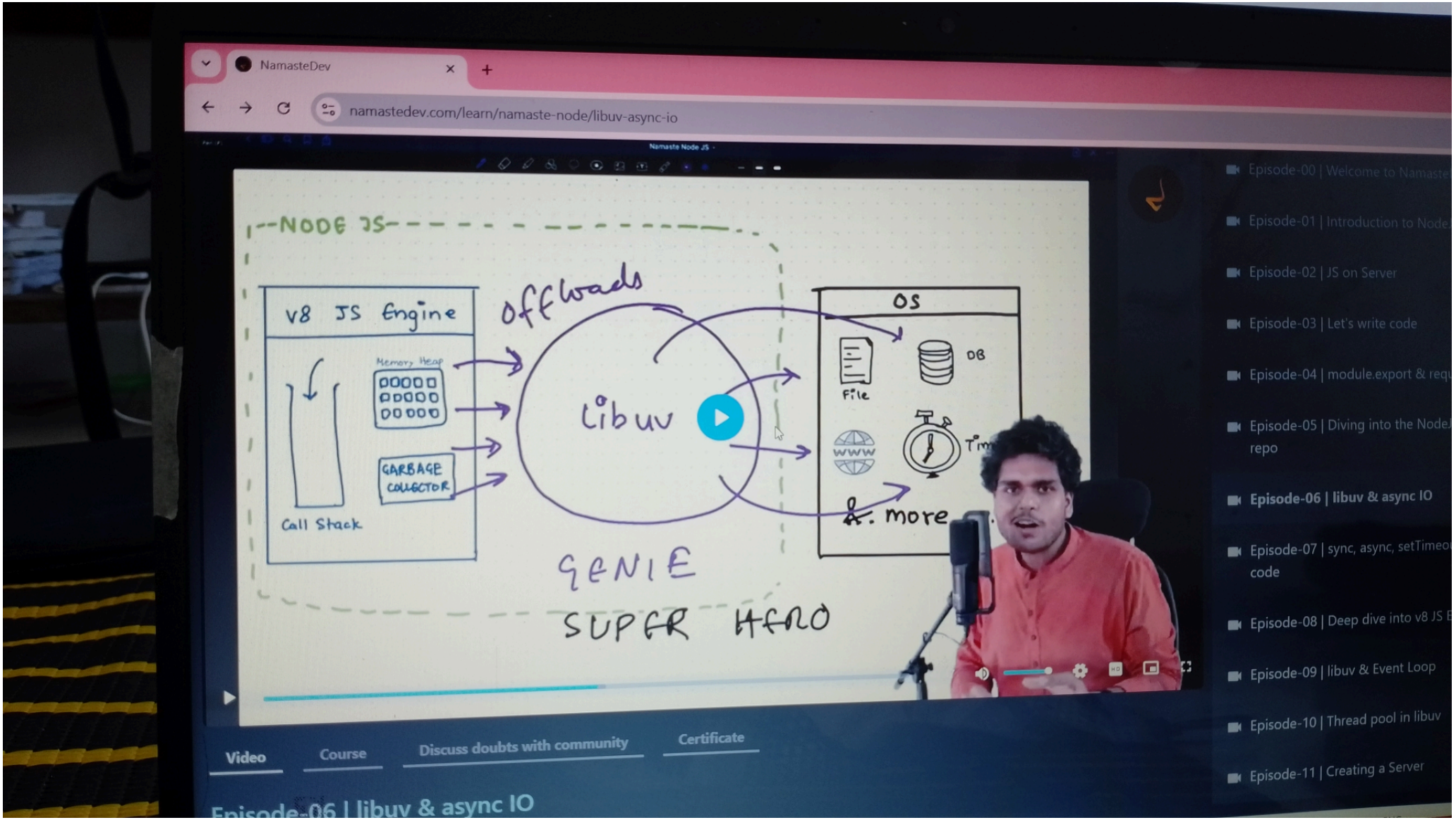
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Episode-09 | libuv & Event Loop
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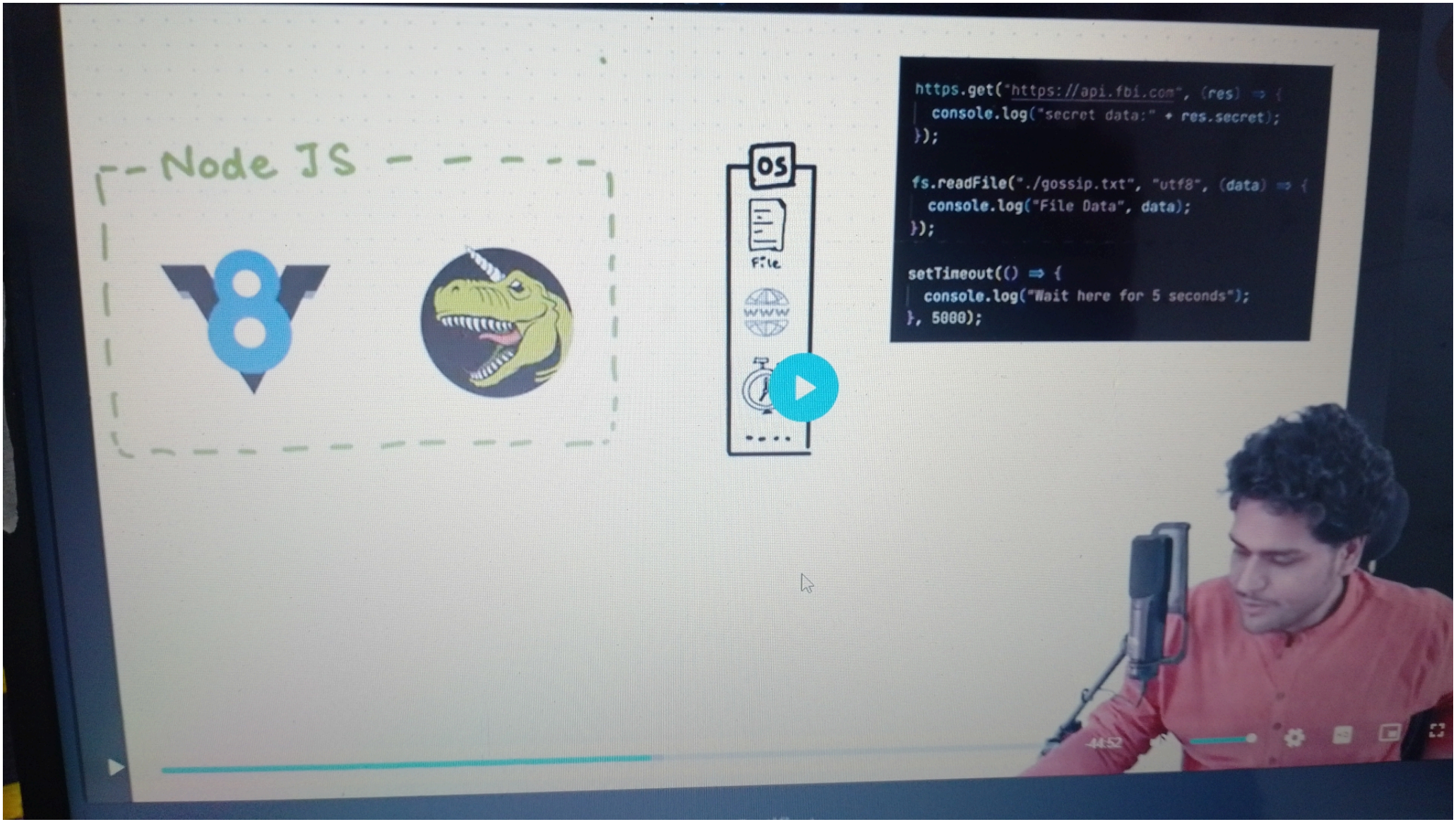
Episode-06 | libuv & async IO


Node JS
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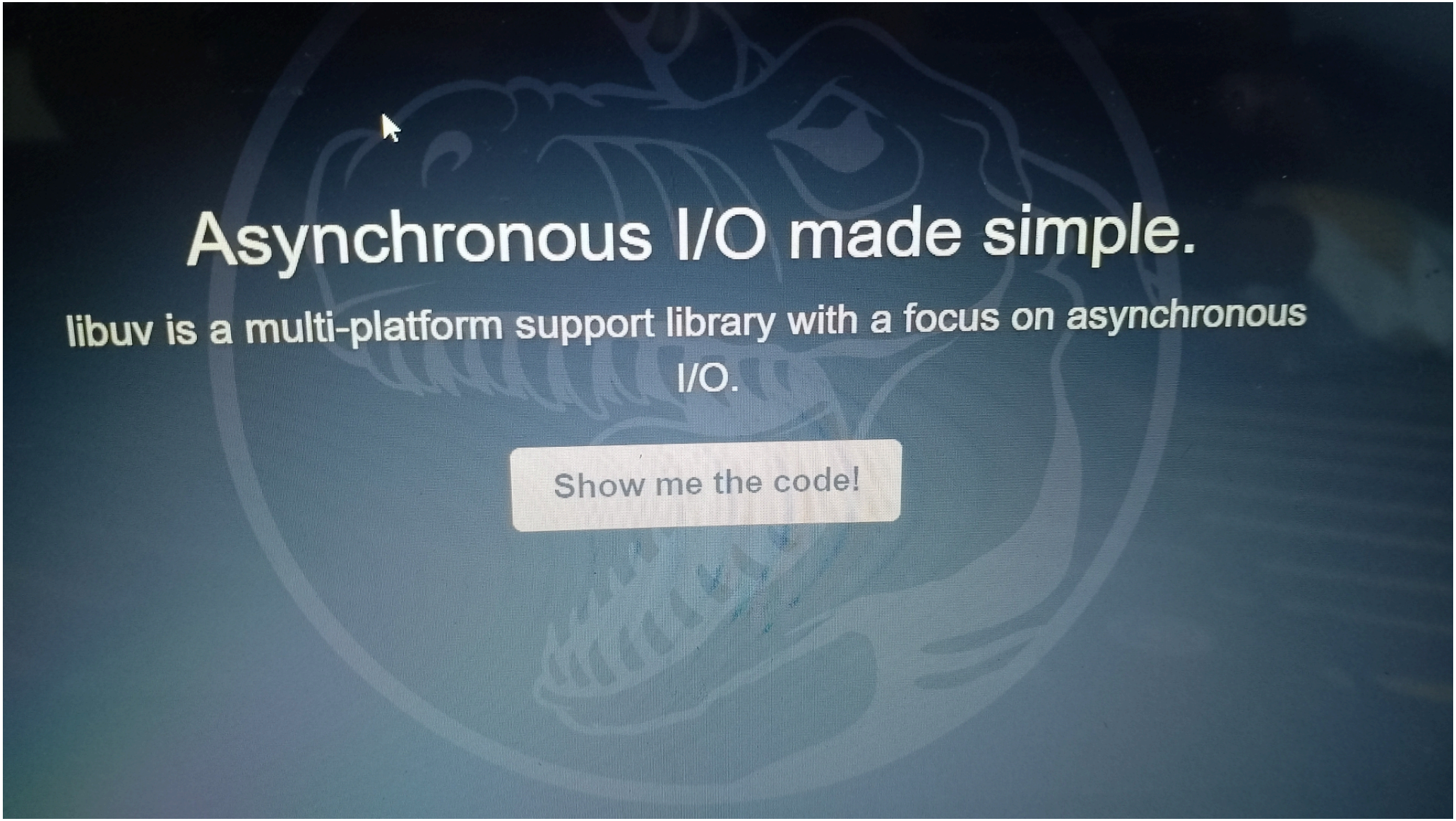
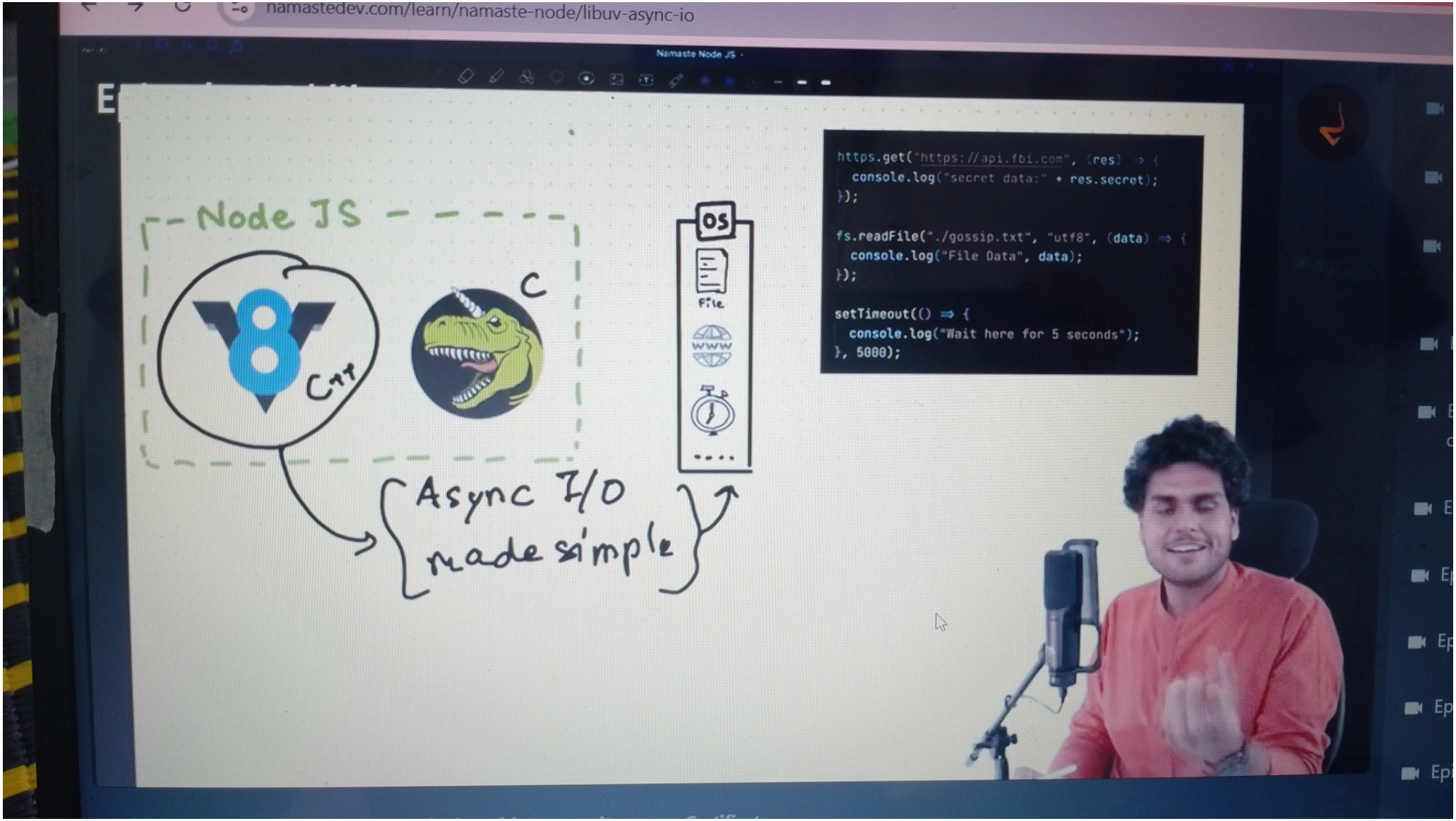

Asynchronous I/O made simple.
libuv is a multi-platform support library with a focus on asynchronous I/O.
Show me the code!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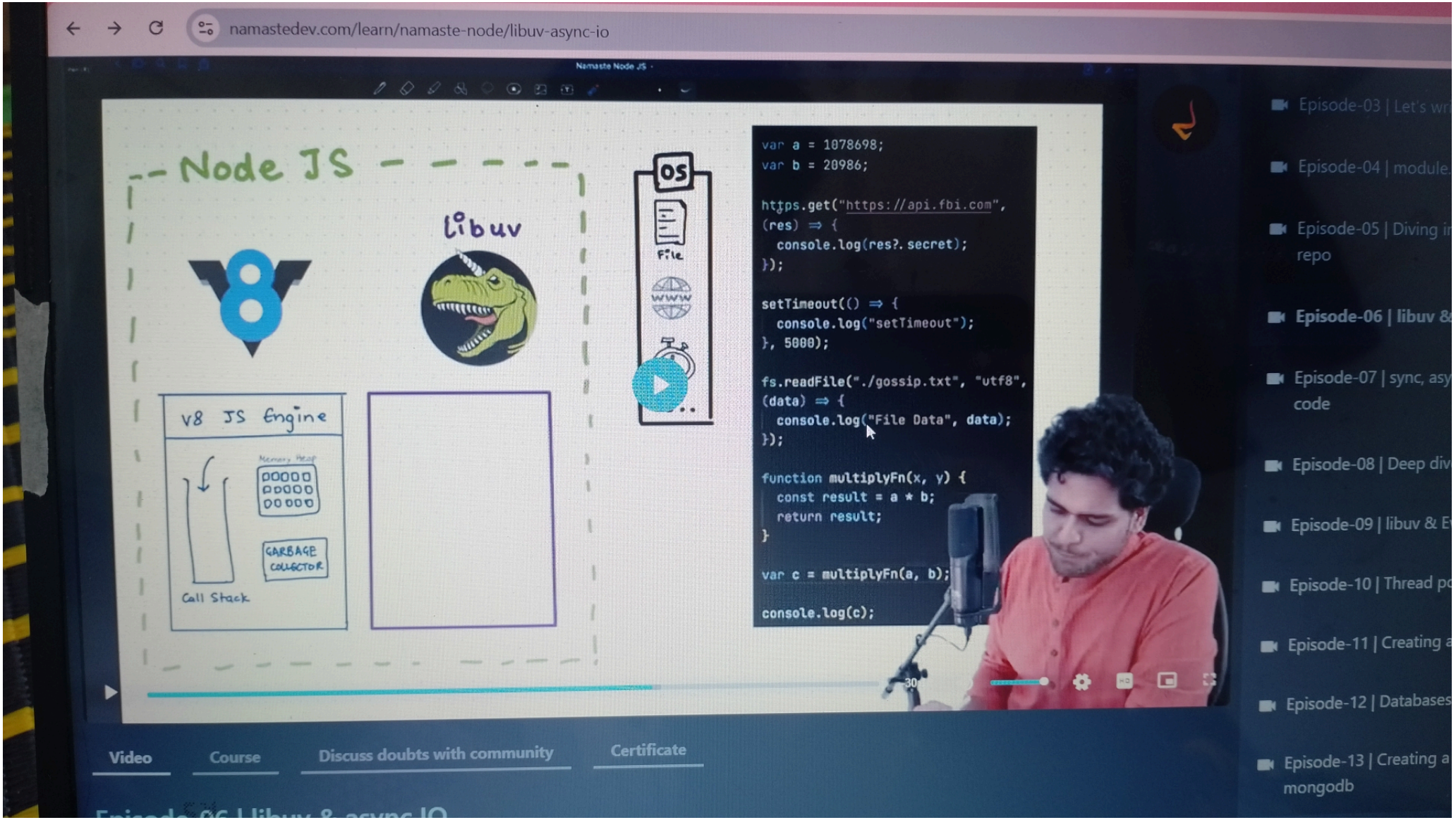
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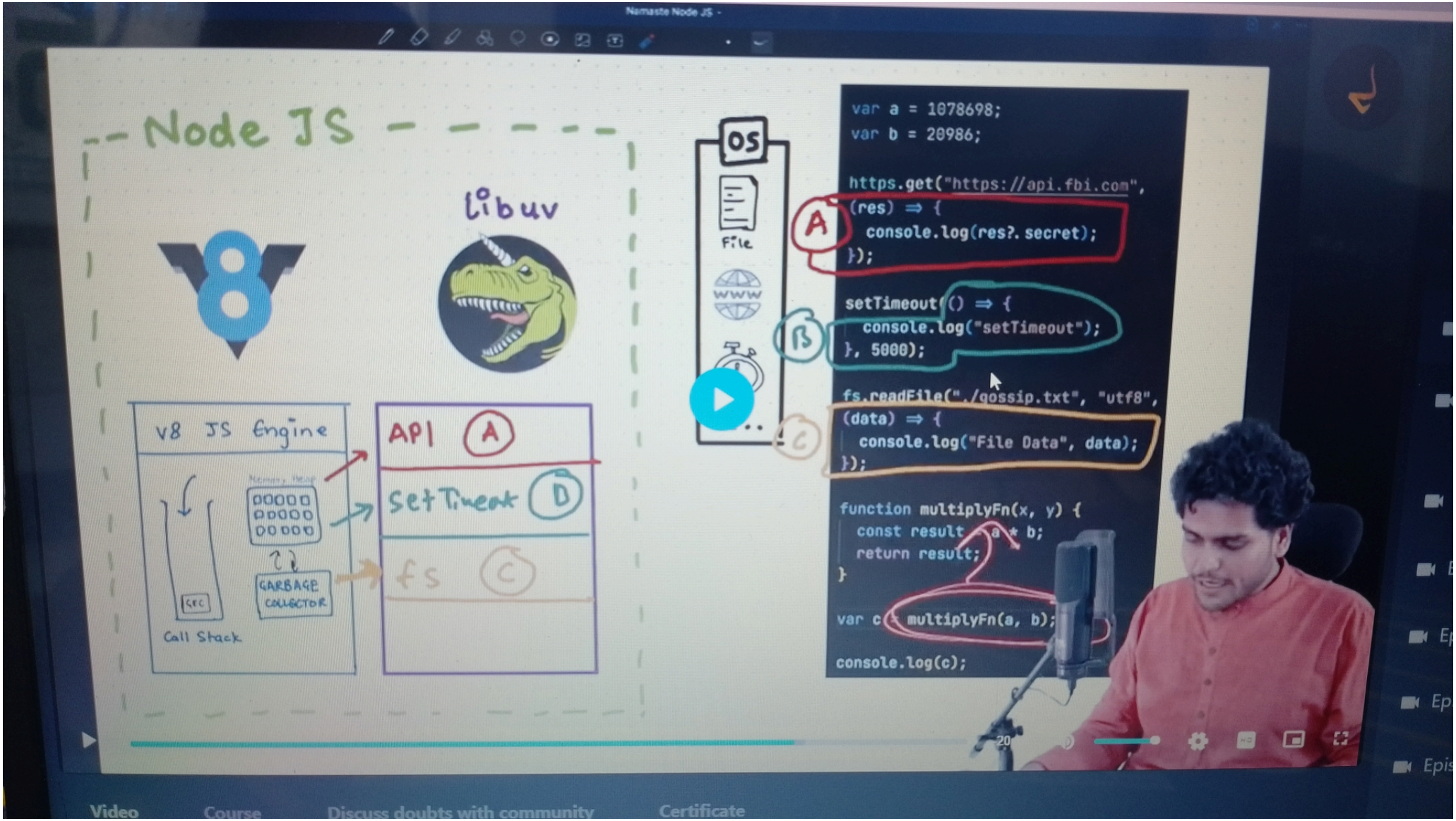
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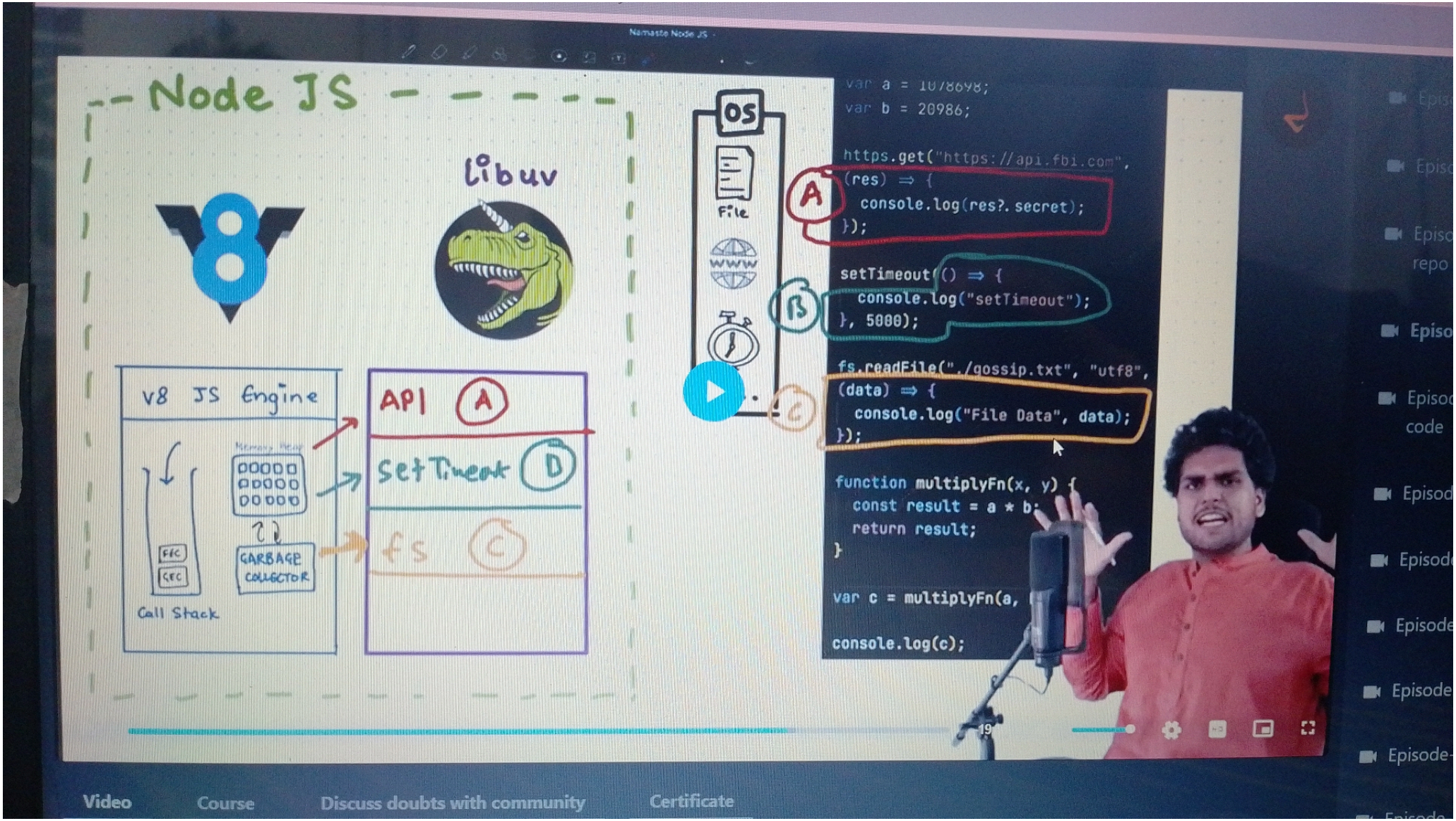
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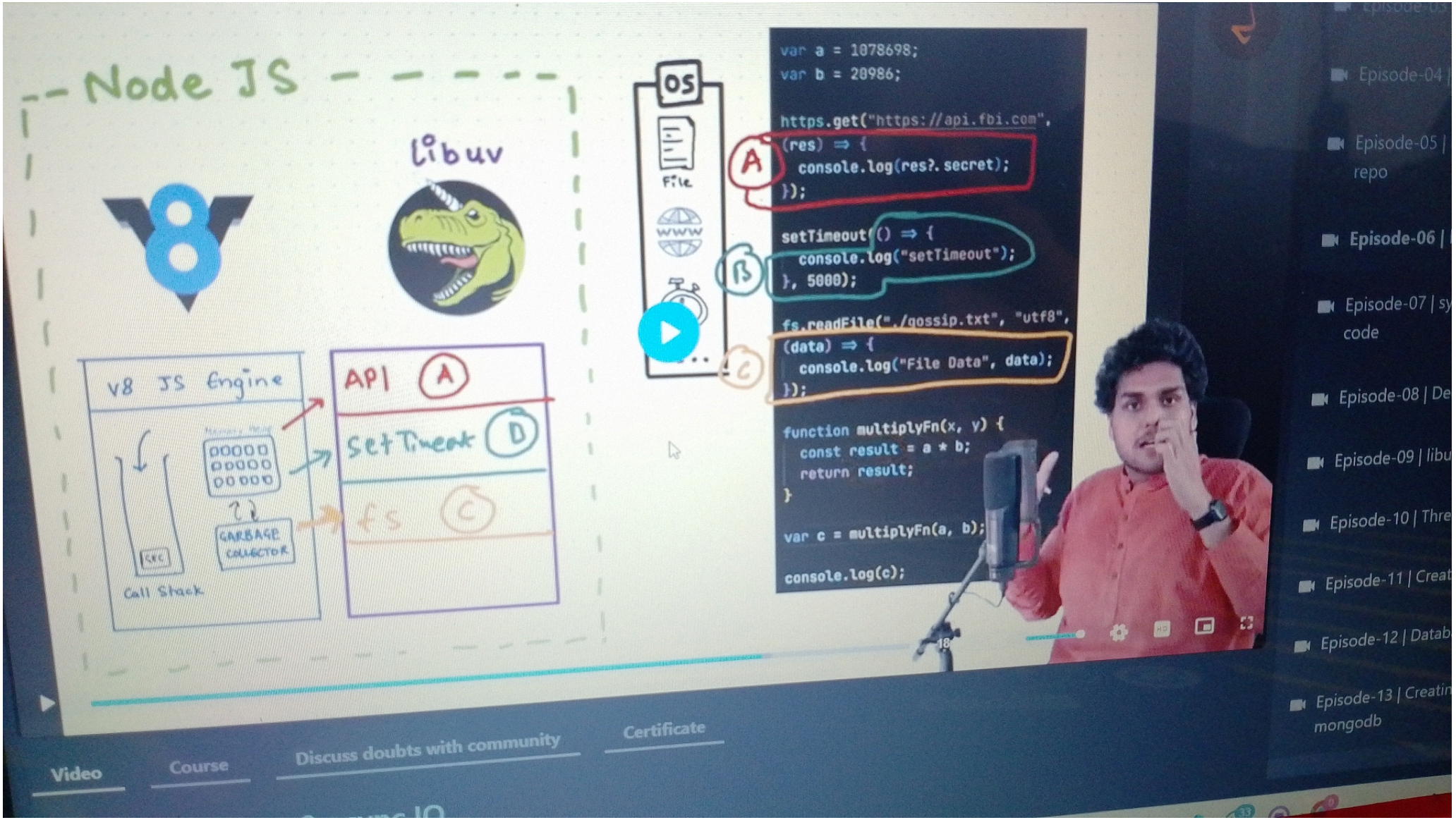
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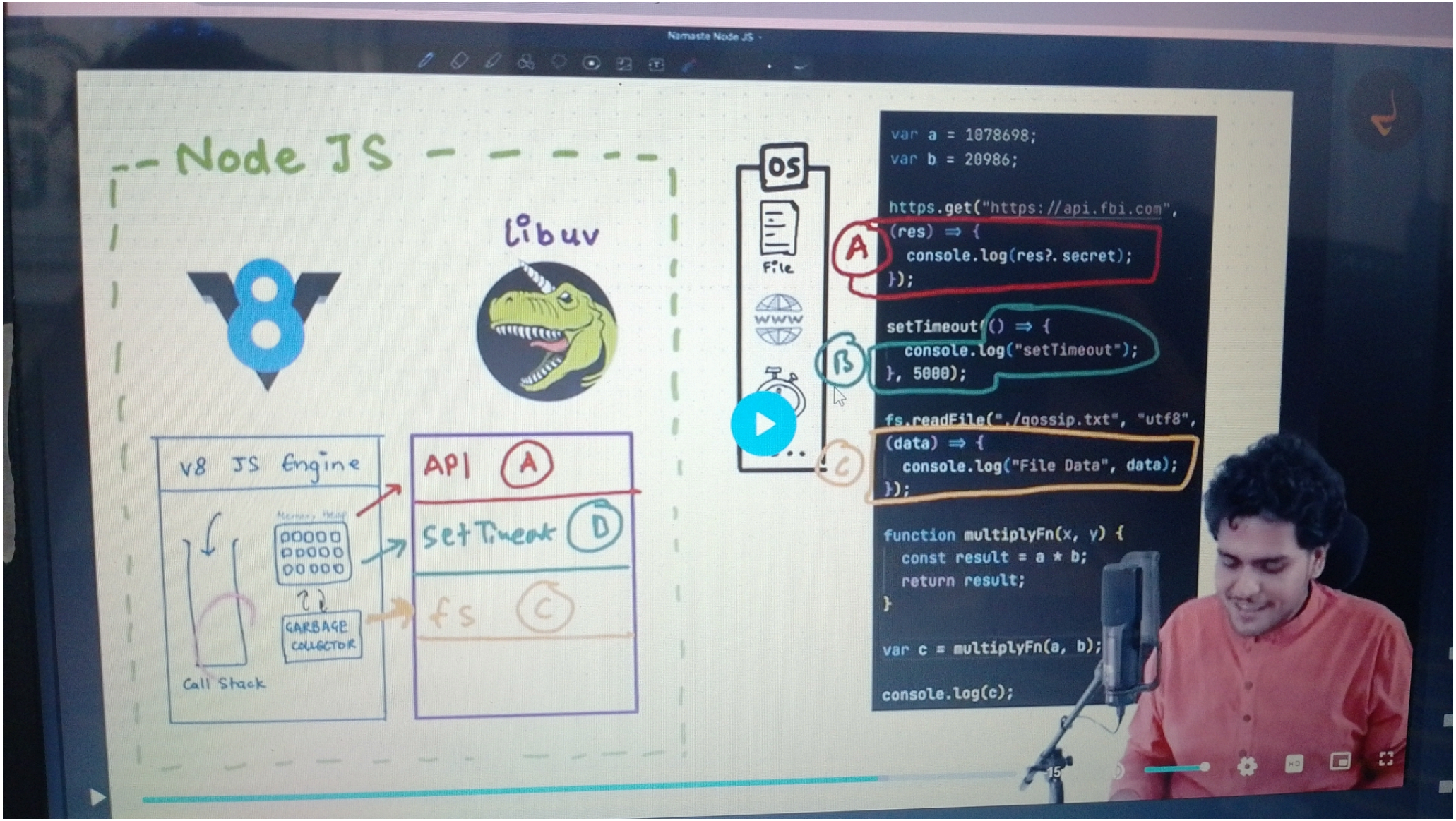
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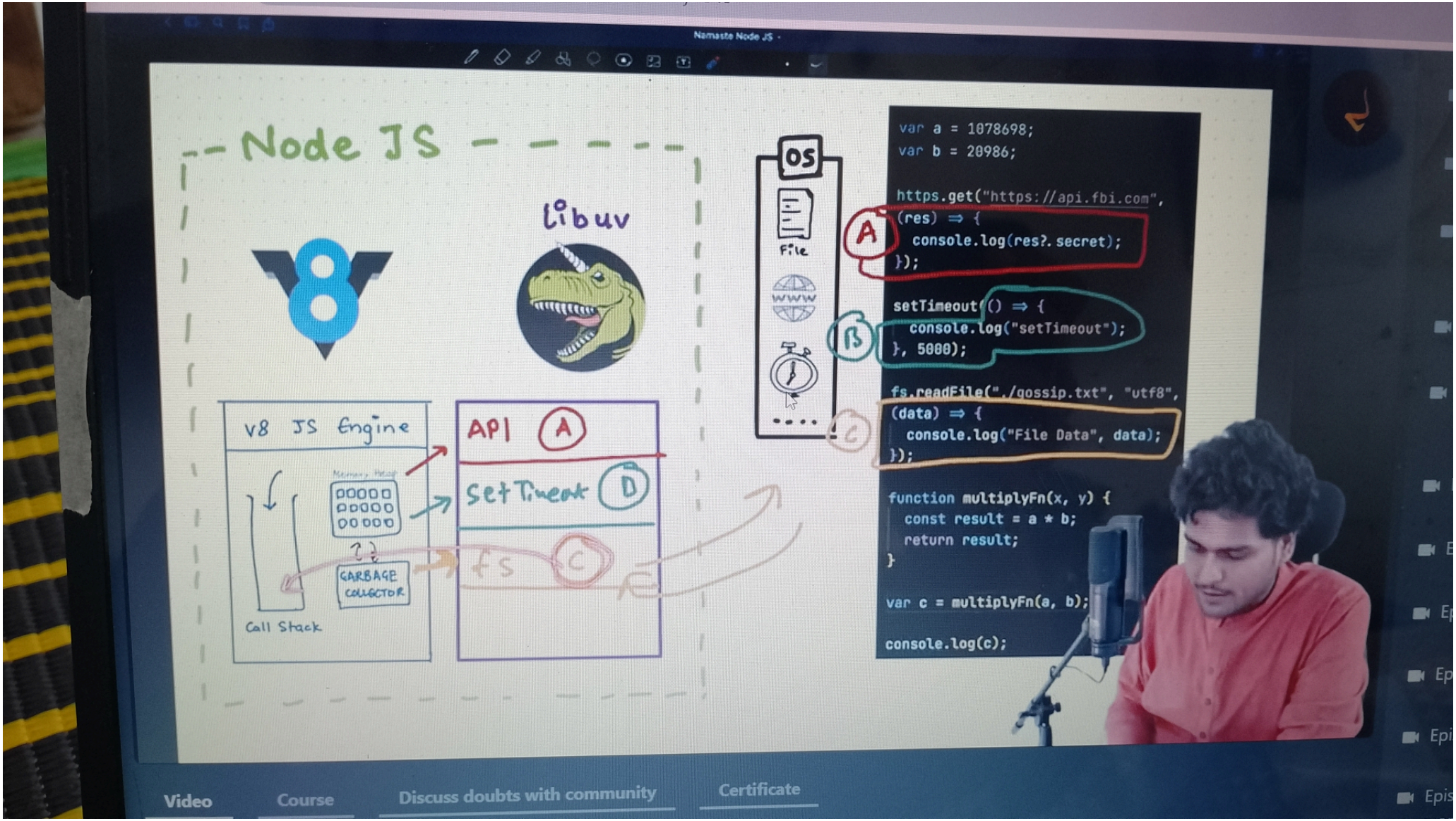
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function multiplyFn(x, y) {
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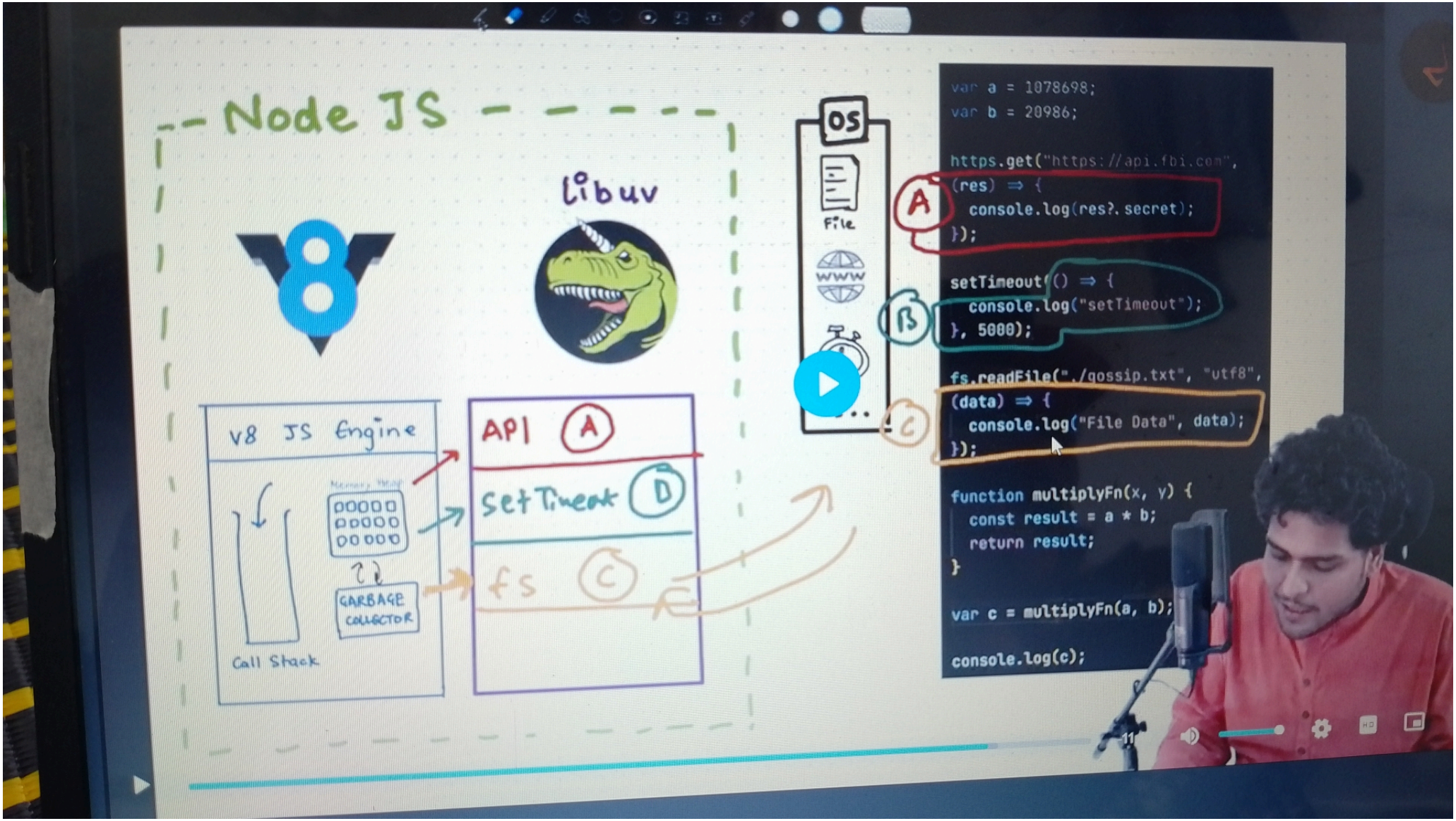
Video
Course
Discuss doubts with community
Certificate


Node JS
libuv
V8 JS Engine
Memory Heap
GARBAGE COLLECTOR
Call Stack
API
A
SetTimeout
B
fs
C
OS
File
WWW
A
B
C
var a = 1078698;
var b = 20986;
https.get("https://api.fbi.com",
(res) => {
console.log(res?.secret);
});
setTimeout(() => {
console.log("setTimeout");
}, 5000);
fs.readFile("./gossip.txt", "utf8",
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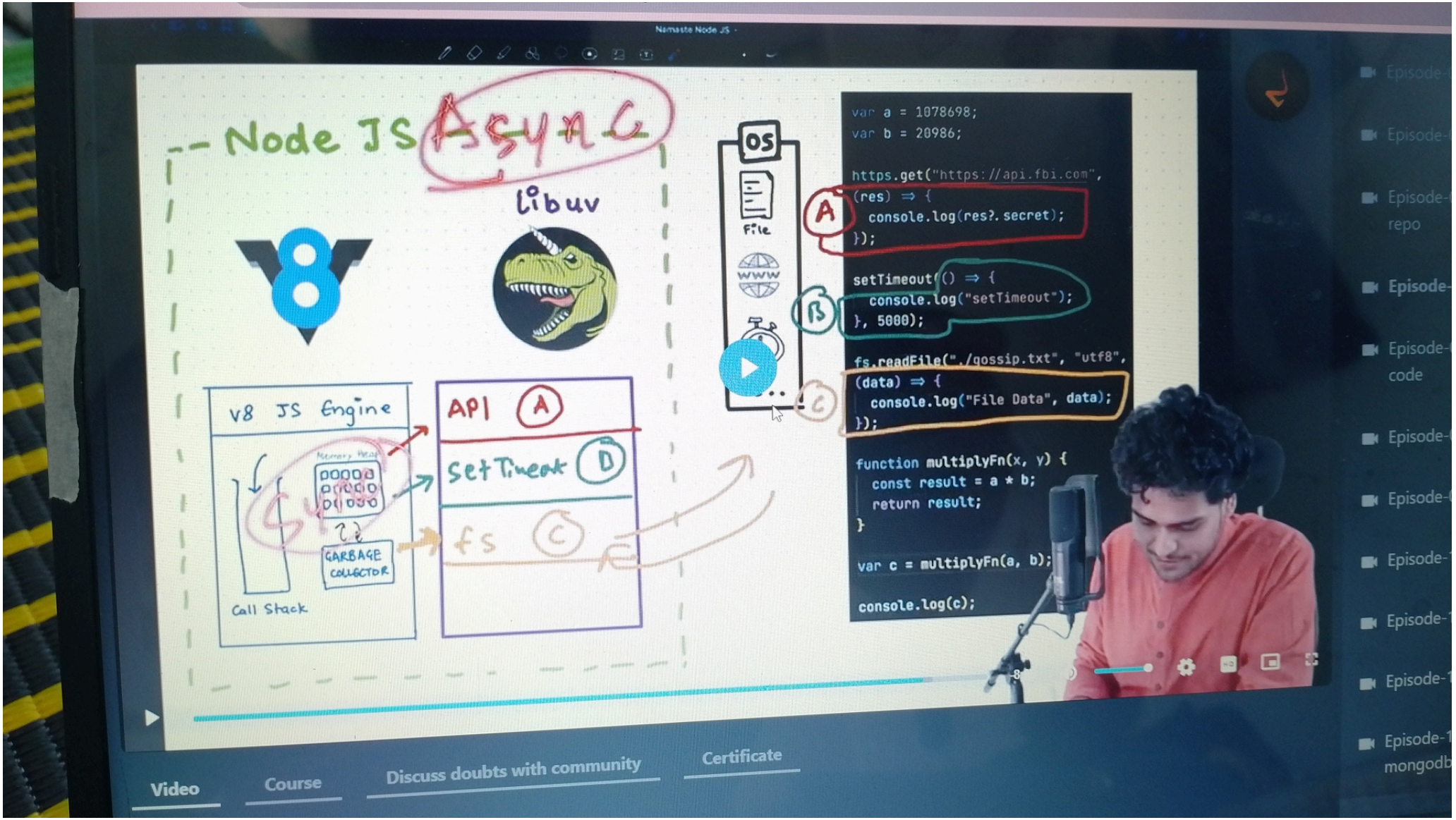
Namaste Node JS
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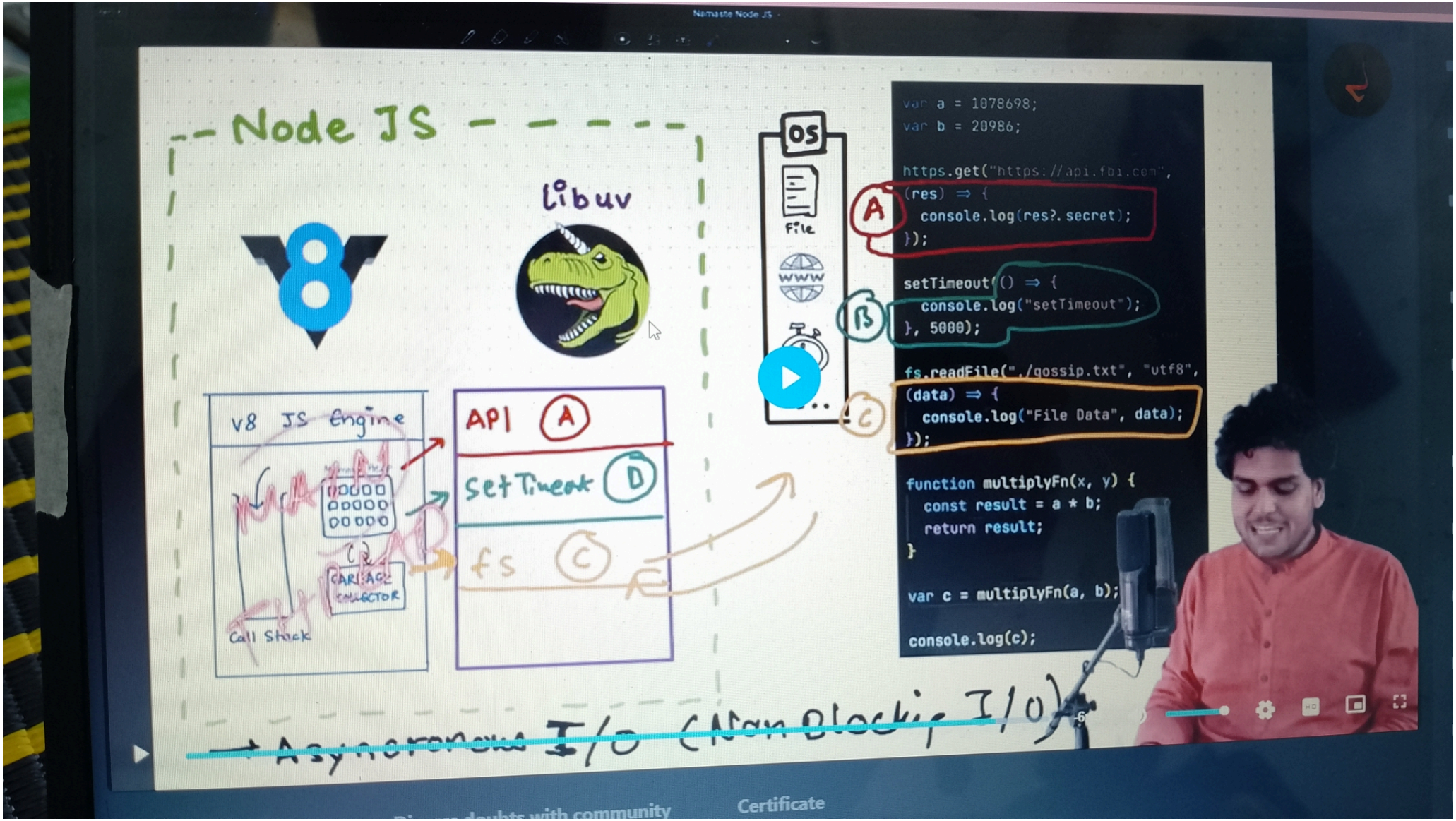
Episode-
repo
code
mongodb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Asynchronous I/O (Non Blocking I/O)
Certificate