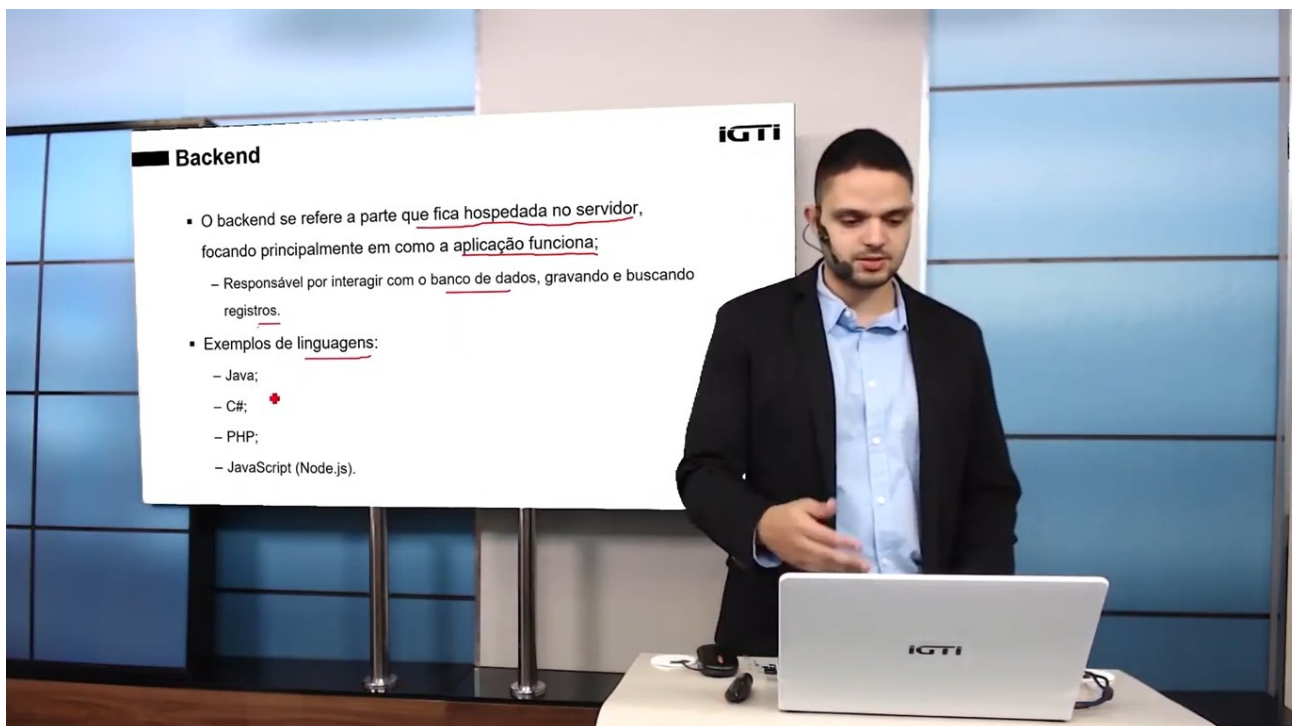
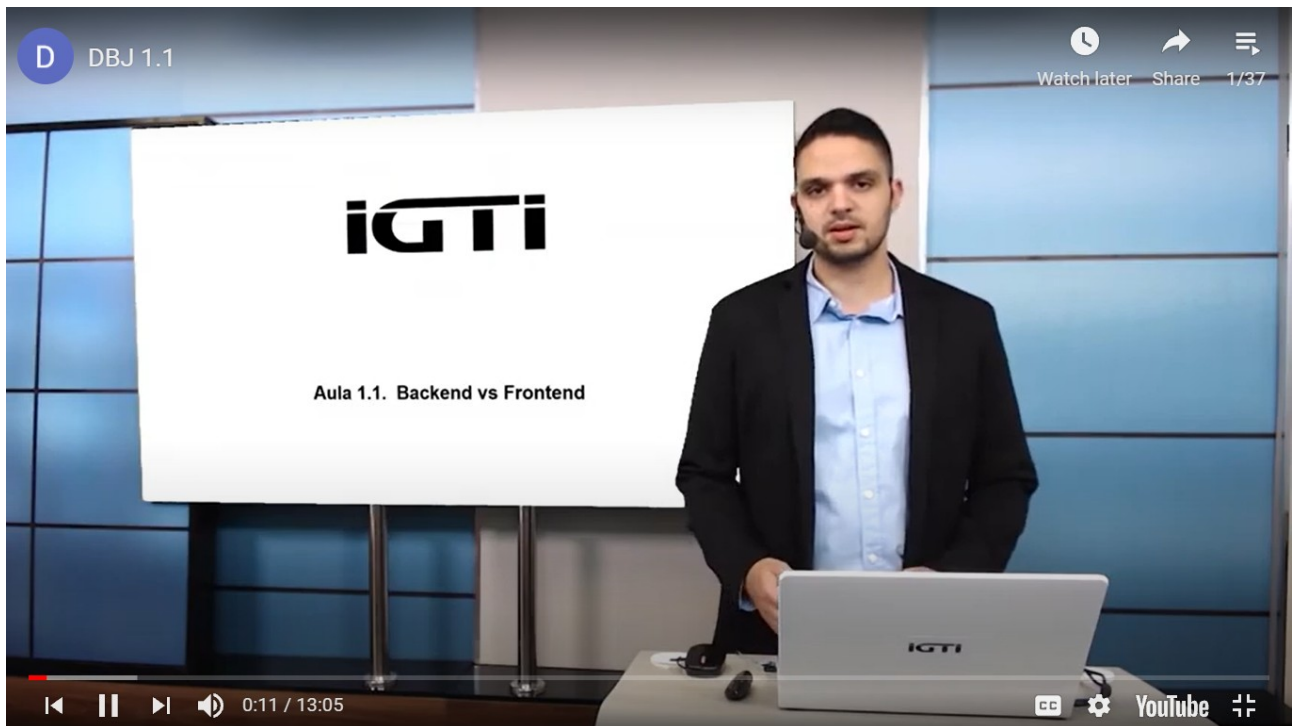


## INTRODUCAO – video aula

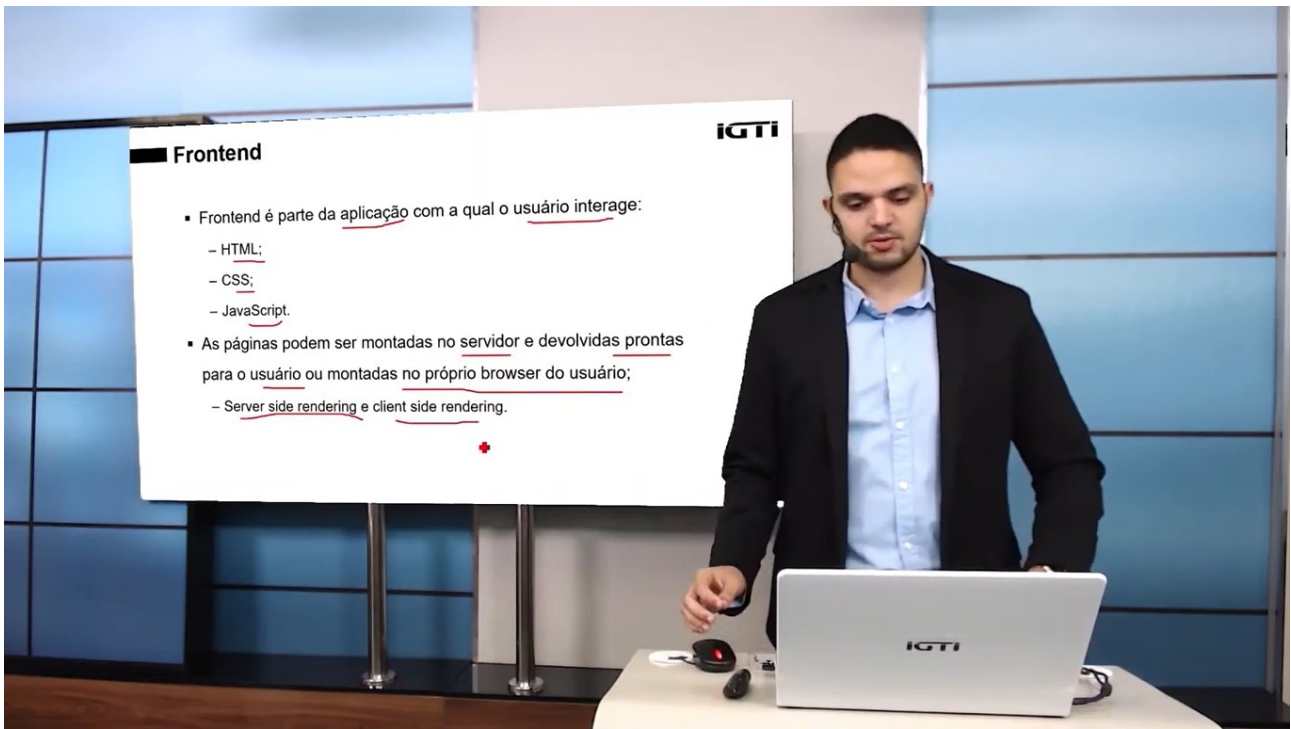
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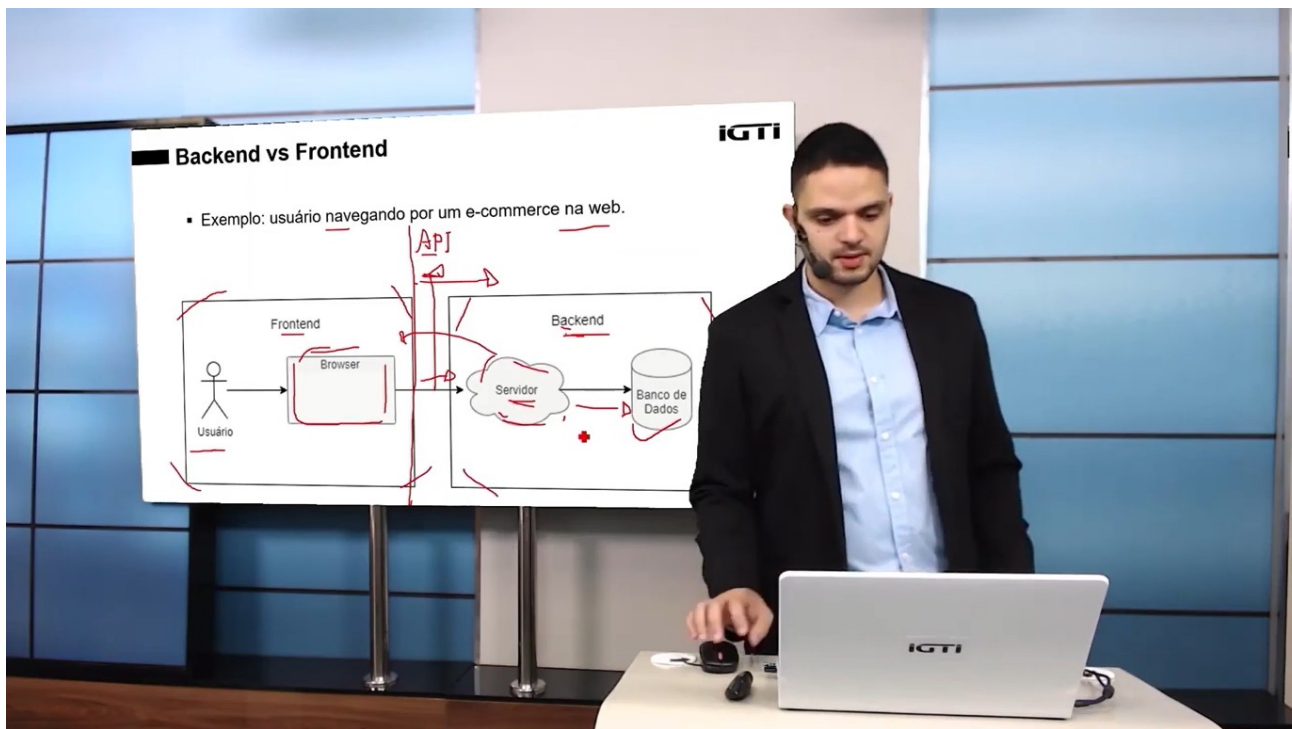


## Frontend

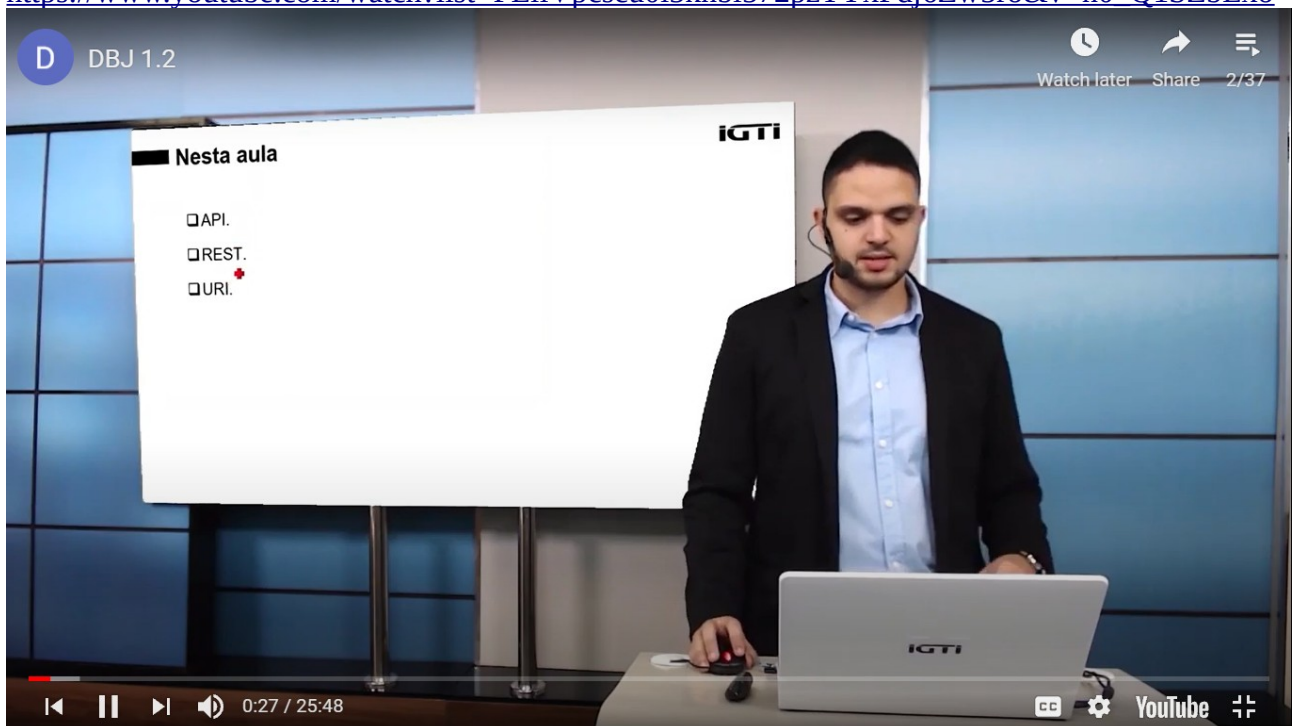
IGTI

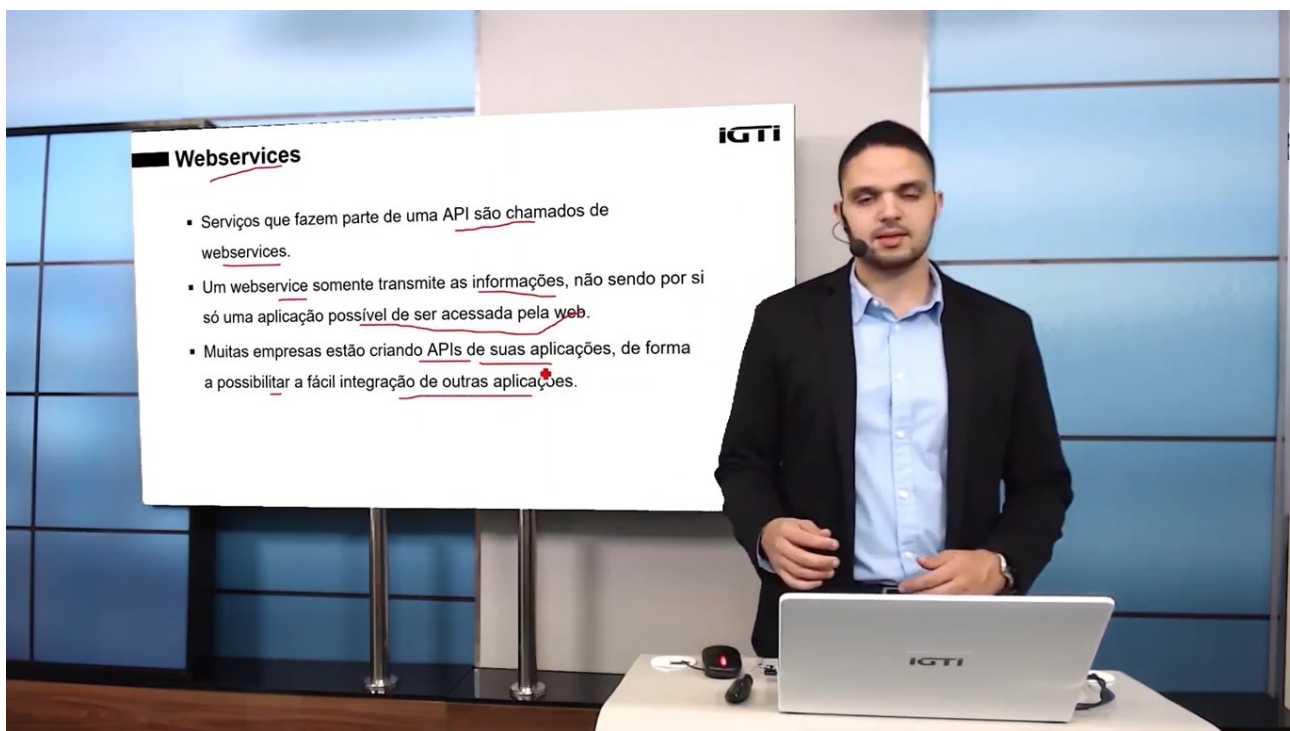
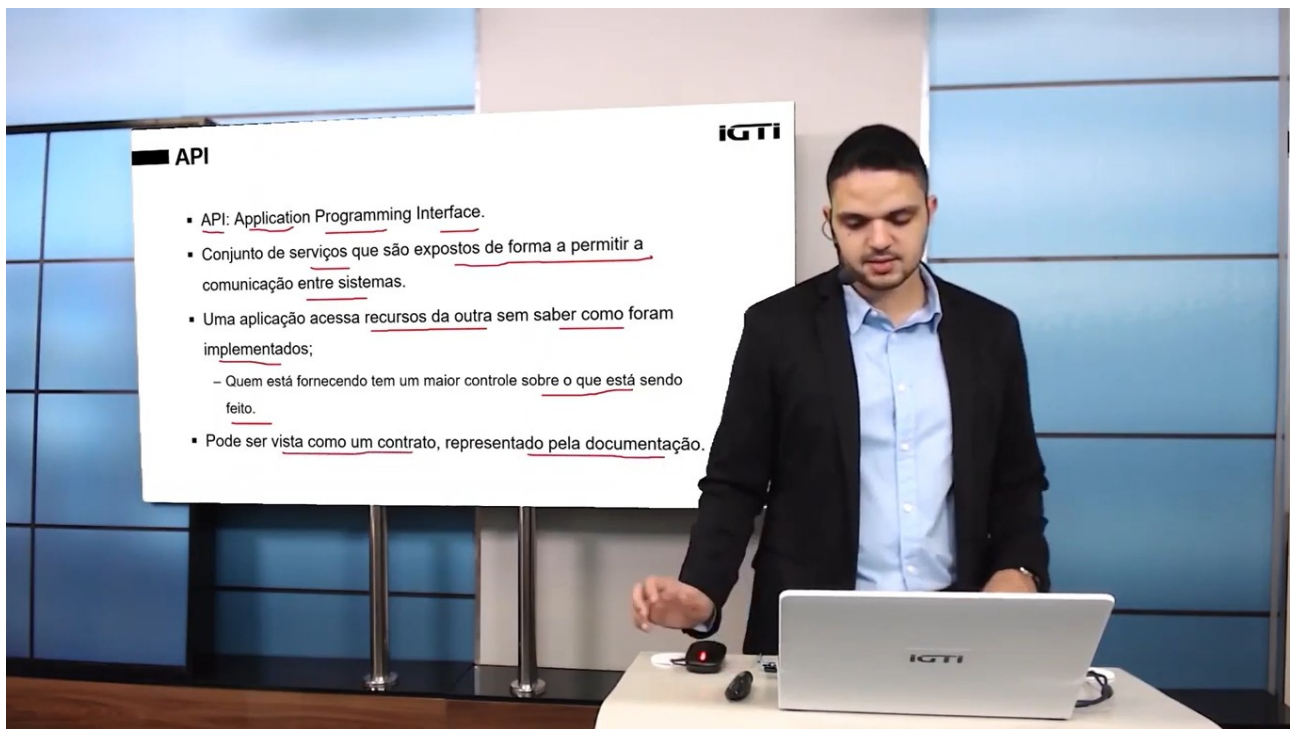
- Frontend é parte da aplicação com a qual o usuário interage:
  - HTML;
  - CSS;
  - JavaScript.
- As páginas podem ser montadas no servidor e devolvidas prontas para o usuário ou montadas no próprio browser do usuário;
  - Server side rendering e client side rendering.



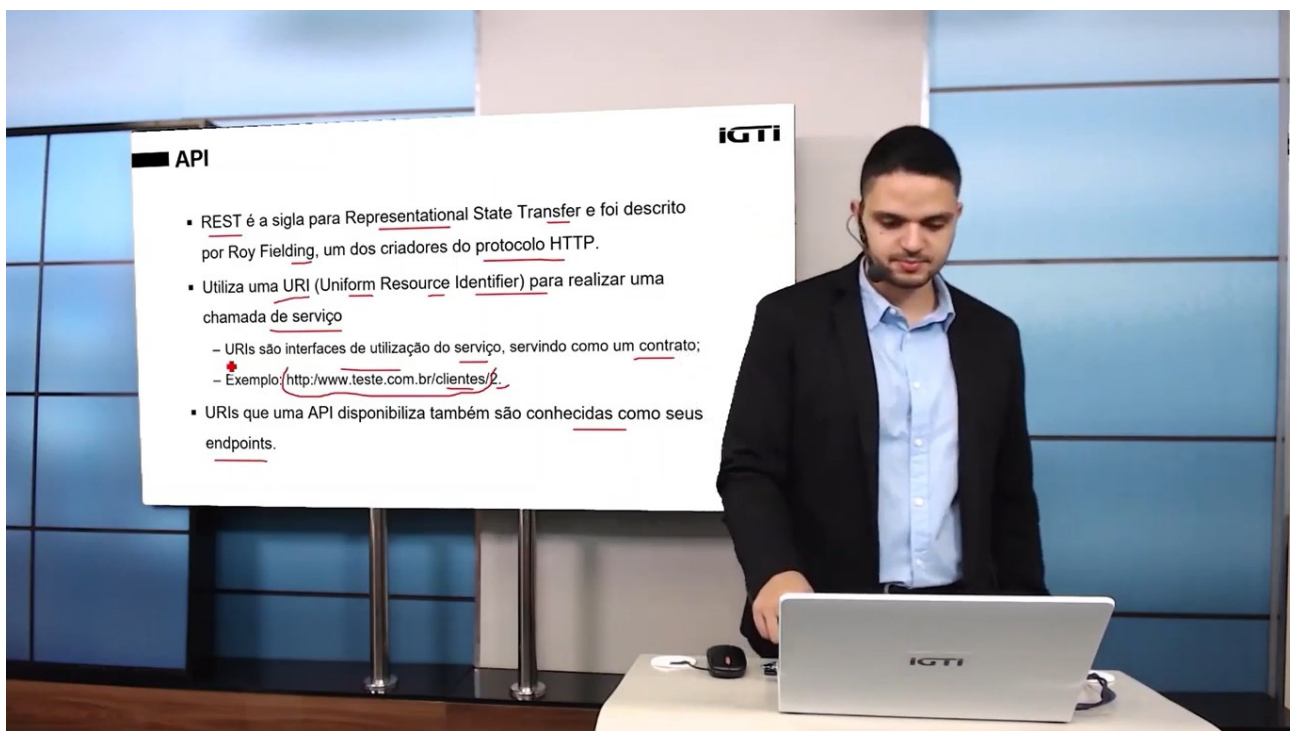
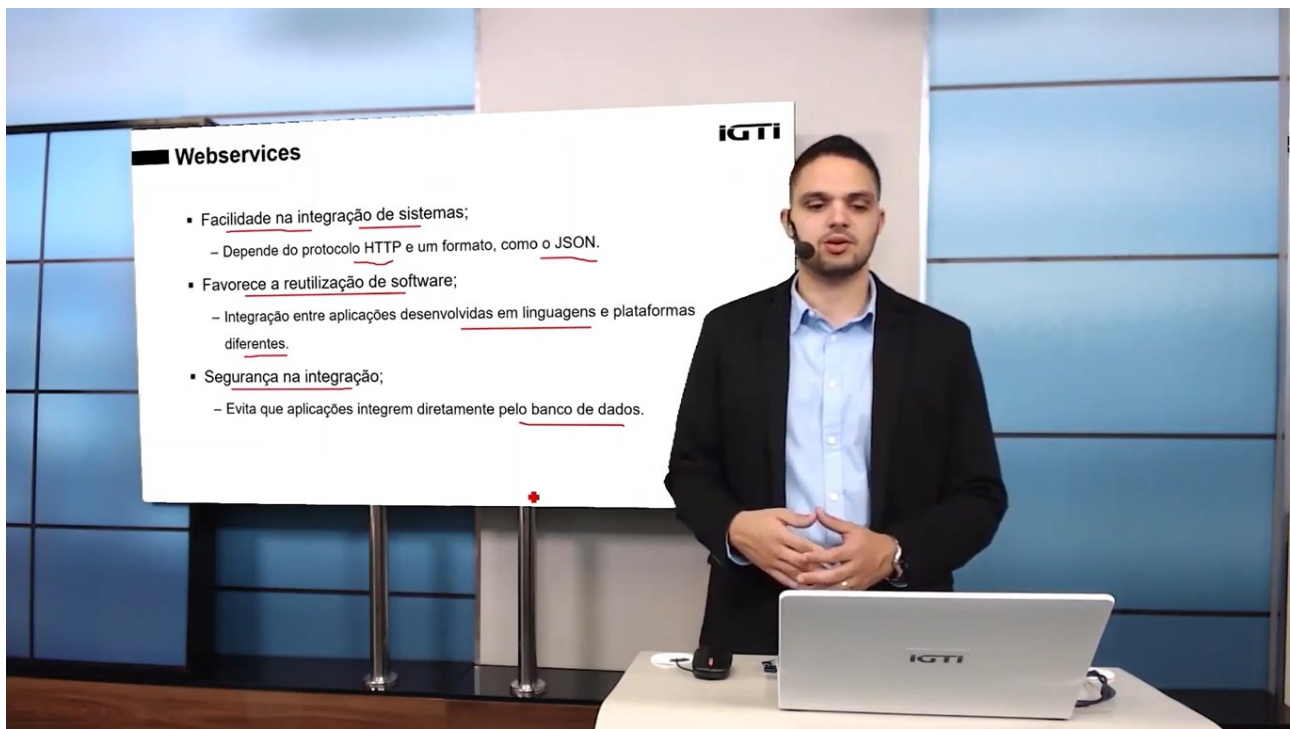


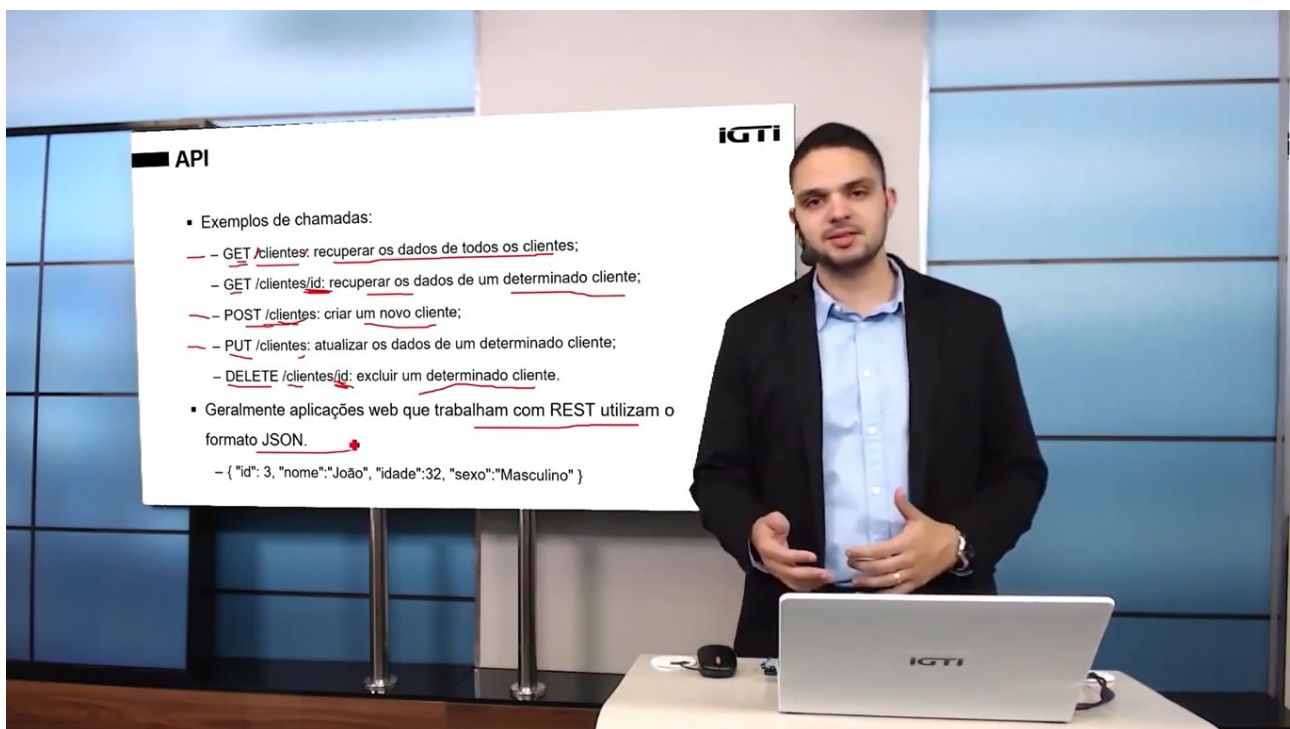
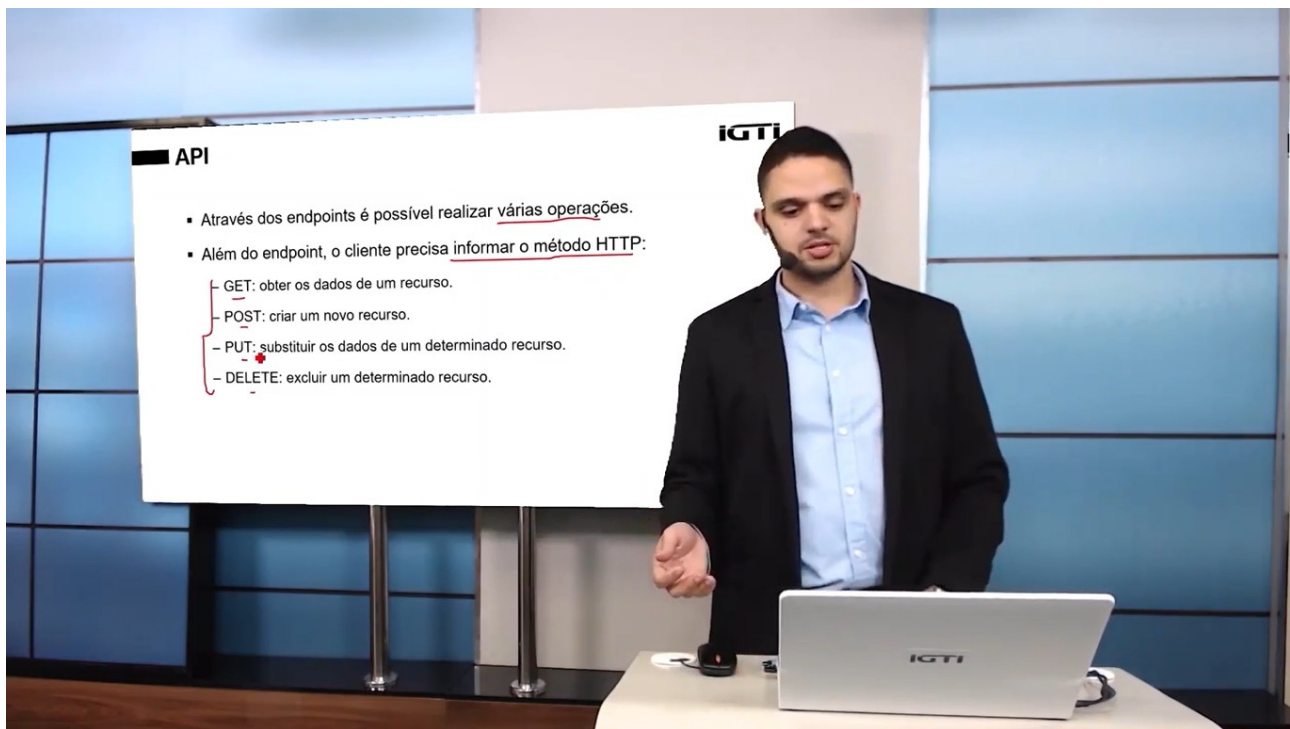
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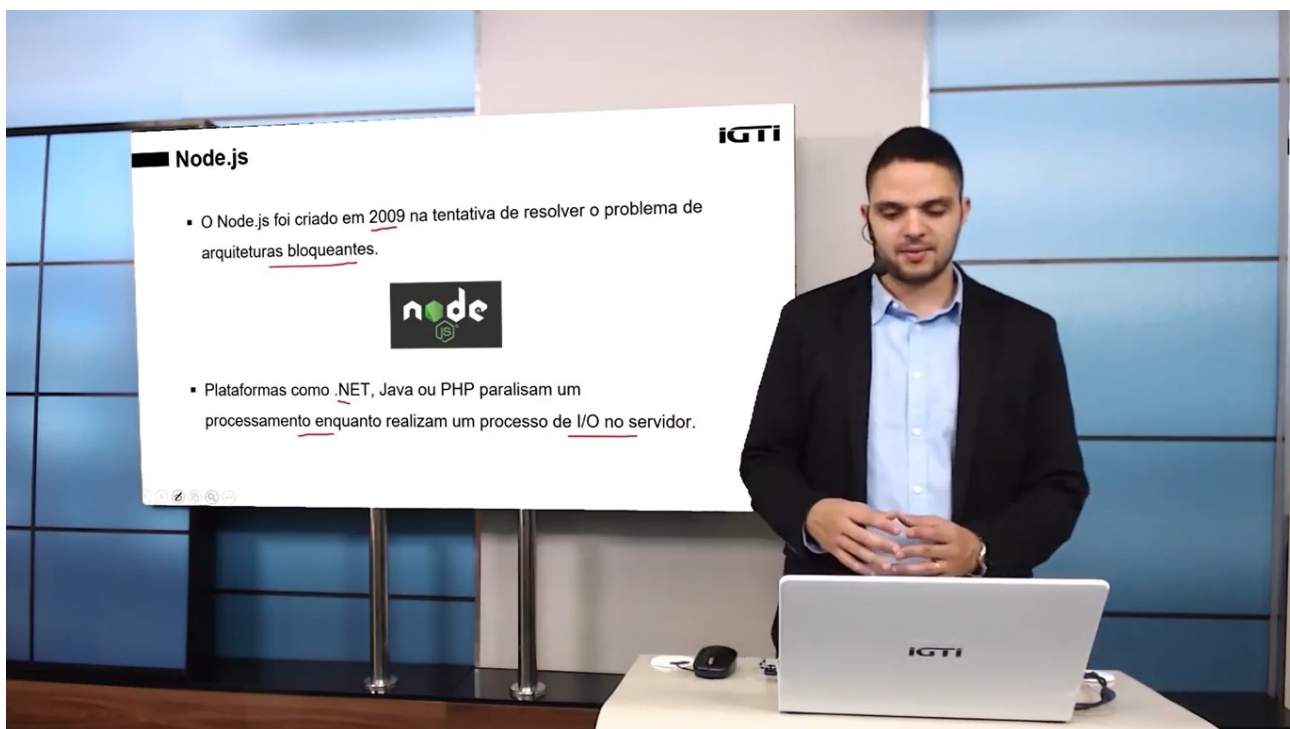
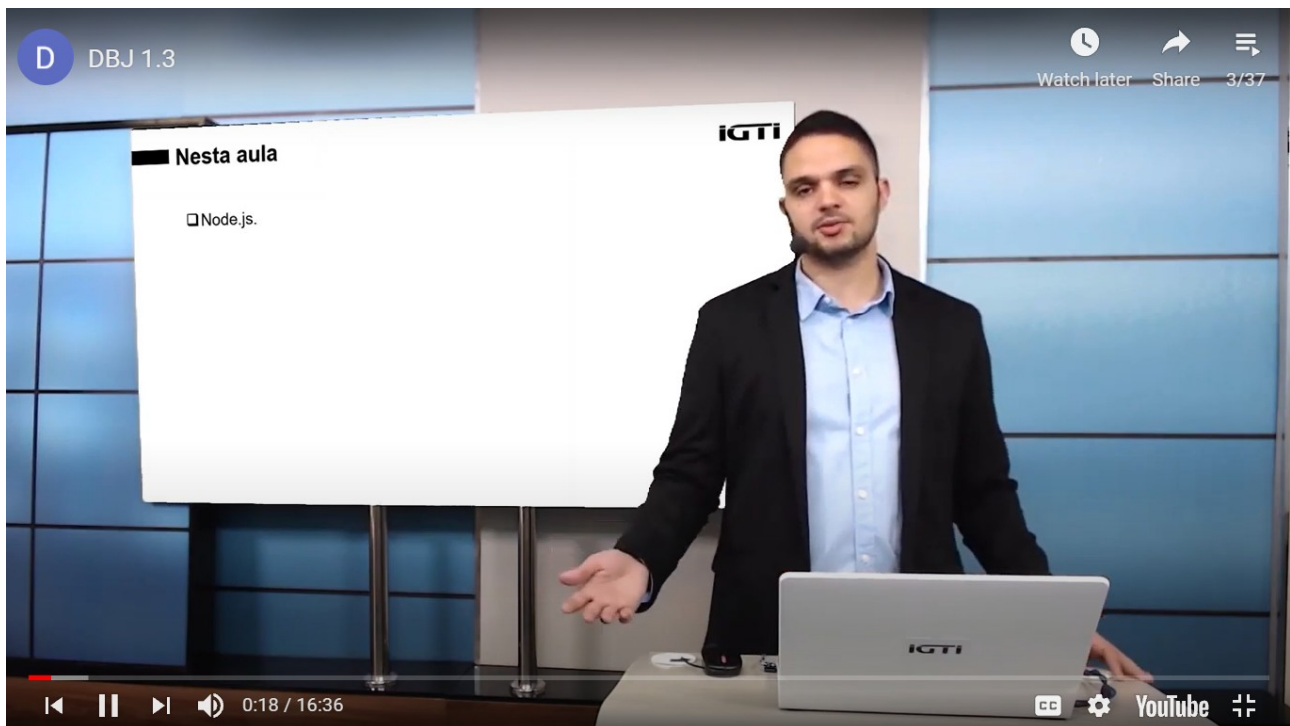




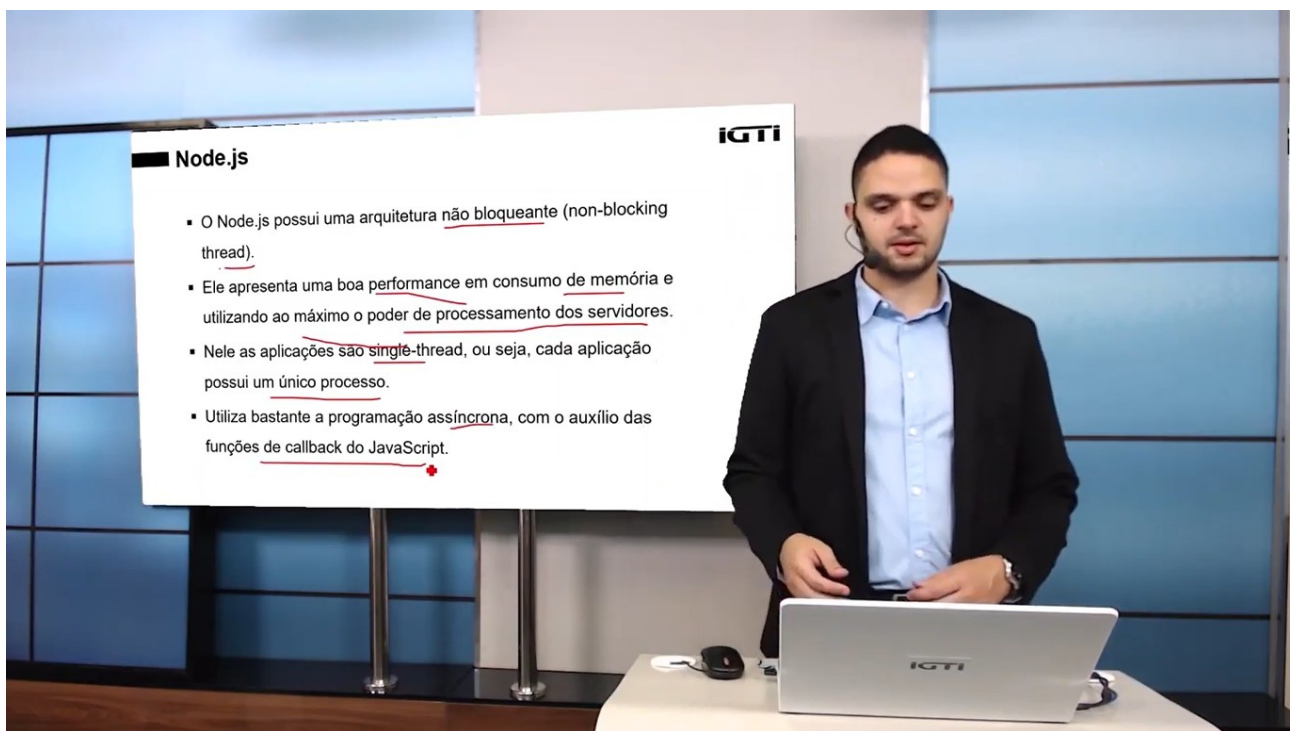
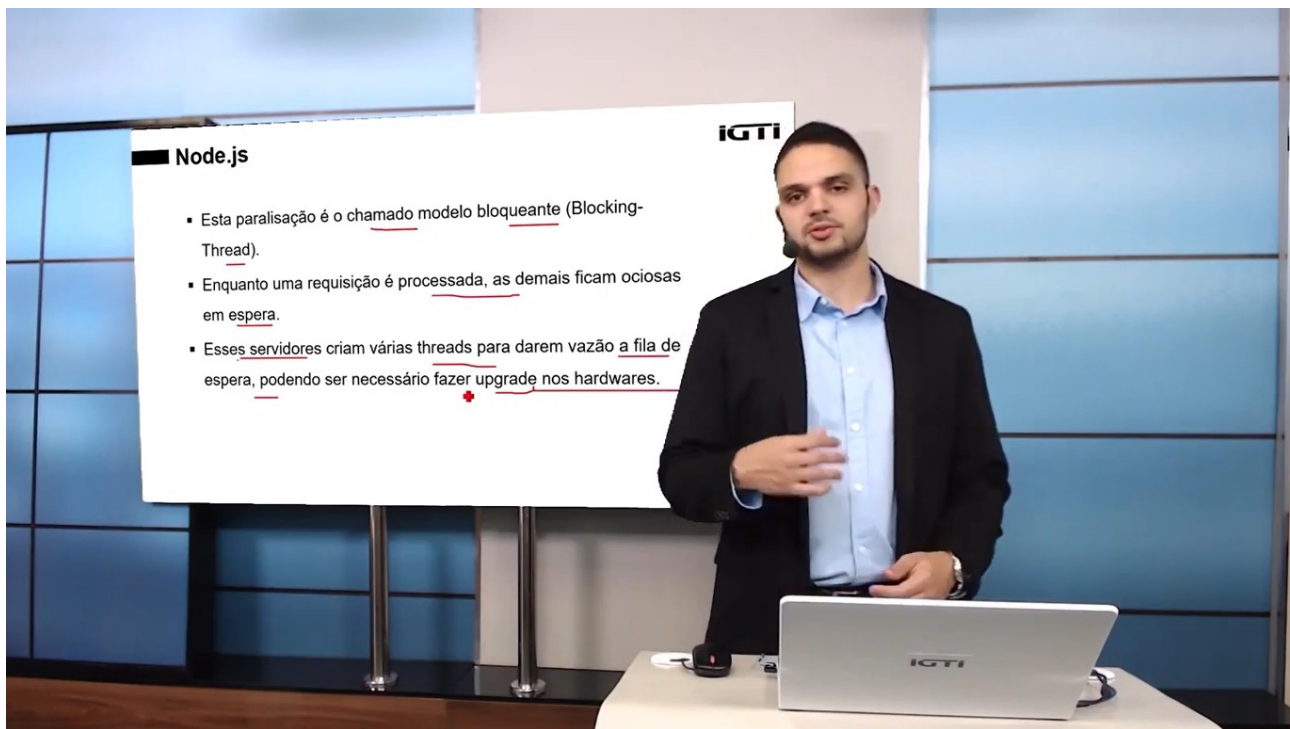




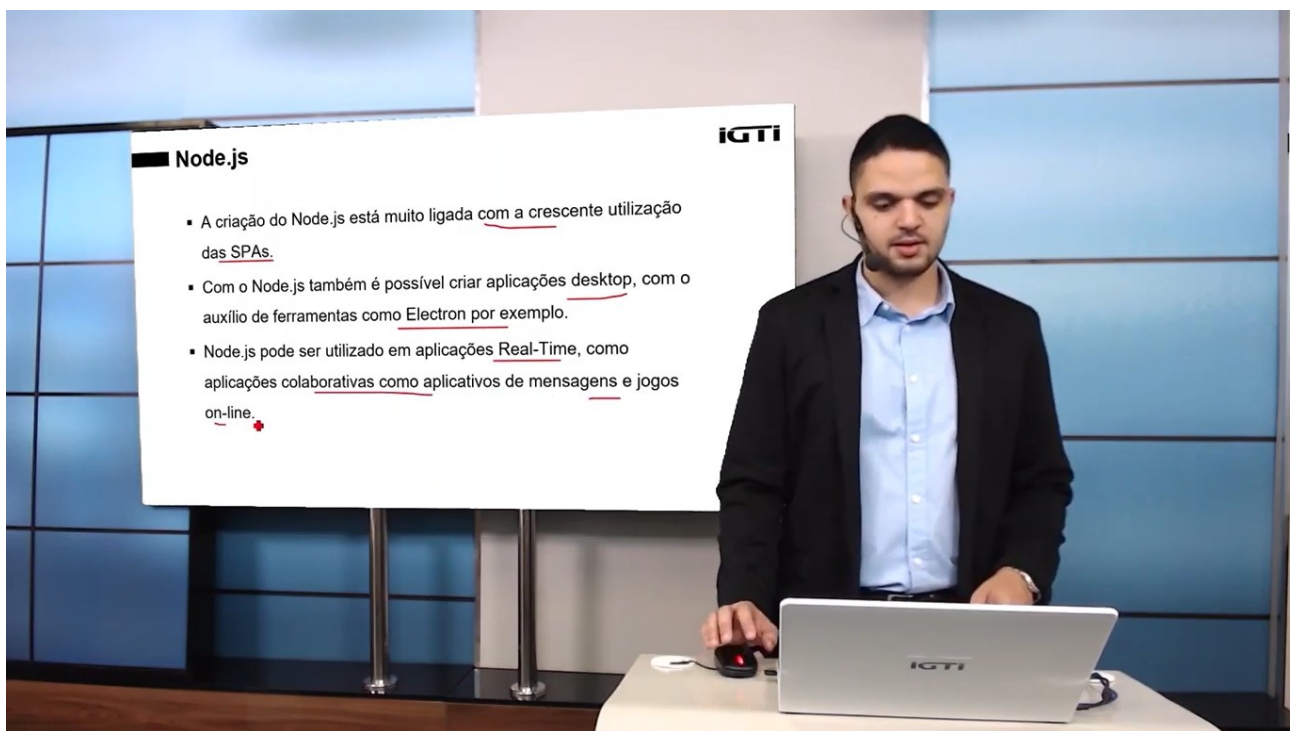
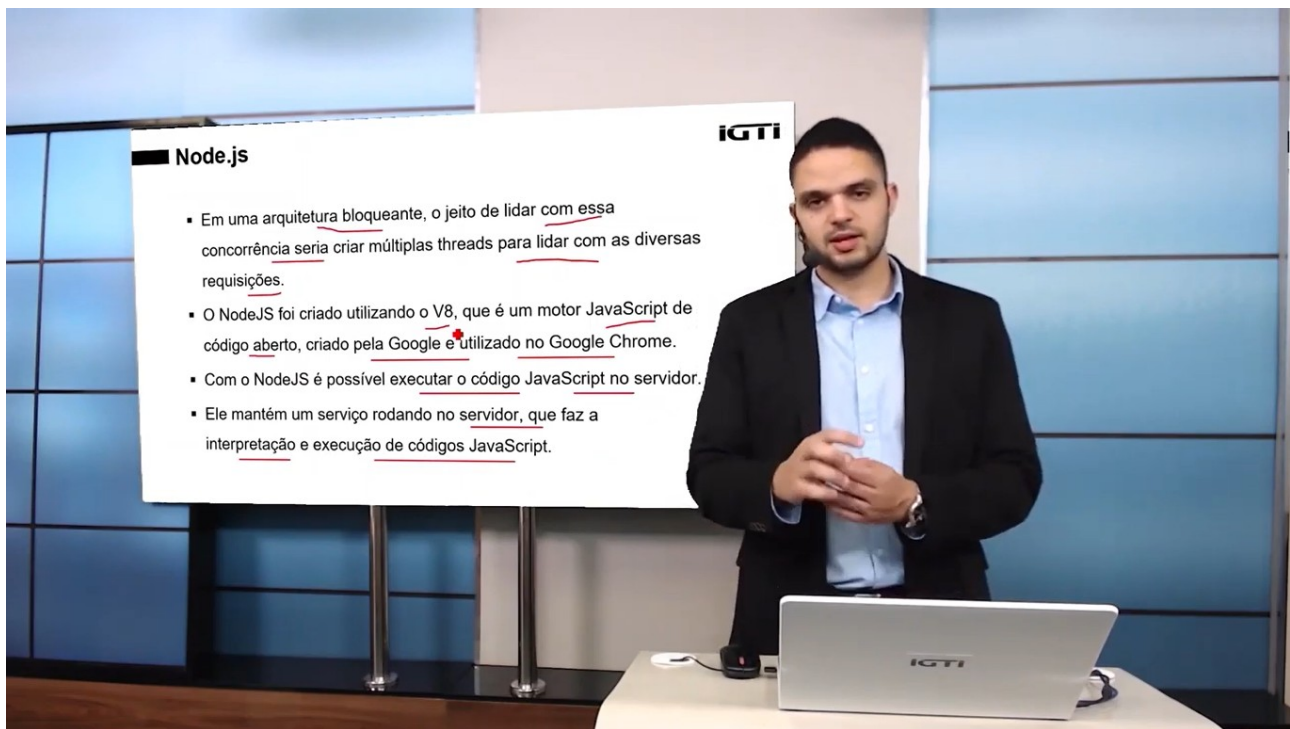
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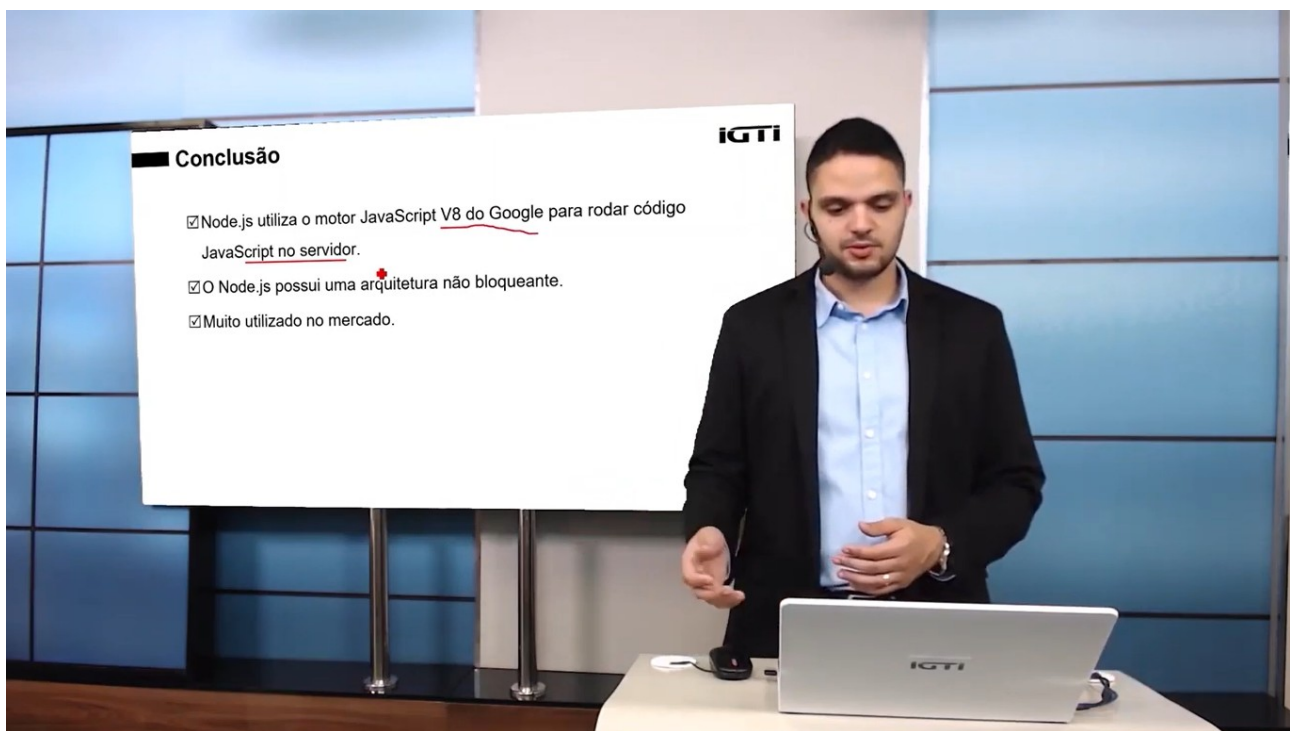








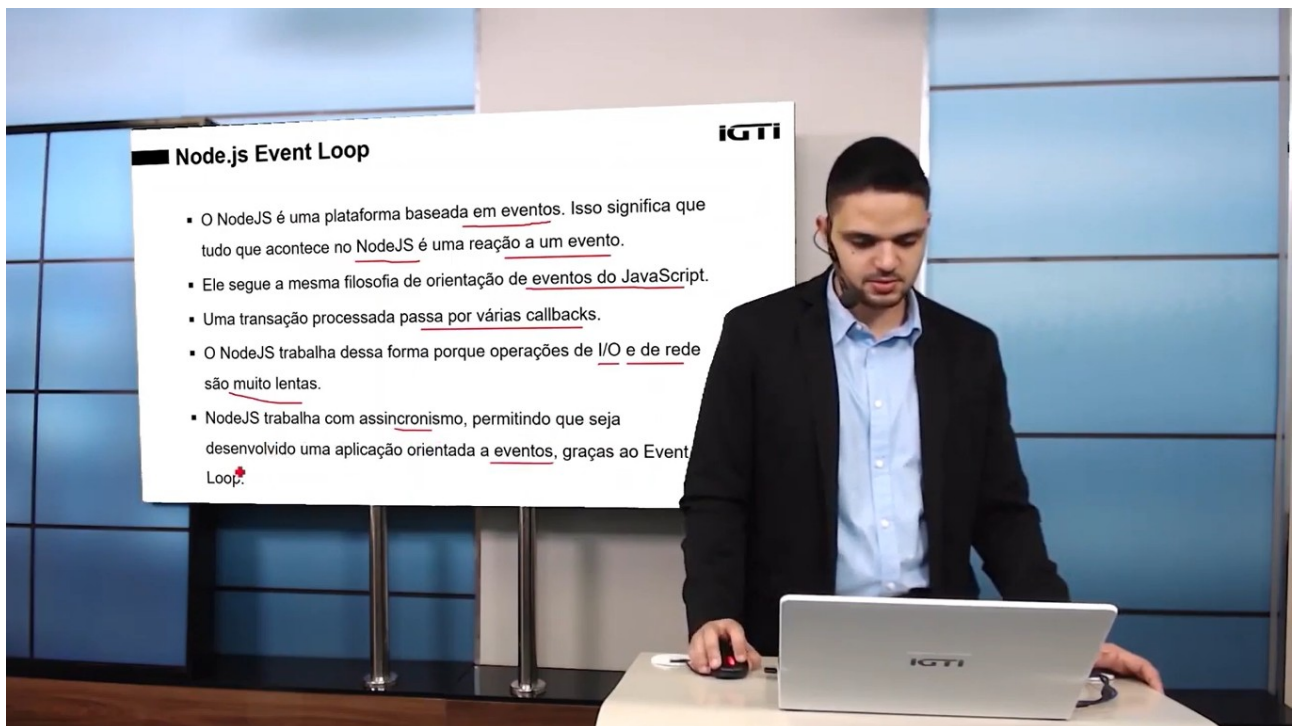
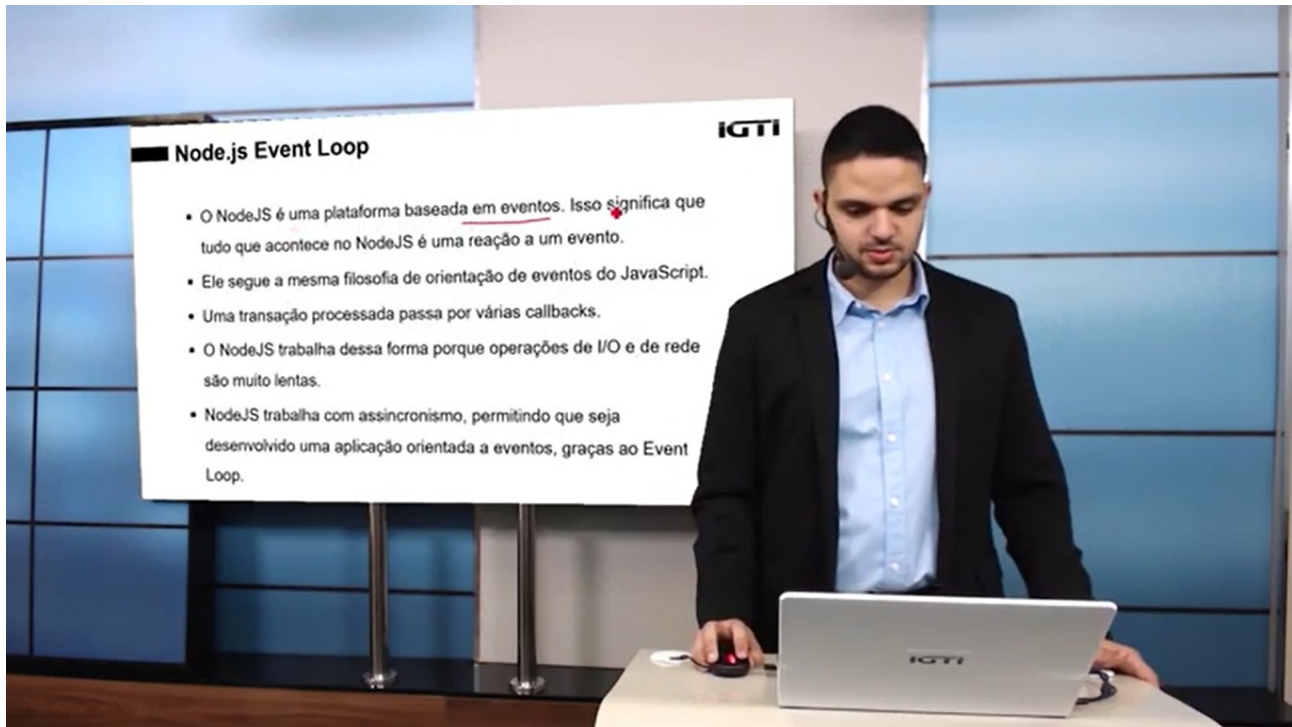




<https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=3poA1eW-B-M>  
NO VSCODE

npm init

[https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=nNV0PSLq\\_C0](https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=nNV0PSLq_C0)





DBJ 1.5

Watch later Share 5/37

### Node.js Event Loop

- O Event Loop basicamente é um loop infinito, que a cada iteração verifica se existem novos eventos em sua fila de eventos.
- O módulo responsável por emitir eventos é o EventEmitter.
- Quando um evento é emitido, ele é enviado para a fila de eventos, para que o Event Loop possa executá-lo e depois retornar seu callback.

4:40 / 15:58

YouTube

### Node.js Event Loop

FILA DE EVENTOS

EVENTOS EXECUTADOS

Close

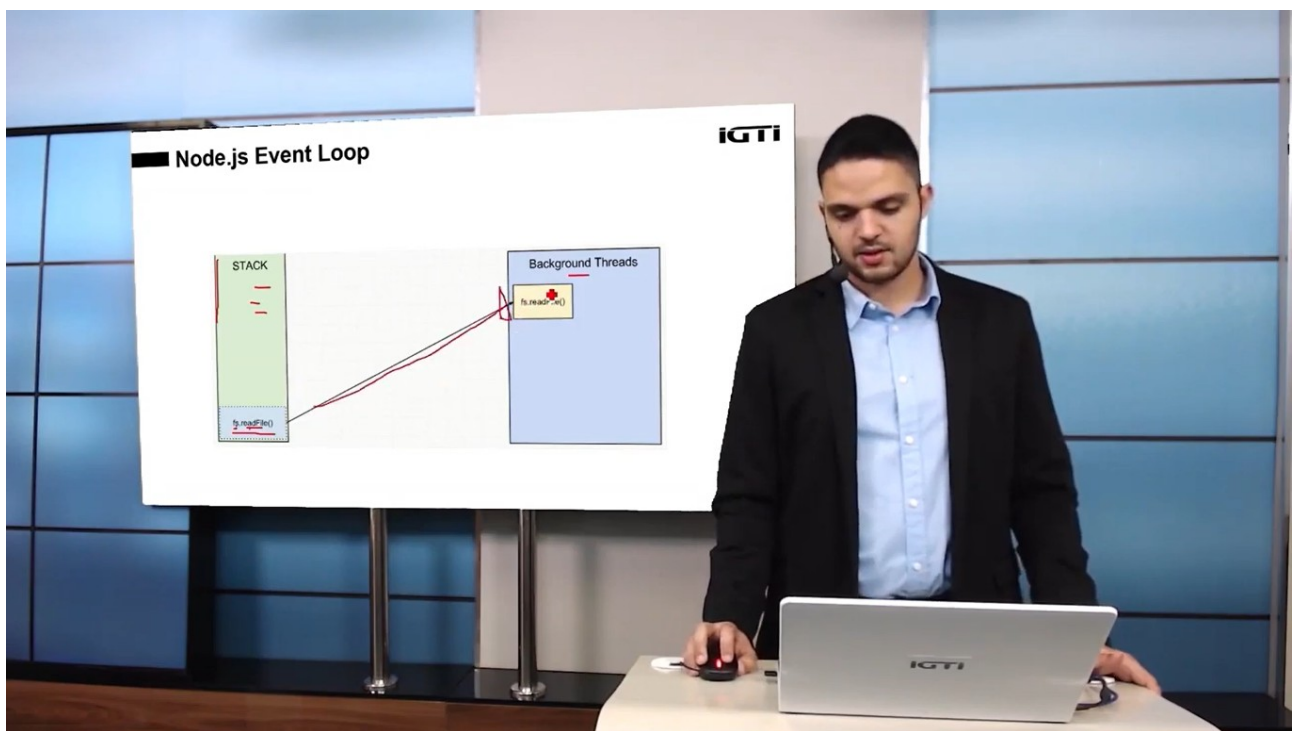
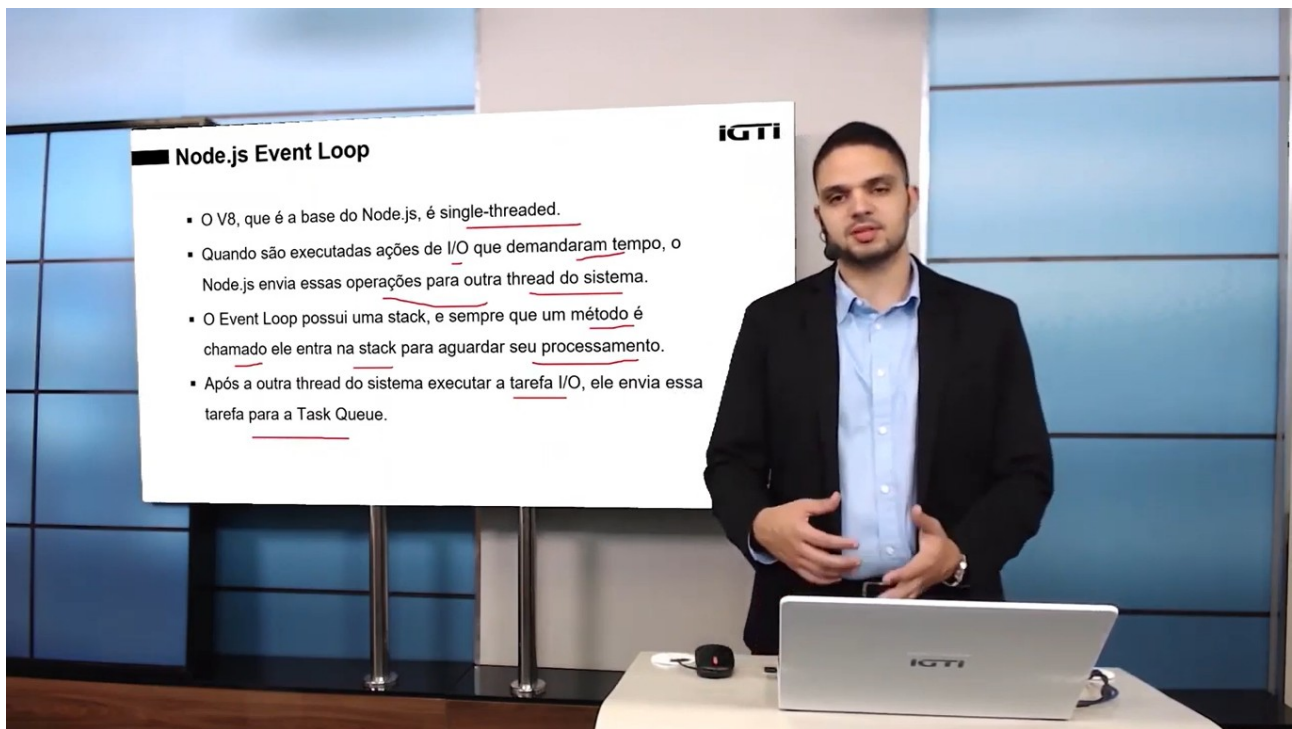
Request

Request

Connection

Close

OS EVENTOS SÃO PROCESSADOS UM POR VEZ



DBJ 1.5

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### Node.js Event Loop

The diagram illustrates the Node.js Event Loop architecture. It features three main components: a green **STACK**, a blue **Background Threads** box, and a yellow **Task Queue**. Inside the **Background Threads** box, a red dot labeled `fs.readFile()` is shown. An arrow points from this dot to a small box labeled **callback** within the **Task Queue**. Another arrow points from this **callback** box to a larger box labeled **callback** inside the **STACK**. The **IGTI** logo is in the top right corner of the slide.

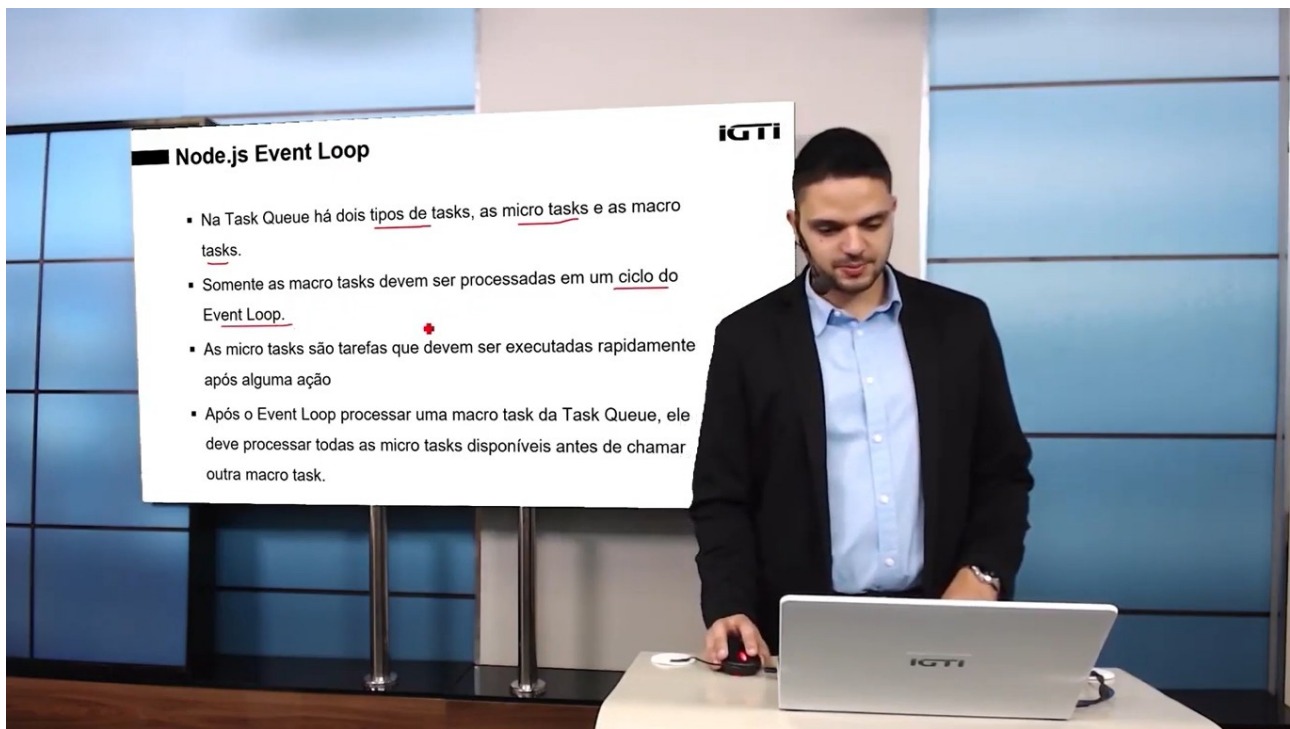
9:35 / 15:58

CC YouTube

### Node.js Event Loop

This diagram shows the next stage of the Node.js Event Loop. The **STACK** (green box) now contains a **callback** box. An arrow points from this **callback** box to a circular arrow icon labeled **Event Loop**. The **Task Queue** (yellow box) still contains a **callback** box, which has a red dot on its right side. An arrow points from this red dot to the **callback** box in the **STACK**. The **Background Threads** (blue box) is empty. The **IGTI** logo is in the top right corner of the slide.





## Node.js Event Loop

- Na Task Queue há dois tipos de tasks, as micro tasks e as macro tasks.
- Somente as macro tasks devem ser processadas em um ciclo do Event Loop.
- As micro tasks são tarefas que devem ser executadas rapidamente após alguma ação
- Após o Event Loop processar uma macro task da Task Queue, ele deve processar todas as micro tasks disponíveis antes de chamar outra macro task.

<https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=kZ2Zxp2aKWE>

## Nesta aula

- ❑ Módulos do Node.js

## Módulos do Node.js

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- Um módulo no Node.js é o mesmo que uma biblioteca no JavaScript
- É um conjunto de funções que podem ser incluídas em uma aplicação
- O Node.js segue o CommonJS, uma especificação de ecossistemas para o JavaScript
- Recentemente o Node.js passou a oferecer suporte ao ES Modules, padrão atual para exportação/importação de módulos

## Módulos do Node.js

IGTI

- Assim é possível incluir um módulo que está em outro arquivo
- É possível criar um módulo e importa-lo em outro arquivo facilmente
- CommonJS: require
- ES Modules: import
- Exemplos de módulos nativos:
  - File System
  - Readline
  - Events
  - HTTP

<https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=6unMVbLUYHQ>

<https://www.youtube.com/watch?list=PLliVpcscu0l5knbl572pzTYxFdj6Zw5ro&v=jWvYaNi229w>

<https://www.youtube.com/watch?v=jnlcAz6cvZU>

