Node - runtime enviroment

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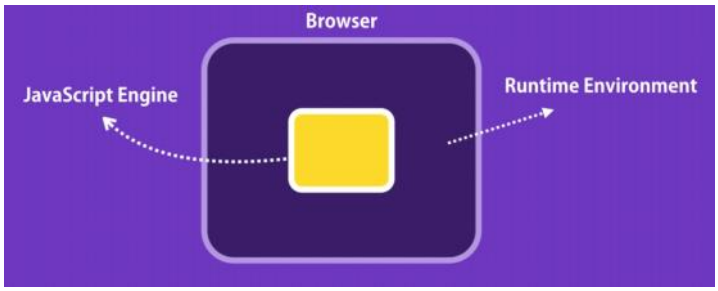

Browser is used to run the JS code

Browser provide a runtime environment**,** to run the javascript code.

How - runtime enviroment

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```
document.getElementById('');
```

In the browser, we have window or document object, these object allow us to work with the environment in which our JS code is running

How node is different

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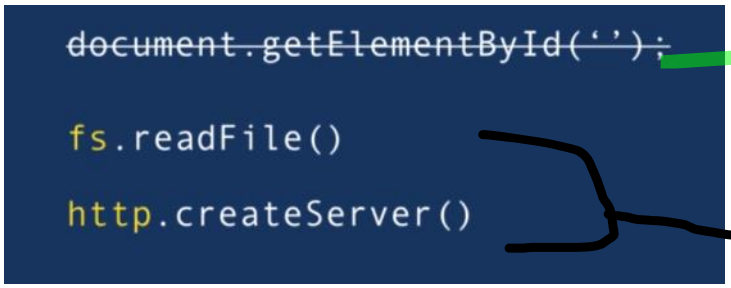

In the node, we don't have object or window, we have other objects that give us more power like -

Browser vs node diff

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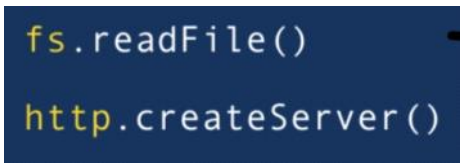

Node can do these stuffs and browser can't because browser use other window or objects.

Node vs browser same

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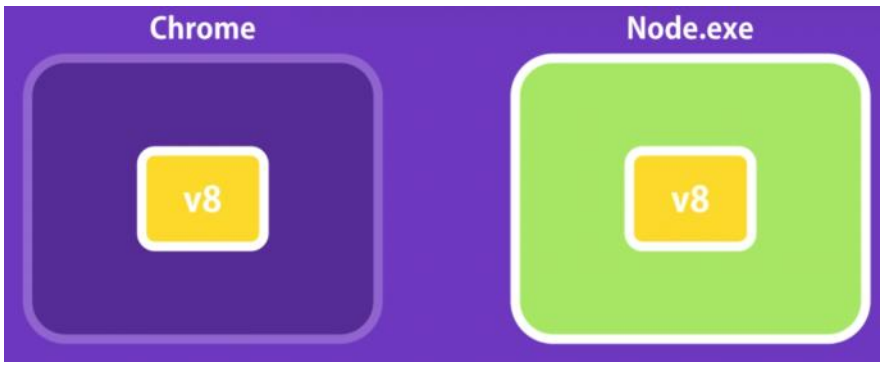

Node and browser uses same - javascript engine (V8), but they provide different runtime environment for Javascript.

Because they uses the different object or window

Summary

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Getting Started with Node

So, in this section, you learned that:

- Node is a runtime environment for executing JS code.
- Essentially, Node is a C++ program that embeds Chrome's v8 engine, the fastest JS engine in the world.
- We use Node to build fast and scalable networking applications. It's a perfect choice for building RESTful services.
- Node applications are single-threaded. That means a single thread is used to serve all clients.
- Node applications are asynchronous or non-blocking by default. That means when the application involves I/O operations (eg accessing the file system or the network), the thread doesn't wait (or block) for the result of the operation. It is released to serve other clients.
- This architecture makes Node ideal for building I/O-intensive applications.
- You should avoid using Node for CPU-intensive applications, such as a video encoding service. Because while executing these operations, other clients have to wait for the single thread to finish its job and be ready to serve them.
- In Node, we don't have browser environment objects such as window or the document object. Instead, we have other objects that are not available in browsers, such as objects for working with the file system, network, operating system, etc.

Trick

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```
node-course $
node-course $mkdir first-app
node-course $cd first-app/
first-app $code .
first-app $
```

By this we can open vs code.