threads no node.js com require(‘worker_threads’)

leonardo brito bittencourt

2021

Threads no Node.js com

require(‘worker_threads’)

agenda

- event loop
- qual problema ele resolve?
- quando usar?
- quando não usar?
- live code

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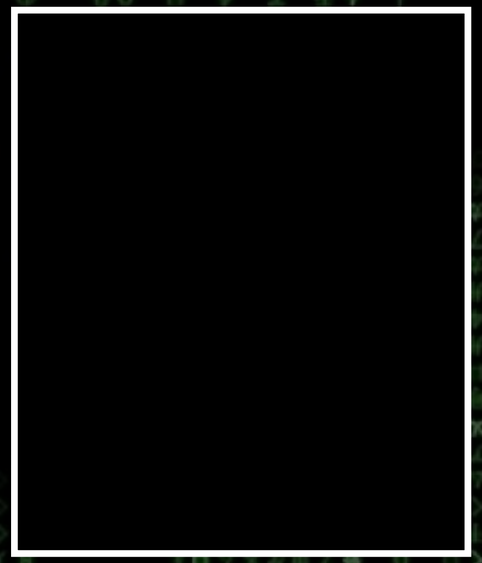
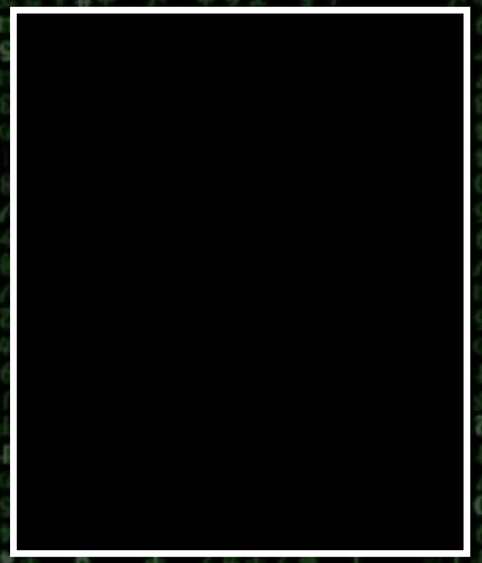
require(‘worker_threads’)

event loop

stack



background threads (libuv)



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6    const path = __dirname + '/users.json';
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8
9    fs.readFile(path, options, (err, data) => {
10     // ...
11   });
12
13   math()
14
15   // ...
16 }
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readFile()

task queue

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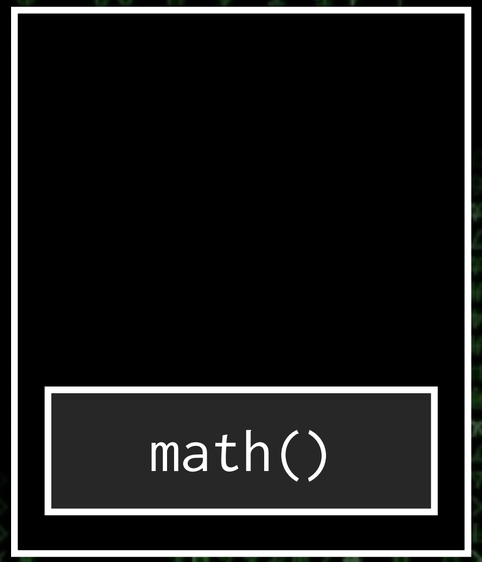


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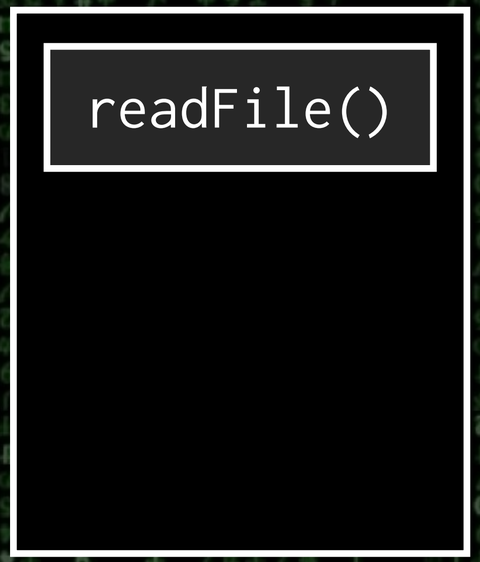

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Função síncrona

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background threads (libuv)

readFile()

readFileCallback() readFileCallback() ...

task queue

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qual problema ele resolve?

funções síncronas que demanda muita CPU.

o worker_thread irá rodar de maneira paralela funções síncronas sem “travar” a Stack

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quando usar?

- cálculos matemáticos muito pesados
- funções de analytics
- funções de machine learning
- parse de json gigantescos
- parses e compilers (typescript)
- test runners (jest)

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quando não usar?

o node.js trabalha muito bem com I/O através da libuv (background threads), ou seja, é muito custoso e não há necessidade de worker_threads para executar funções como:

- ler arquivos de disco
- requests HTTP
- …

Threads no Node.js com

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live code

time

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dúvidas?

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