

Day 17



Javascript
THE LANGUAGE OF THE WEB

Table Navigation:

What is Table Navigation?

Table navigation means accessing and moving through parts of an HTML table using JavaScript. The browser treats table elements (<table>, <thead>, <tbody>, <tr>, <td>, etc.) as nested DOM elements, so you can easily navigate between them.

Why Use Table Navigation?

We use it to:

- Read or modify table data
- Highlight or style specific rows/cells
- Access elements like thead, tbody, tr, td directly

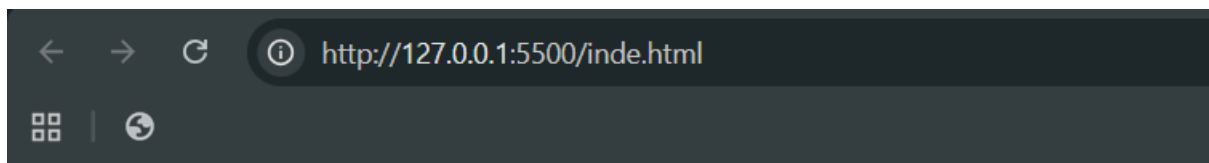
Table Navigation Properties

Property	Description	Example
table.rows	All rows in the table	table.rows
table.tHead	Refers to the <thead> section	table.tHead
table.tBodies	All <tbody> sections	table.tBodies
table.tFoot	Refers to the <tfoot> section (if any)	table.tFoot
table.caption	Refers to <caption> element (if any)	table.caption
tbody.rows	All rows in a specific <tbody>	table.tBodies[0].rows
row.cells	All cells (<td> or <th>) in a row	table.rows[0].cells

Now, to explain this let's understand this:

```
Welcome | inde.html x
inde.html > ...
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Table Navigation Example</title>
5 </head>
6 <body>
7   <table id="myTable" border="1">
8     <thead>
9       <tr>
10        <th>Name</th>
11        <th>Age</th>
12      </tr>
13    </thead>
14    <tbody>
15      <tr>
16        <td>Aditya</td>
17        <td>21</td>
18      </tr>
19      <tr>
20        <td>Riya</td>
21        <td>20</td>
22      </tr>
23    </tbody>
24  </table>
25 </body>
26 </html>
```

Output:



Name	Age
Aditya	21
Riya	20

Now, on console:

```
Elements Console Sources Network Performance Memory Application Privacy and
top | Filter
> let table = document.getElementById("myTable");

console.log("Table Head:", table.tHead);           // <thead>
console.log("Table Body:", table.tBodies[0]);       // <tbody>
console.log("All rows:", table.rows);               // HTMLCollection of rows
console.log("First row cells:", table.rows[0].cells); // <th>Name</th>, <th>Age</th>
console.log("Second row first cell:", table.rows[1].cells[0].innerText); // Aditya

Table Head: ▶ <thead>⋮</thead>
Table Body: ▶ <tbody>⋮</tbody>
All rows: ▶ HTMLCollection(3) [tr, tr, tr]
First row cells: ▶ HTMLCollection(2) [th, th]
Second row first cell: Aditya
```

Searching the DOM:

What is “Searching the DOM”?

In JavaScript, searching the DOM means finding elements inside an HTML page using selectors or element properties. The DOM (Document Object Model) represents your web page as a tree of elements, and JavaScript can search through it to access or modify those elements.

Why We Search the DOM

We use DOM searching to:

- Get access to specific HTML elements
- Change text, style, or attributes
- Add interactivity (buttons, inputs, etc.)

Common DOM Searching Methods

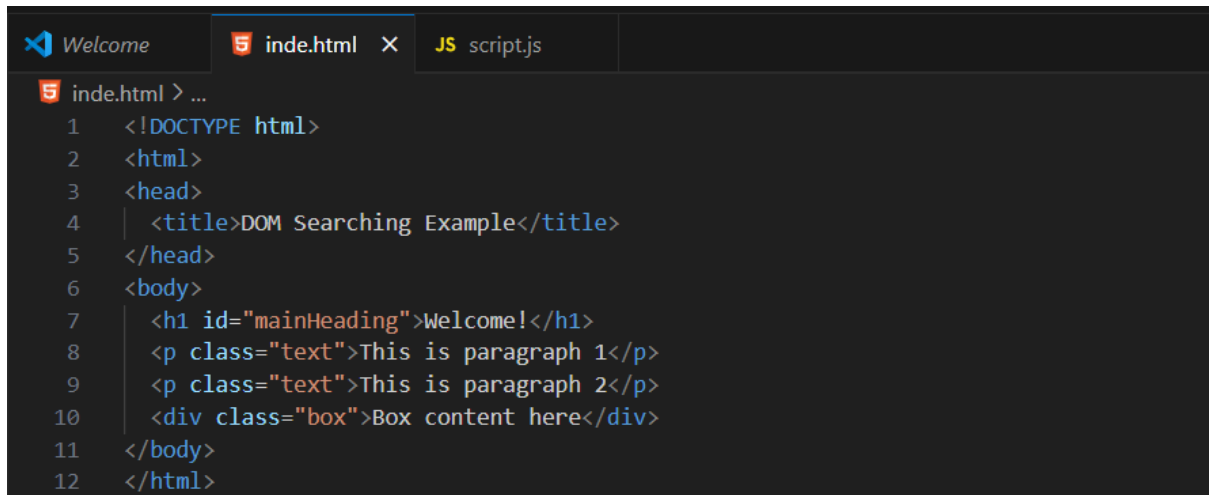
Method	Description	Example
<code>getElementById()</code>	Finds element by its id	<code>document.getElementById("header")</code>
<code>getElementsByClassName()</code>	Finds elements by class name	<code>document.getElementsByClassName("item")</code>
<code>getElementsByTagName()</code>	Finds elements by tag name	<code>document.getElementsByTagName("p")</code>
<code>querySelector()</code>	Finds the first element that matches a CSS selector	<code>document.querySelector(".item")</code>
<code>querySelectorAll()</code>	Finds all elements that match a CSS selector	<code>document.querySelectorAll("p.item")</code>

Difference Between Methods

Method	Returns	Live or Static
<code>getElementById()</code>	Single element	—
<code>getElementsByClassName()</code>	HTMLCollection	Live
<code>getElementsByTagName()</code>	HTMLCollection	Live
<code>querySelector()</code>	First match	Static
<code>querySelectorAll()</code>	NodeList	Static

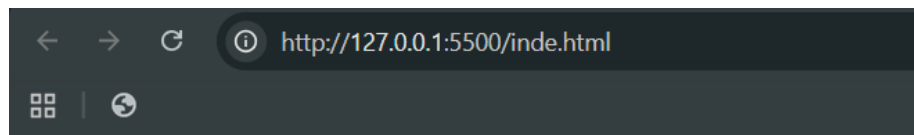
To understand this, take a very basic example:

Index.html:



```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>DOM Searching Example</title>
5 </head>
6 <body>
7   <h1 id="mainHeading">Welcome!</h1>
8   <p class="text">This is paragraph 1</p>
9   <p class="text">This is paragraph 2</p>
10  <div class="box">Box content here</div>
11 </body>
12 </html>
```

Output:



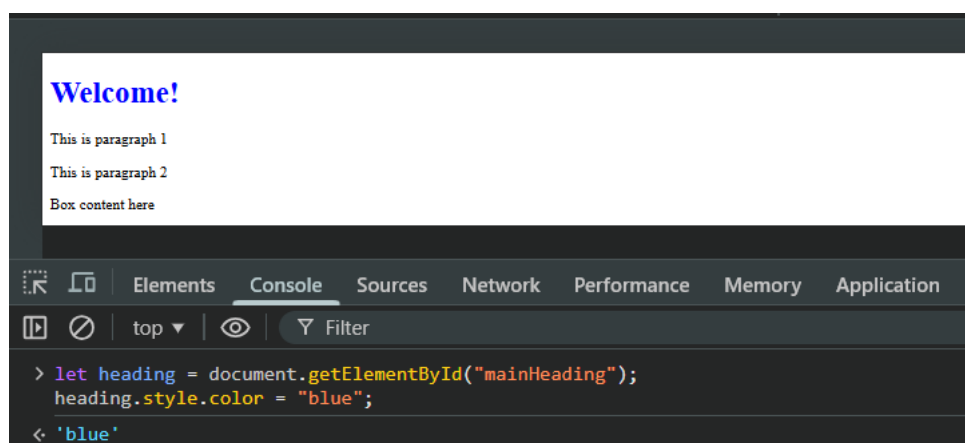
Welcome!

This is paragraph 1

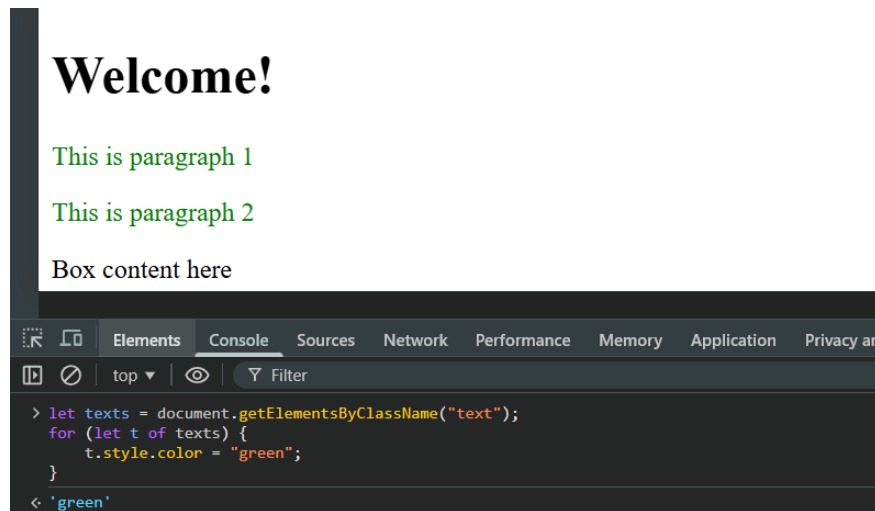
This is paragraph 2

Box content here

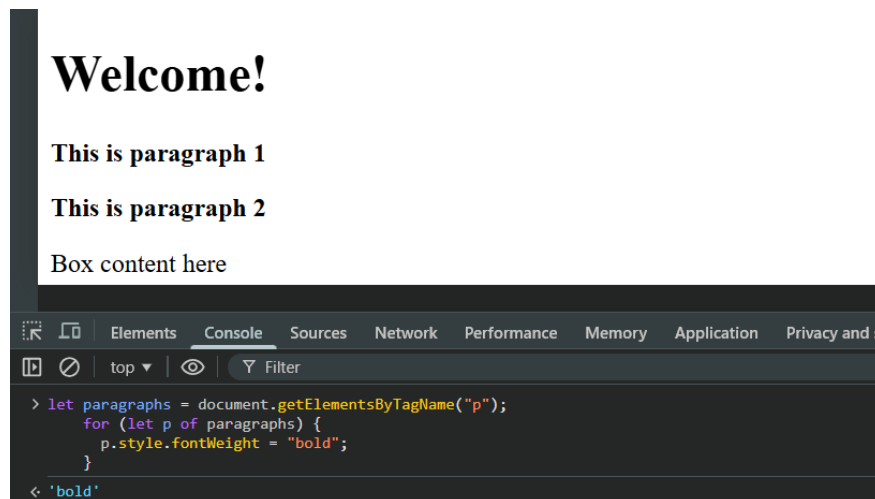
Now, applying the DOM searching and changing the properties: `.getElementById`



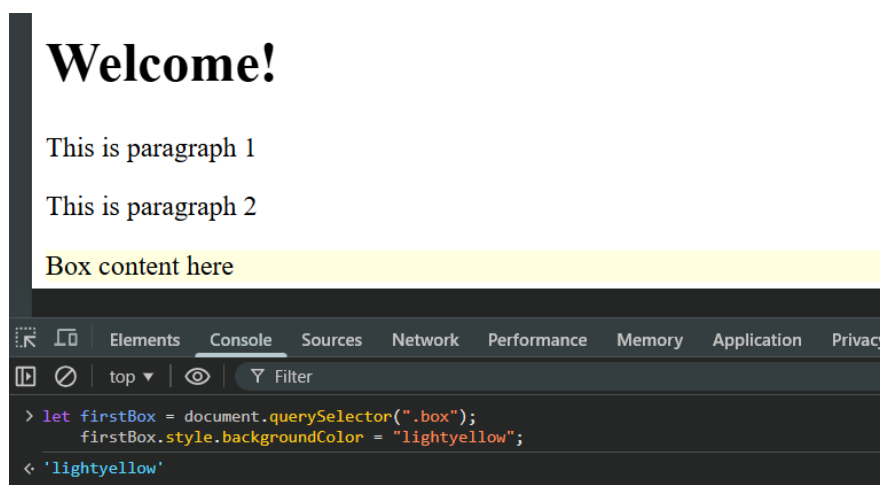
Now, using the `.getElementsByClassName`:



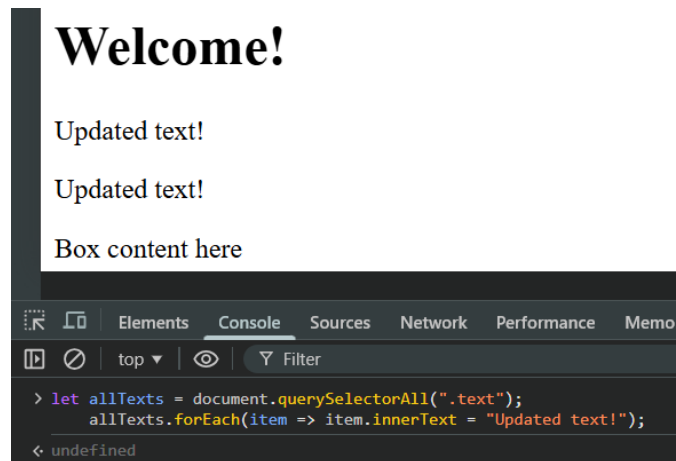
Also, using the `.getElementsByTagName`:



Also, using the `.querySelector`



Also, using `.querySelectorAll`:



--The End--