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.

1. `getElementById()`
2. `getElementsByClassName()`
3. `getElementsByTagName()`

1. getElementById()

The getElementById() method returns an element with a specified value. The getElementById() method returns null if the element does not exist. The getElementById() method is one of the most common methods in the HTML DOM. It is used almost every time you want to read or edit an HTML element.

Example

```
document.getElementById("demo");
```

Example of getElementById

```
<!DOCTYPE html>

<html>

<body>

<h1 id="demo">The Document Object</h1>

<h2>The getElementById() Method</h2>

<script>

const myElement = document.getElementById("demo");

myElement.style.color = "red";

</script>

</body>

</html>
```

AJAX

2. getElementsByClassName()

The getElementsByClassName() method is **used for selecting or getting the elements through their class name value**. This DOM method returns an array-like object that consists of all the elements having the specified classname.

```
<h1>The Document Object</h1>
<h2>The getElementsByClassName() Method</h2>

<p>Change the background color of the first element with the classes "example" and "color":</p>

Example

<div class="example">
  <p>This is a paragraph.</p>
</div>
<br>
<div class="example color">
  <p>This is a paragraph.</p>
</div>
<br>
<div class="example color">
  <p>This is a paragraph.</p>
</div>

<script>
const collection = document.getElementsByClassName("example color");
collection[0].style.backgroundColor = "red";
</script>
```

The getElementsByTagName()
The getElementsByTagName() is **a method of the document object or a specific DOM element**. The getElementsByTagName() method accepts a tag name and returns a live HTMLCollection of elements with the matching tag name in the order which they appear in the document.

```
<!DOCTYPE html>
<html>
<body>

<h1>The Document Object</h1>
<h2>The getElementsByTagName() Method</h2>

<p>An unordered list:</p>
<ul>
  <li>Coffee</li>0
  <li>Tea</li>1
  <li>Milk</li>2
</ul>

<p>The innerHTML of the second li element is:</p>
<p id="demo"></p>

<script>
const collection = document.getElementsByTagName("li");
document.getElementById("demo").innerHTML = collection[1].innerHTML;
</script>

</body>
</html>
```