HEIG-VD / INGÉNIERIE DES MÉDIAS / PROGRAMMATION WEB

INTRODUCTION AU DOM

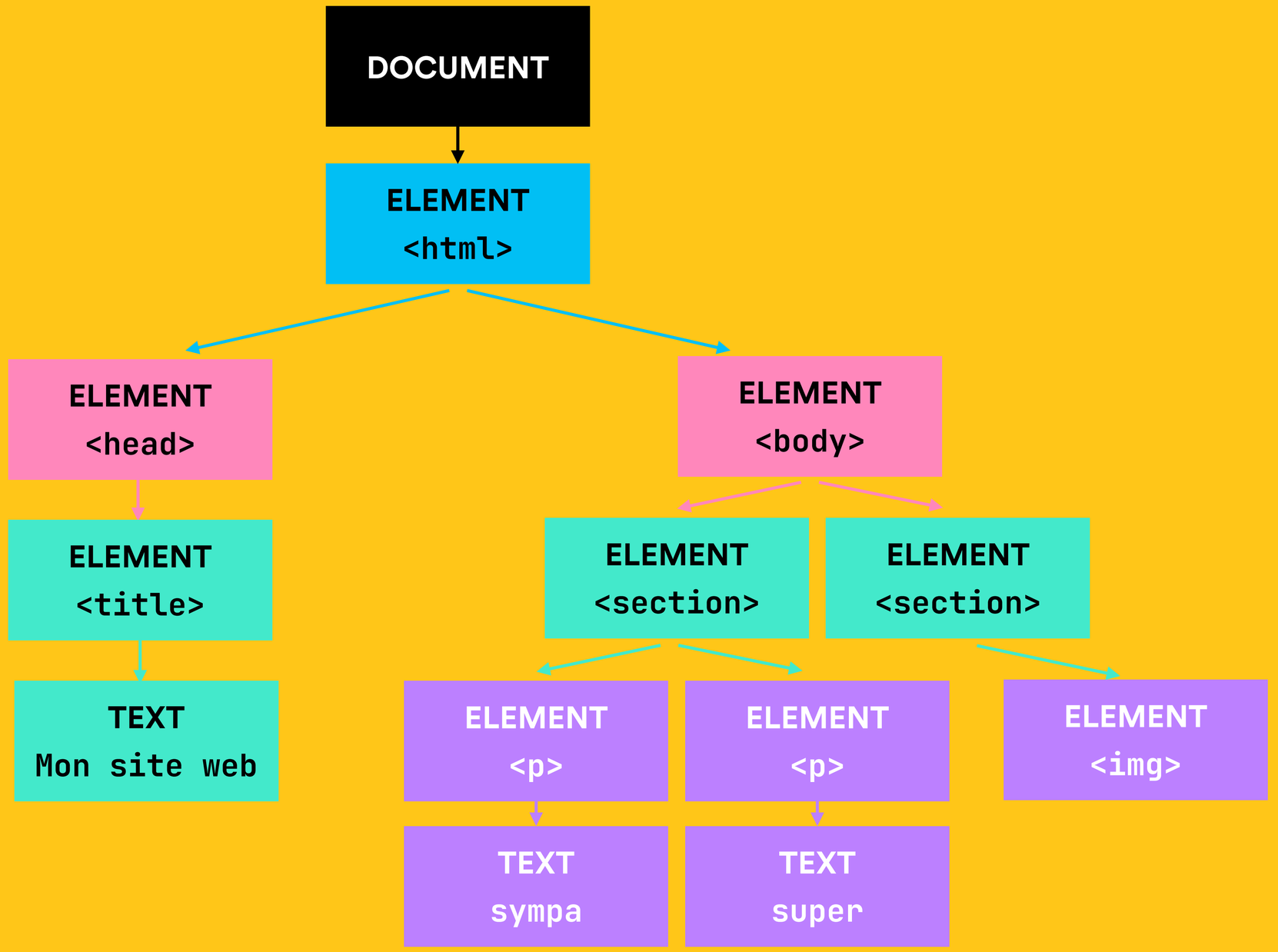
```
<div class="card">
    <img src="truc.png" alt="Une magnifique photo">
    <p>Lorem ipsum dolor sit amet consectetur.</p>
</div>
```

Qu’est-ce que le DOM?

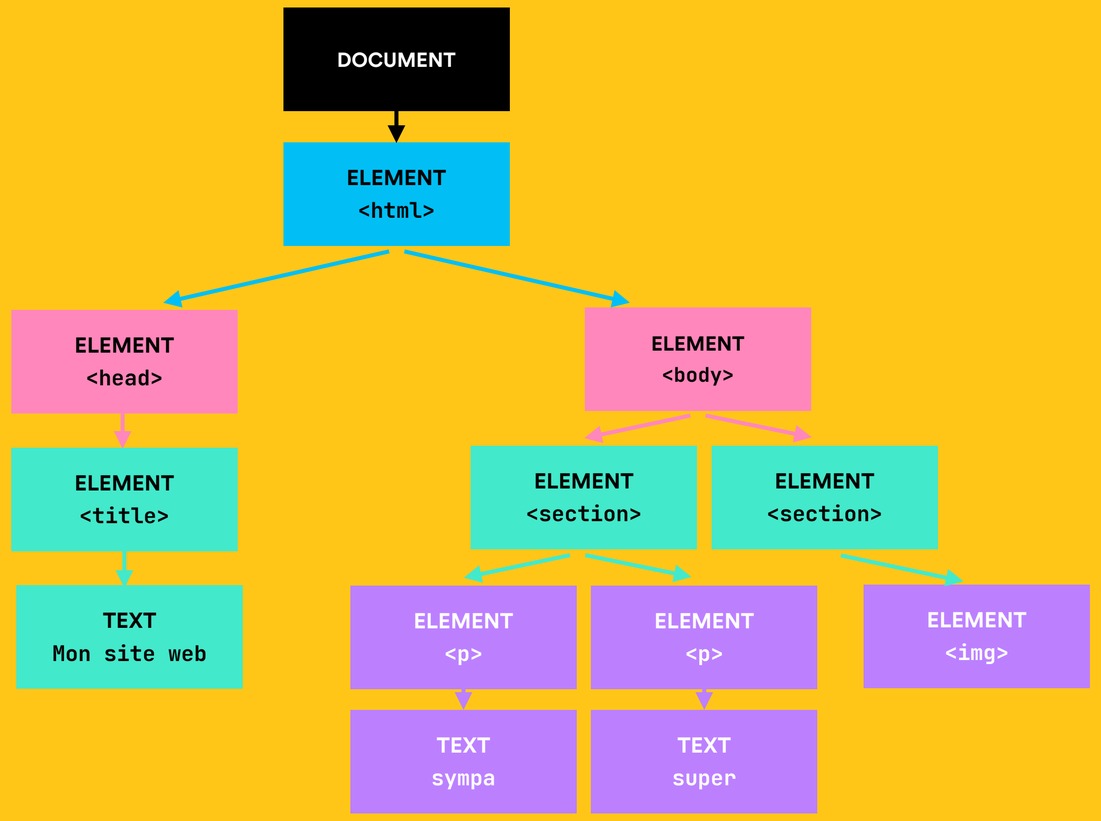
Document Object Model: Une représentation structurée de documents HTML. Il permet au JavaScript d’accéder aux différents éléments HTML et de les manipuler.

Qu’est-ce que le DOM?

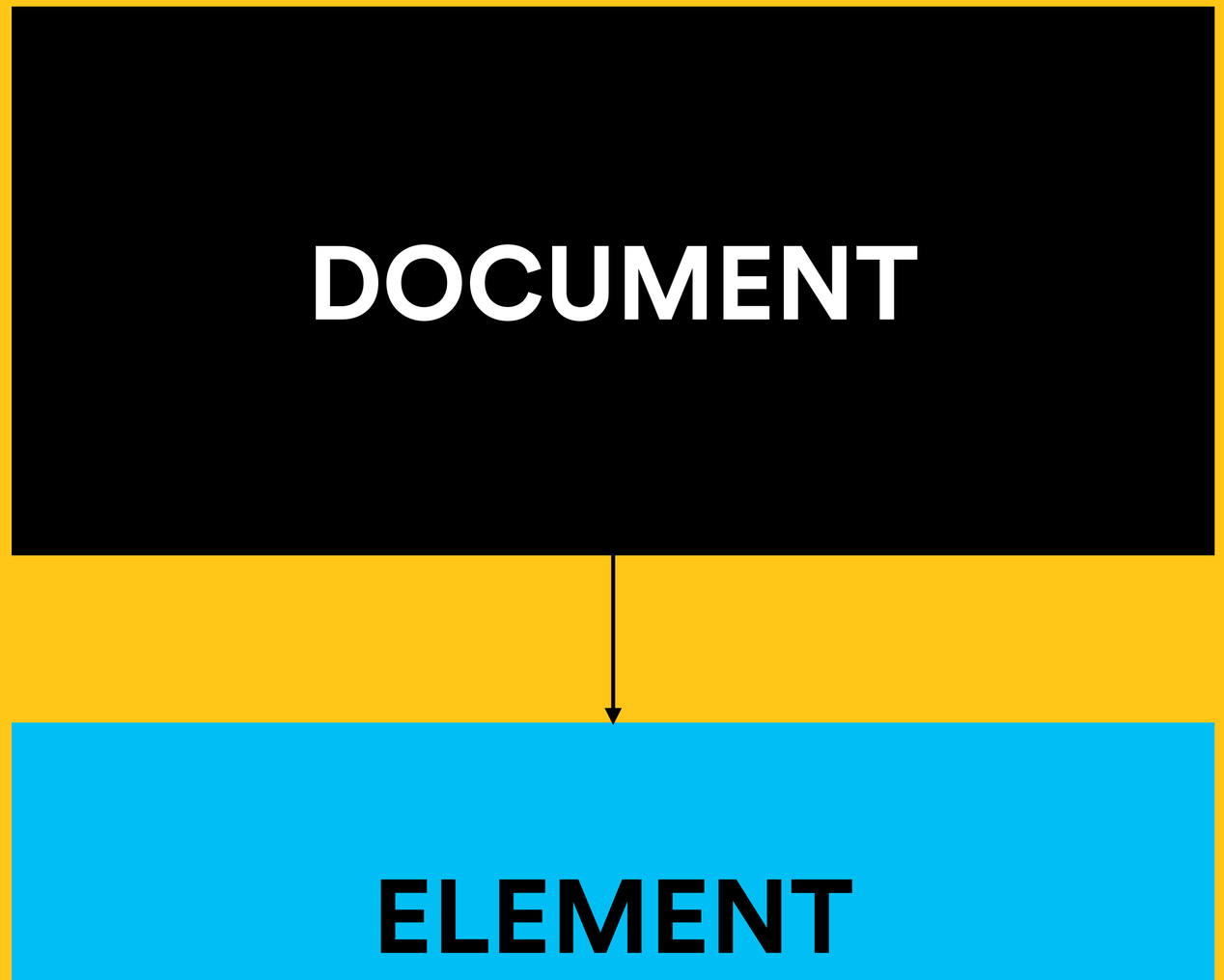
Document Object Model: Une représentation structurée de documents HTML. Il permet au JavaScript d’accéder aux différents éléments HTML et de les manipuler.


DOCUMENT
ELEMENT
<html>
ELEMENT
<head>
ELEMENT
<body>
ELEMENT
<title>
ELEMENT
<section>
ELEMENT
<section>
TEXT
Mon site web
ELEMENT
<p>
ELEMENT
<p>
ELEMENT
<img>
TEXT
sympa
TEXT
super

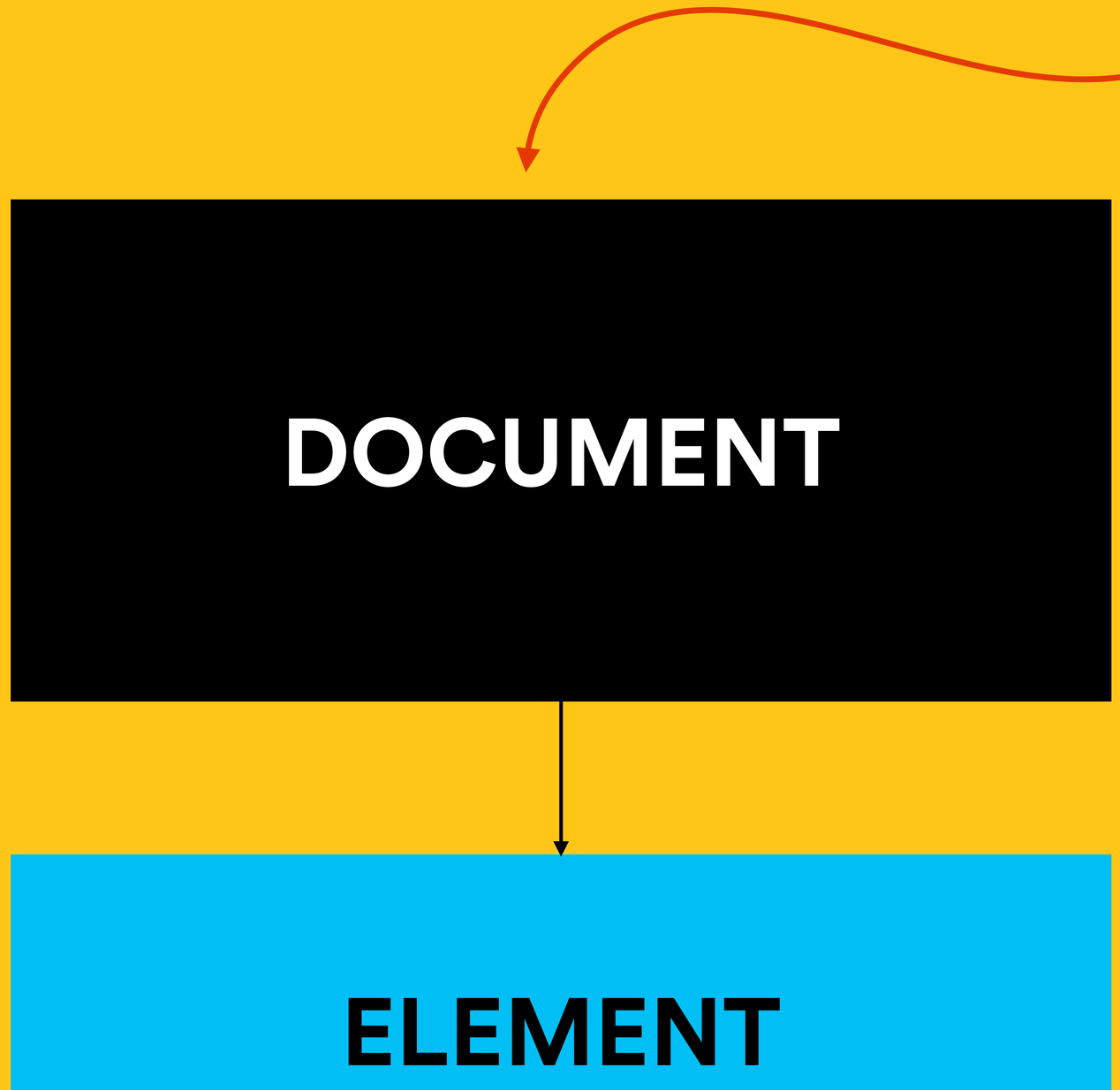
```
<html>
  <head>
    <title>Mon site web</title>
  </head>
  <body>
    <section>
        <p>
            sympa
        </p>
        <p>
            super
        </p>
    </section>
    <section>
        <img src="truc.png">
    </section>
  </body>
</html>
```

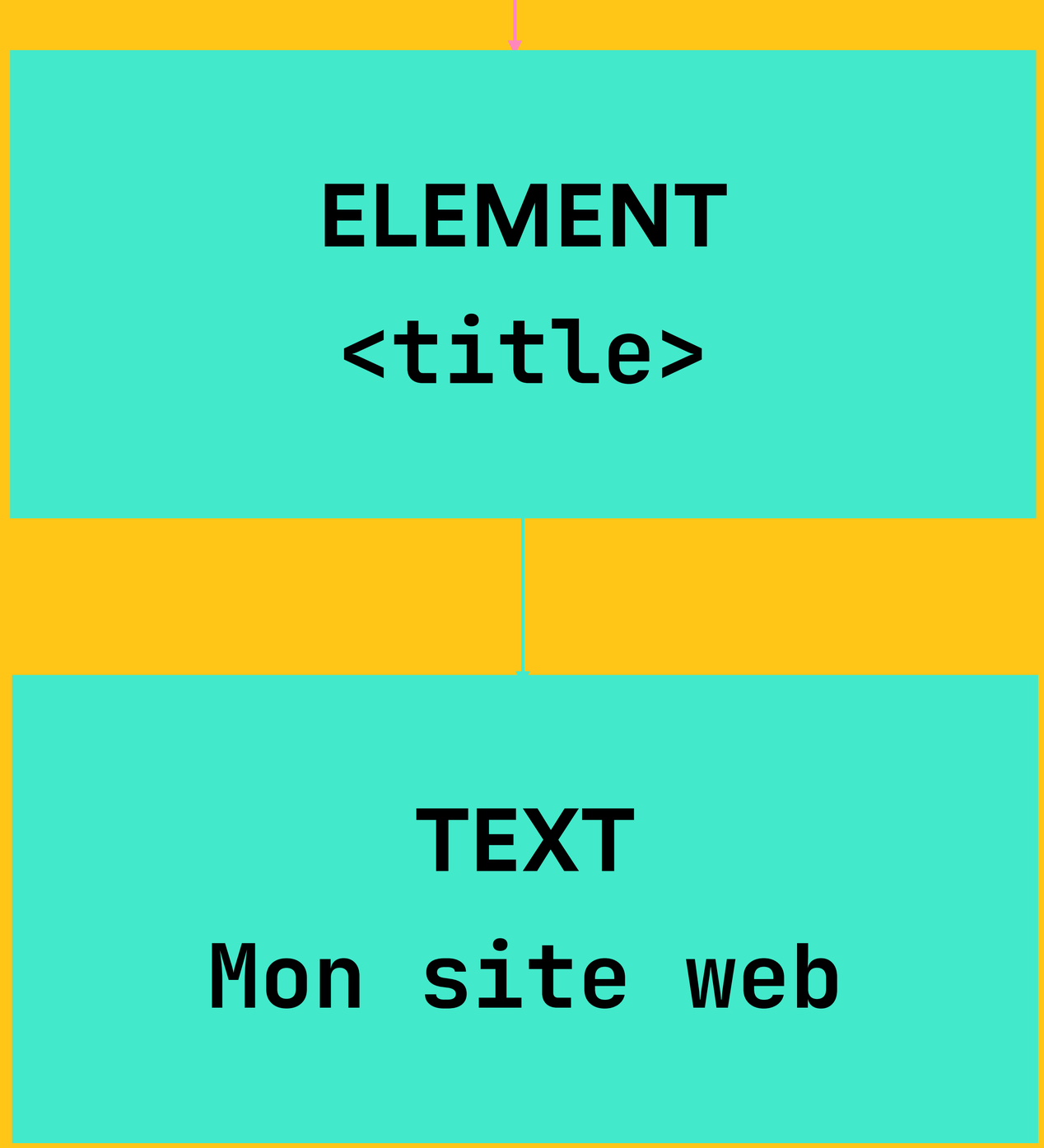


HEIG VD


DOCUMENT
ELEMENT

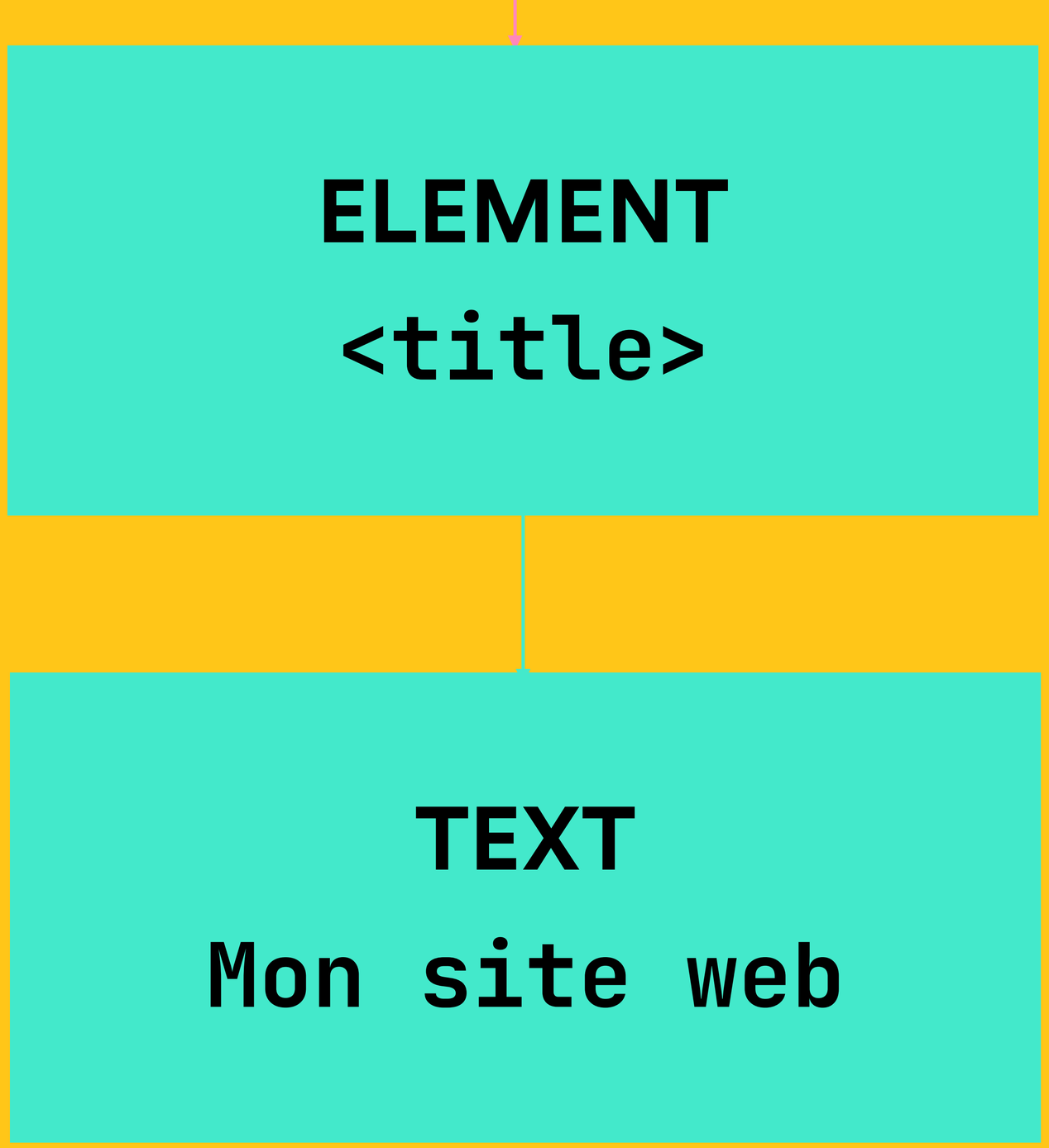
On objet spécial qui est le point d'entrée vers le DOM.




ELEMENT
<title>
TEXT
Mon site web

Tout ce qui est dans un document HTML se retrouve automatiquement dans le DOM.

Ce dernier est une représentation complète du document HTML.



DOM !== JS

HE VD
IG

Web APIs

DOM
BACKGROUND TASKS
FILE API
UI EVENTS
CANVAS
FETCH API
GEOLOCATION
STORAGE
TOUCH EVENTS
WEB ANIMATION
WEB SPEECH
WEB SOCKETS
WEB WORKERS
WEBRTC

...

HE VD
IG

```
document.querySelector("sel");
```

Le méthode `querySelector()` nous permet d'aller piocher un élément dans le DOM.

```
document.querySelector(“element”);
document.querySelector(“.class”);
document.querySelector(“#id”);
```

On utilise la même syntaxe que pour les sélecteurs CSS.

querySelector() retourne le premier élément répondant aux critères du sélecteur passé en paramètre.

L’élément est représenté sous forme d’objet, avec des méthodes et des propriétés qui lui sont propres.

HE IG VD

INDEX.HTML

```
<body>
  <div class="card"></div>
  <div class="card"></div>
</body>
```

SCRIPT.JS

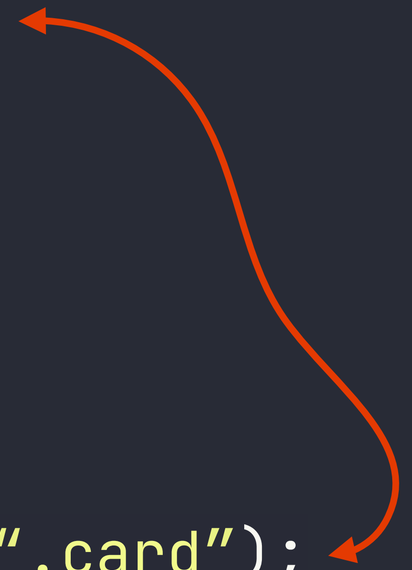
```
document.querySelector(“.card”);
```

INDEX.HTML

```
<body>
  <div class="card"></div>
  <div class="card"></div>
</body>
```

SCRIPT.JS

```
document.querySelector(“.card”);
```



```
ariaLabel: null
ariaLevel: null
ariaLive: null
ariaModal: null
ariaMultiLine: null
ariaMultiSelectable: null
ariaOrientation: null
ariaPlaceholder: null
ariaPosInSet: null
ariaPressed: null
ariaReadOnly: null
ariaRelevant: null
ariaRequired: null
ariaRoleDescription: null
ariaRowCount: null
ariaRowIndex: null
ariaRowSpan: null
ariaSelected: null
ariaSetSize: null
ariaSort: null
ariaValueMax: null
ariaValueMin: null
ariaValueNow: null
ariaValueText: null
assignedSlot: null
▶ attributeStyleMap: StylePropertyMap {size: 0}
▶ attributes: NamedNodeMap {0: class, class: class, length: 1}
autocapitalize: ""
autofocus: false
baseURI: "http://127.0.0.1:5500/"
childElementCount: 0
▶ childNodes: NodeList []
▶ children: HTMLCollection []
▶ classList: DOMTokenList ['card', value: 'card']
className: "card"
clientHeight: 0
clientLeft: 0
clientTop: 0
clientWidth: 935
contentEditable: "inherit"
▶ dataset: DOMStringMap {}
dir: ""
draggable: false
elementTiming: ""
enterKeyHint: ""
firstChild: null
firstElementChild: null
hidden: false
id: ""
inert: false
innerHTML: ""
innerText: ""
inputMode: ""
isConnected: true
isContentEditable: false
lang: ""
```

INDEX.HTML

```
<body>
  <div id=“card">Super!</div>
</body>
```

OUTPUT

Super!

SCRIPT.JS

```
document.querySelector(“#card").textContent
```

INDEX.HTML

```
<body>
  <input type=“number" />
</body>
```

OUTPUT

```
i.e. 23
```

SCRIPT.JS

```
document.querySelector(“input”).value
```

```html
<body>
    <div class="card"></div>
    <div class="card"></div>
</body>
```

```js
document.querySelectorAll(".card");
// NodeList(2) [div.card, div.card]
```

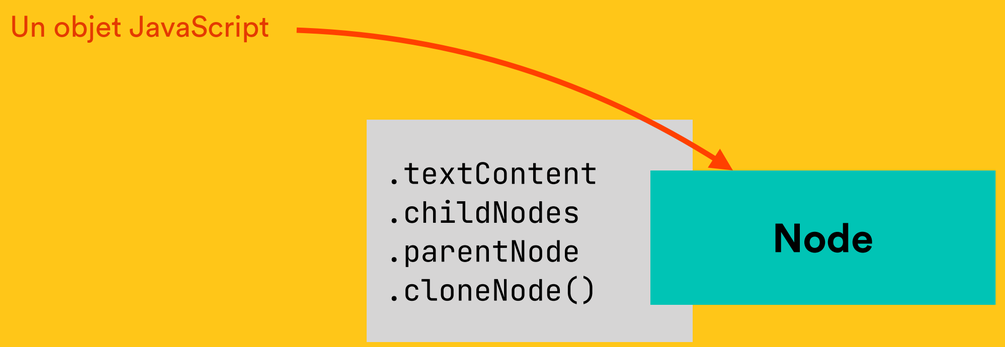
Le méthode `querySelectorAll()` nous permet d'aller piocher plusieurs éléments dans le DOM.

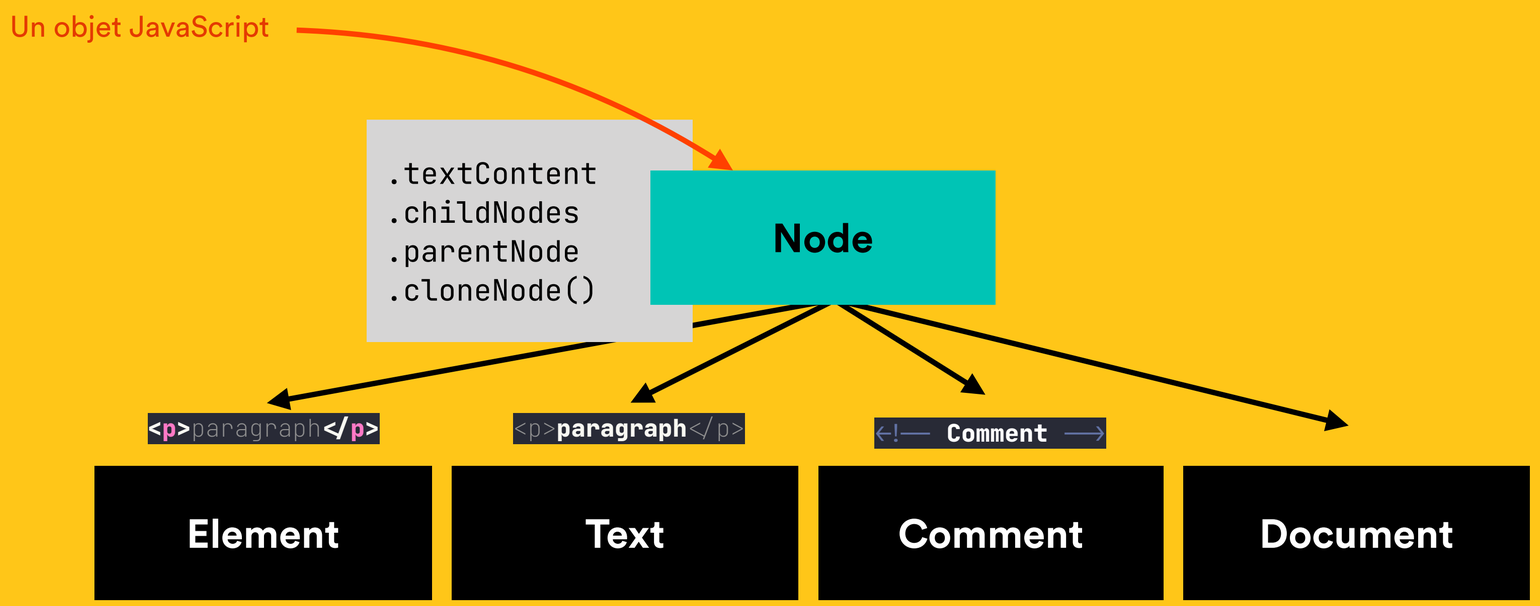
Cette méthode retourne un objet NodeList, qui a la particularité d'être itérable. Ce n'est techniquement pas un tableau, même si ça en a tout l'air.

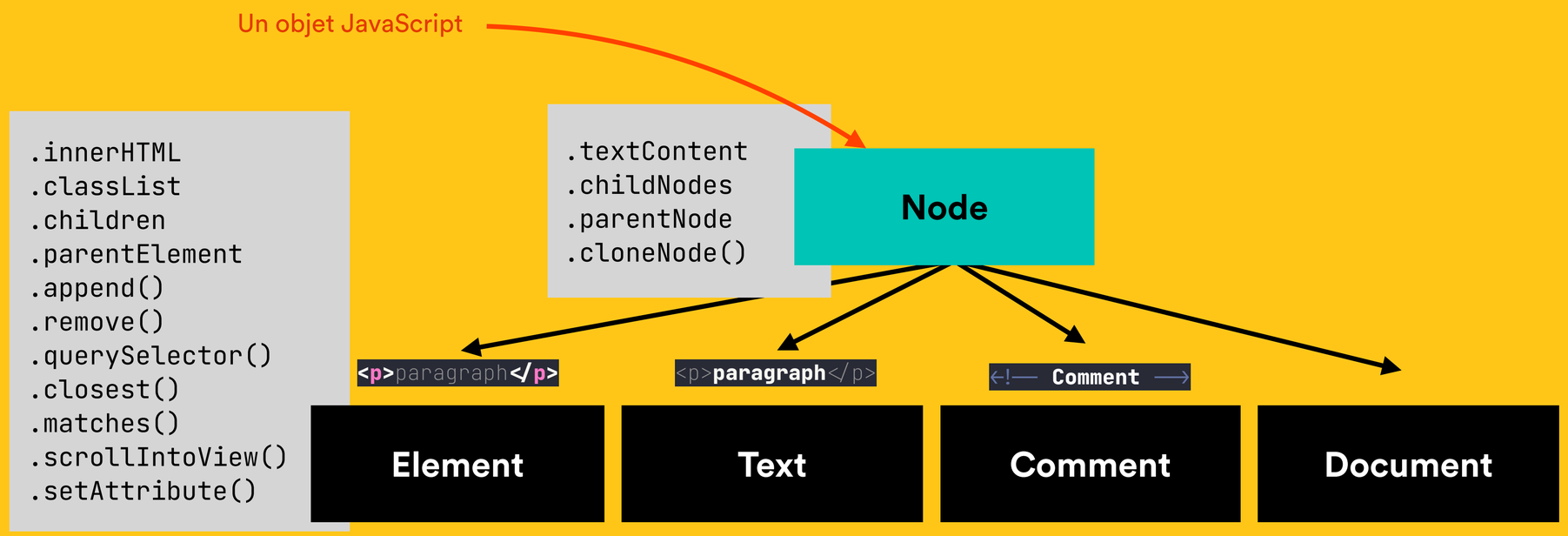
On peut utiliser `for…of` ou `forEach()` pour traverser une NodeList.

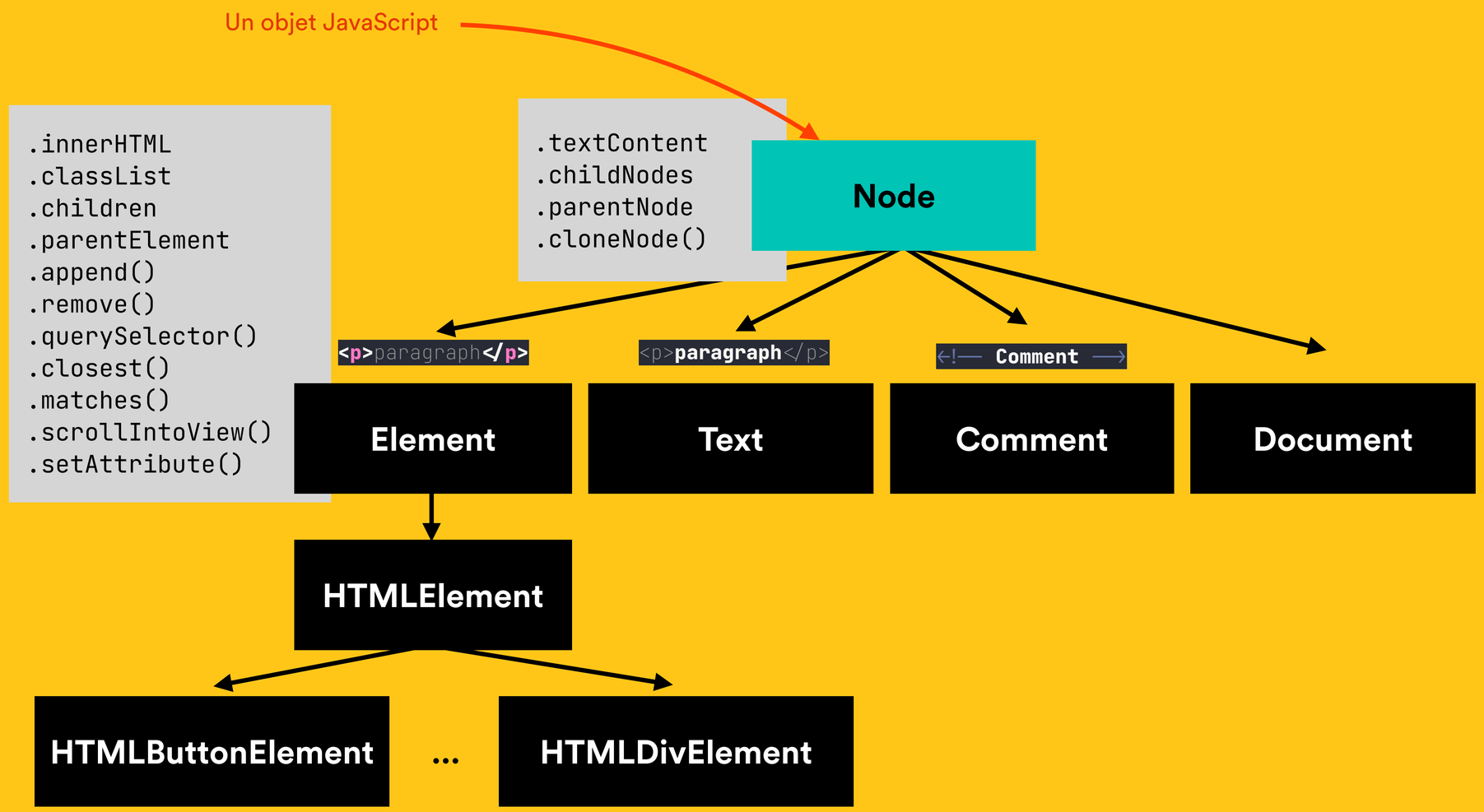
HEIG VD

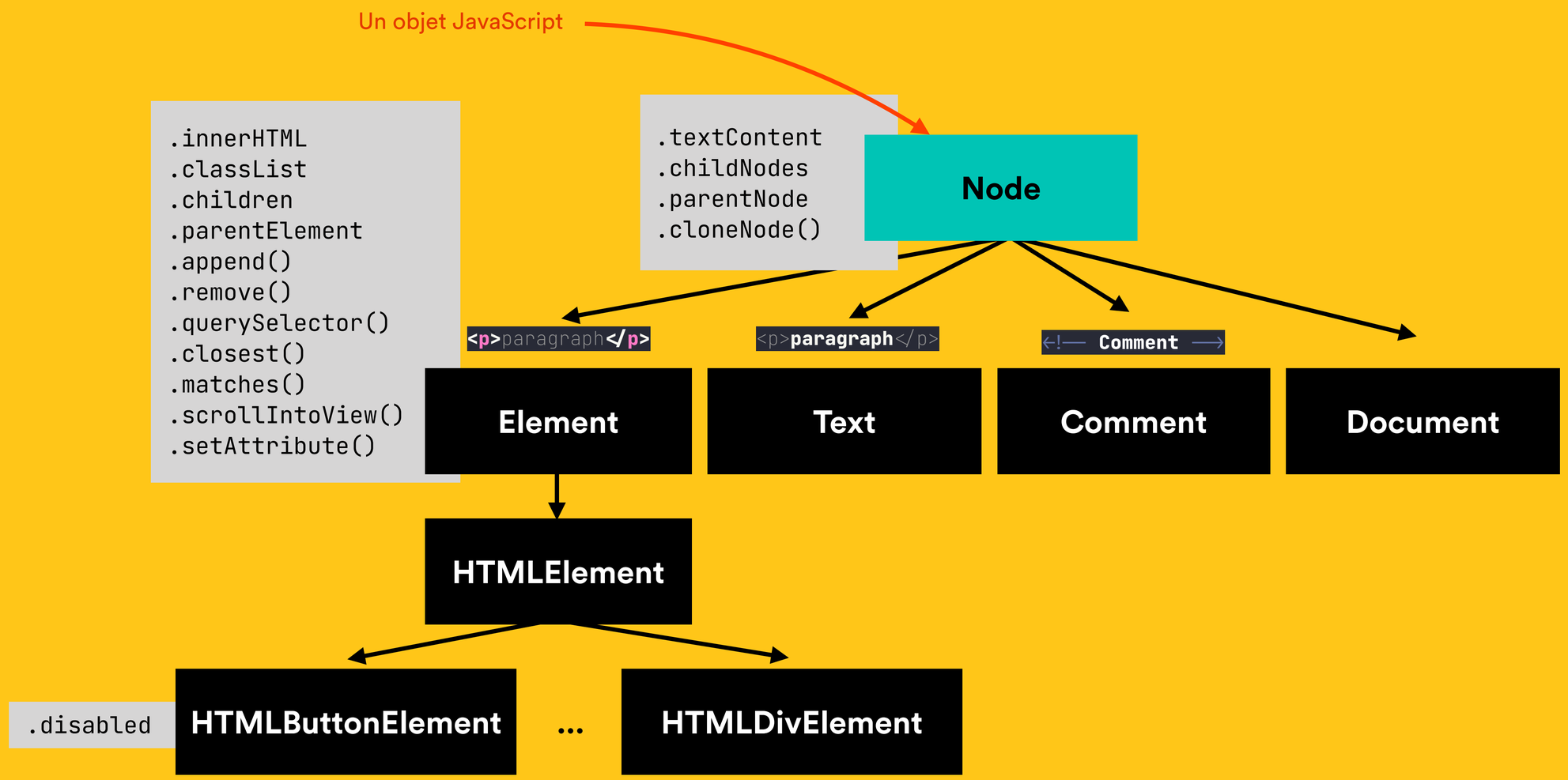
Method	Searches by...	Can call on an element?	Live?
`querySelector`	CSS-selector	✔	-
`querySelectorAll`	CSS-selector	✔	-
`getElementById`	`id`	-	-
`getElementsByName`	`name`	-	✔
`getElementsByTagName`	tag or `'*'`	✔	✔
`getElementsByClassName`	class	✔	✔

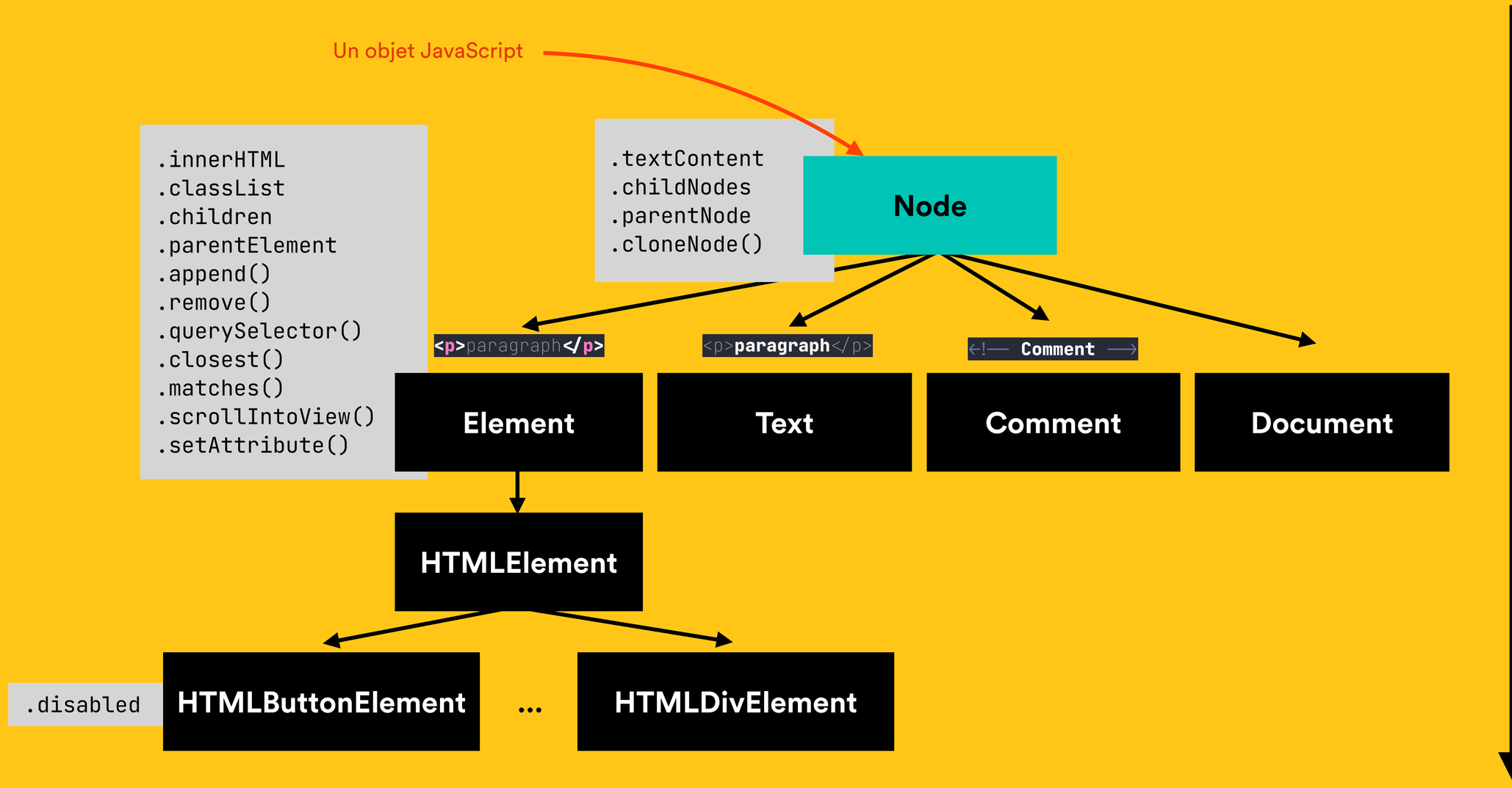

Un objet JavaScript
.textContent
.childNodes
.parentNode
.cloneNode()
Node


Un objet JavaScript
.textContent
.childNodes
.parentNode
.cloneNode()
Node
paragraph
paragraph
<!— Comment —>
Element
Text
Comment
Document


Un objet JavaScript
.innerHTML
.classList
.children
.parentElement
.append()
.remove()
.querySelector()
.closest()
.matches()
.scrollIntoView()
.setAttribute()
.textContent
.childNodes
.parentNode
.cloneNode()
Node
paragraph
paragraph
<!-- Comment -->
Element
Text
Comment
Document


Un objet JavaScript
.innerHTML
.classList
.children
.parentElement
.append()
.remove()
.querySelector()
.closest()
.matches()
.scrollIntoView()
.setAttribute()
.textContent
.childNodes
.parentNode
.cloneNode()
Node
paragraph
paragraph
<!-- Comment -->
Element
Text
Comment
Document
HTMLElement
HTMLButtonElement
...
HTMLDivElement

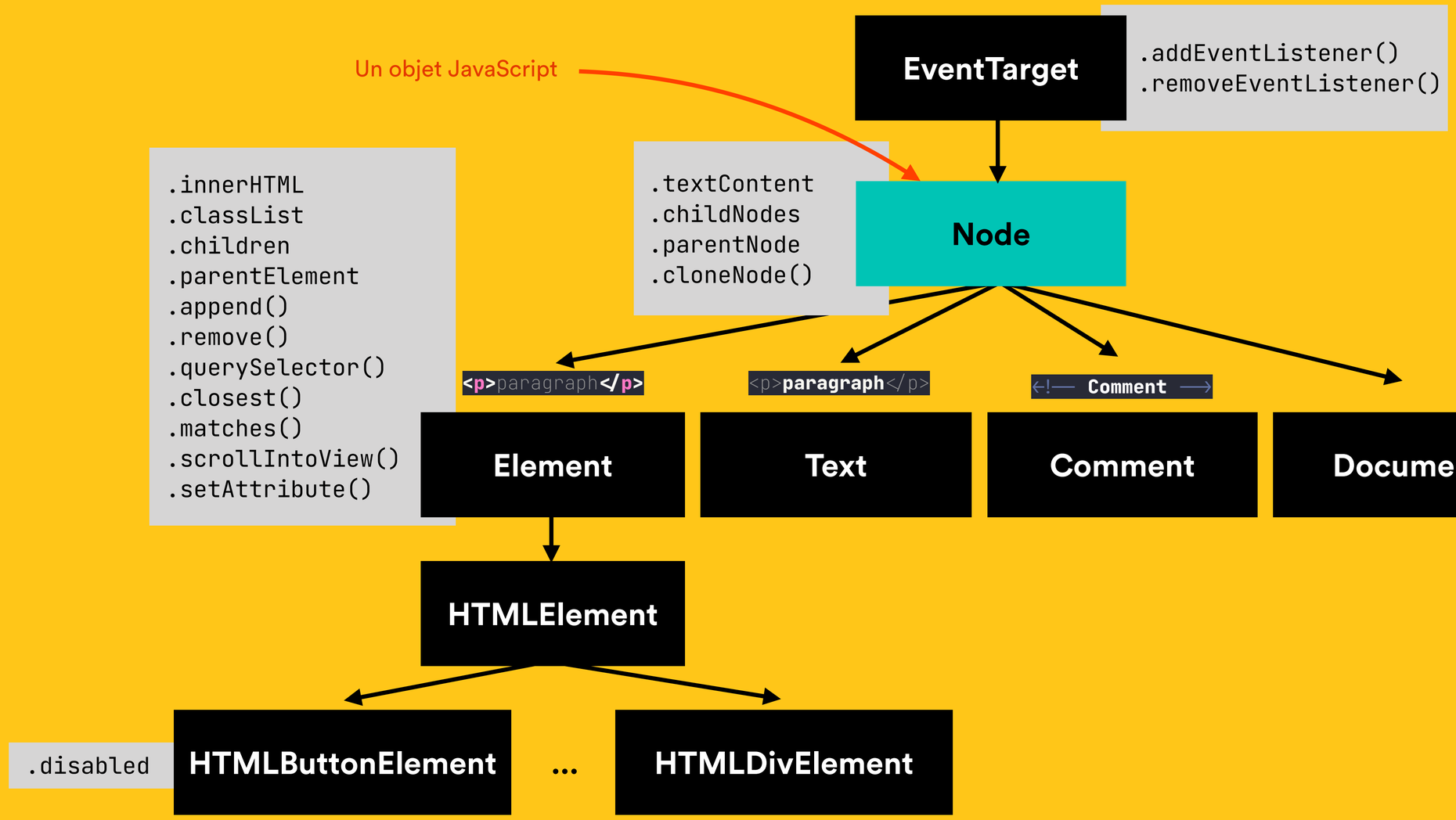

Un objet JavaScript
.innerHTML
.classList
.children
.parentElement
.append()
.remove()
.querySelector()
.closest()
.matches()
.scrollIntoView()
.setAttribute()
.textContent
.childNodes
.parentNode
.cloneNode()
Node
paragraph
paragraph
<!— Comment —>
Element
Text
Comment
Document
HTMLElement
.disabled
HTMLButtonElement
...
HTMLDivElement



Héritage des propriétés et des méthodes!

Par exemple: HTMLElement à accès aux méthodes `cloneNode()` ou `closest()`

HE VD IG



Héritage des propriétés et des méthodes!

Par exemple: HTMLElement à accès aux méthodes `cloneNode()` ou `closest()`

HE VD IG