

Web Application Development for Industrial Engineers

การพัฒนาแอปพลิเคชันสำหรับวิศวกรอุตสาหกรรม

What is the DOM?

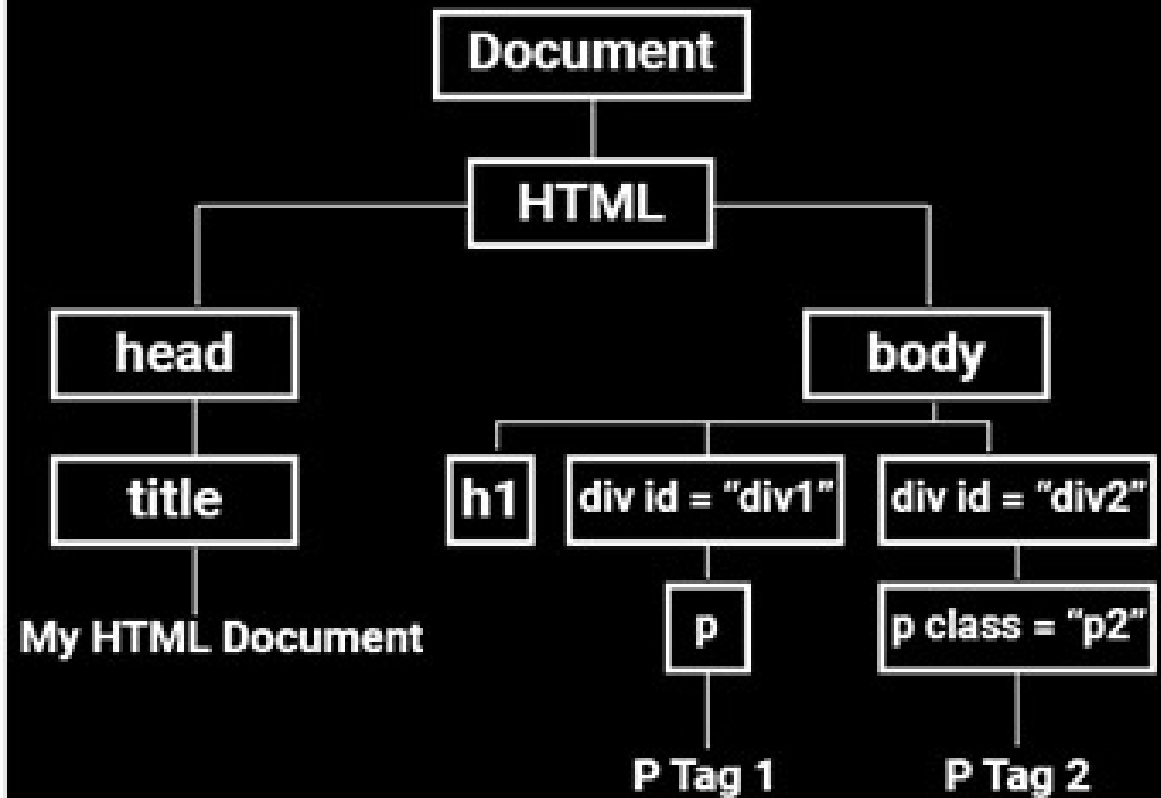
- The Document Object Model (DOM) is a programming interface for web documents.
- It represents the page so that programs can change the document structure, style, and content.
- The DOM represents the document as nodes and objects; that way, programming languages can interact with the page.

What is Document Object Model ?

HTML Document

```
index.html x
1  <html>
2    <head>
3      <title>My HTML Document</title>
4    </head>
5
6    <body>
7      <h1>Heading</h1>
8      <div id="div1">
9        <p>P Tag 1</p>
10     </div>
11     <div id="div2">
12       <p class="p2">P Tag 2</p>
13     </div>
14   </body>
15 </html>
```

Document Object Model (DOM)



Data type

- `Document` : represents any web page loaded in the browser
- `Node` : represents an object located within a document.
 - `Element` : represents an element in HTML.
 - `TextNode` : specifies text in an element.
 - `Attr` : specifies attributes of an element.
- `NodeList` : A `nodeList` is an array of elements.

DOM Navigation

```
<!DOCTYPE html>
<html lang="en">
  <head>
    ...
  </head>
  <body>
    <h1>Headings</h1>
    <div id="div1">
      div1 text
      <p>p text</p>
    </div>
  </body>
</html>
```

DOM Navigation

```
const html = document.childNodes[1];  
console.log(html);  
  
const head = html.childNodes[0];  
const body = html.childNodes[2];  
  
console.log(head);  
console.log(body);  
  
const div1 = body.childNodes[3];  
console.log(div1);
```

DOM Navigation API

```
parentNode;  
childNodes;  
firstChild;  
lastChild;  
nextSibling;  
previousSibling;
```

Core interface

```
document.querySelector(selector)
document.querySelectorAll(name)
document.createElement(name)
parentNode.appendChild(node)
element.innerHTML
element.textContent
element.style
element.setAttribute()
element.getAttribute()
element.addEventListener()
```