



Day 15

“Web Development + Security”

Selectors:

What are Selectors in CSS?

A selector tells the browser *which HTML elements* you want to style. It's the first part of a CSS rule, before the { ... }.

Syntax:

```
selector {
  property: value;
}
```

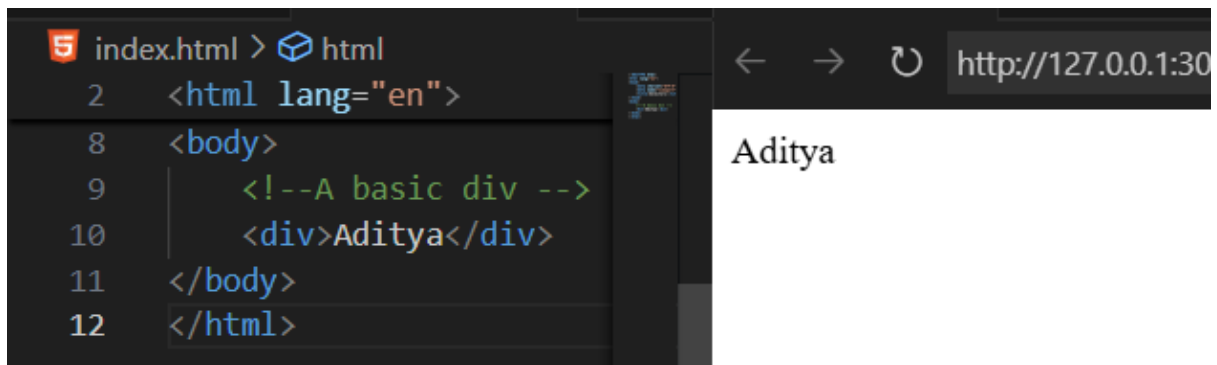
Example:

```
p {
  color: blue;
  font-size: 18px;
}
```

Types of CSS Selectors:

Selector Type	Example	Selects
Element Selector	p {}	All <p> tags
Class Selector	.intro {}	Elements with class="intro"
ID Selector	#main {}	Element with id="main"
Universal Selector	* {}	All elements
Group Selector	h1, h2, p {}	Multiple types at once
Descendant Selector	div p {}	<p> inside <div>
Attribute Selector	input[type="text"] {}	<input> with type="text"
Pseudo-class	a:hover {}	<a> when hovered
Pseudo-element	p::first-letter {}	The first letter of each <p>

Example: a basic div tag use

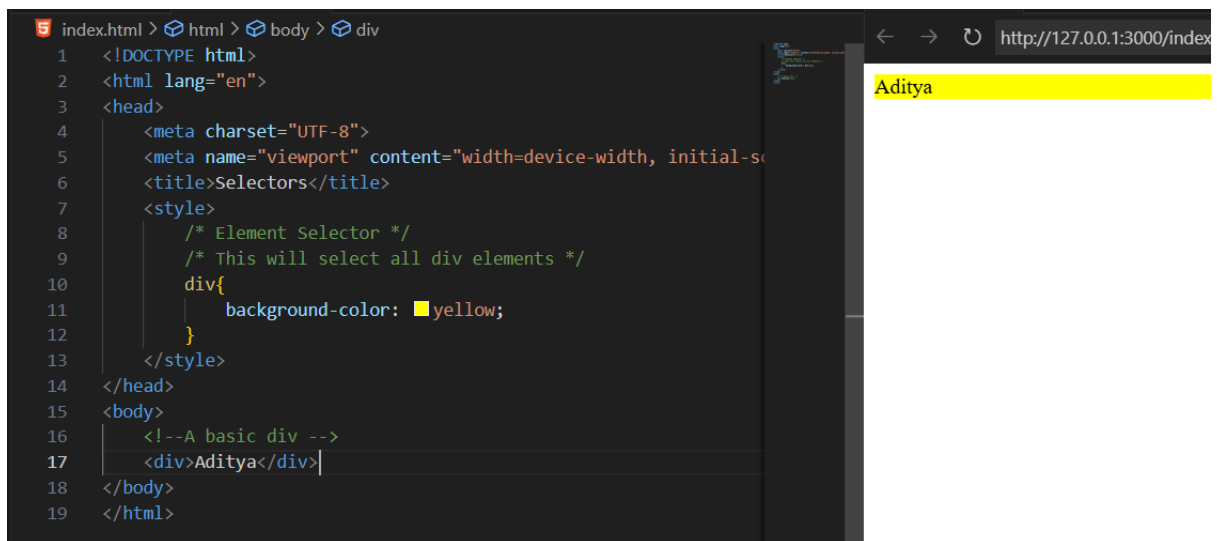


The screenshot shows a code editor on the left and a browser window on the right. The code editor displays the following HTML code:

```
index.html > html
2 <html lang="en">
8 <body>
9   <!--A basic div -->
10  <div>Aditya</div>
11 </body>
12 </html>
```

The browser window on the right shows the URL `http://127.0.0.1:3000/` and the text "Aditya" displayed on the page.

Example: element selector, we just use the element name in the style tag to style them.

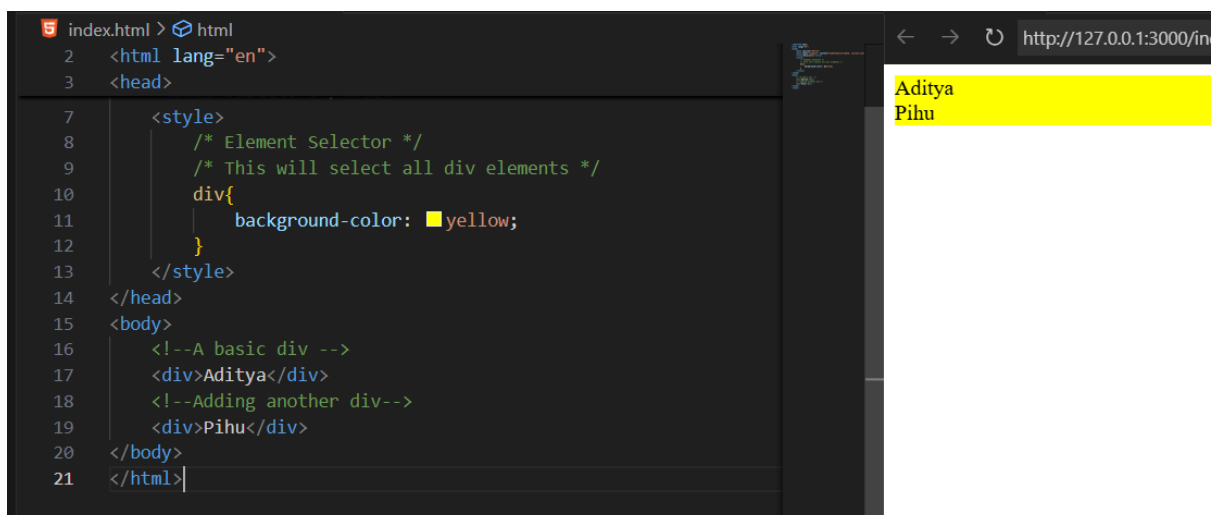


The screenshot shows a code editor on the left and a browser window on the right. The code editor displays the following HTML code:

```
index.html > html > body > div
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Selectors</title>
7   <style>
8     /* Element Selector */
9     /* This will select all div elements */
10    div{
11      background-color: yellow;
12    }
13  </style>
14 </head>
15 <body>
16   <!--A basic div -->
17   <div>Aditya</div>
18 </body>
19 </html>
```

The browser window on the right shows the URL `http://127.0.0.1:3000/index.html` and the text "Aditya" displayed on the page, which is highlighted in yellow.

Example: adding another div tag, we can see that same properties get applied to both

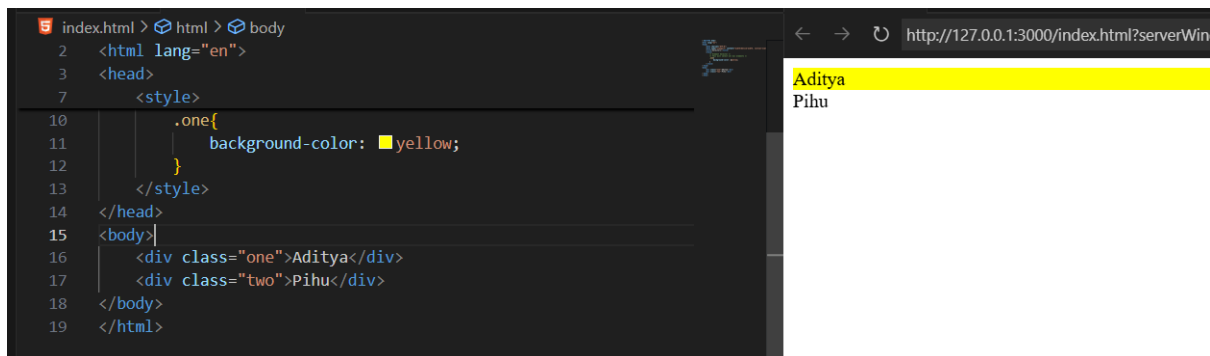


The screenshot shows a code editor on the left and a browser window on the right. The code editor displays the following HTML code:

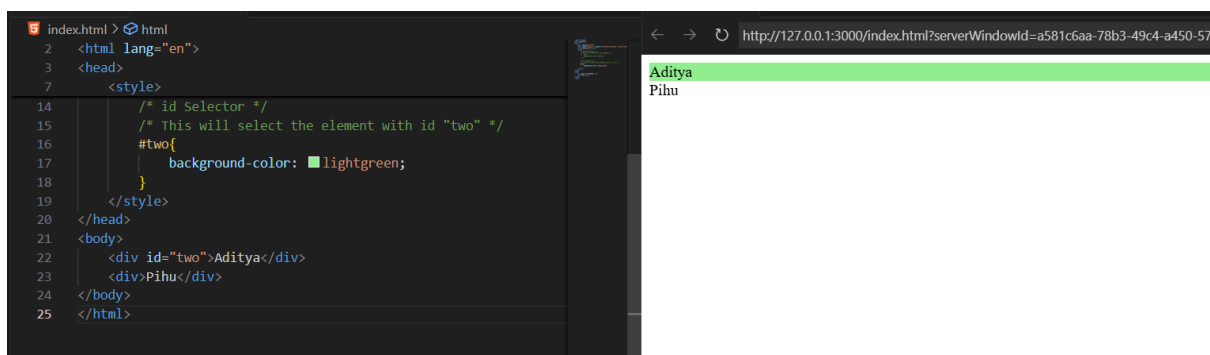
```
index.html > html
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Selectors</title>
7   <style>
8     /* Element Selector */
9     /* This will select all div elements */
10    div{
11      background-color: yellow;
12    }
13  </style>
14 </head>
15 <body>
16   <!--A basic div -->
17   <div>Aditya</div>
18   <!--Adding another div-->
19   <div>Pihu</div>
20 </body>
21 </html>
```

The browser window on the right shows the URL `http://127.0.0.1:3000/index.html` and the text "Aditya" and "Pihu" displayed on the page, both of which are highlighted in yellow.

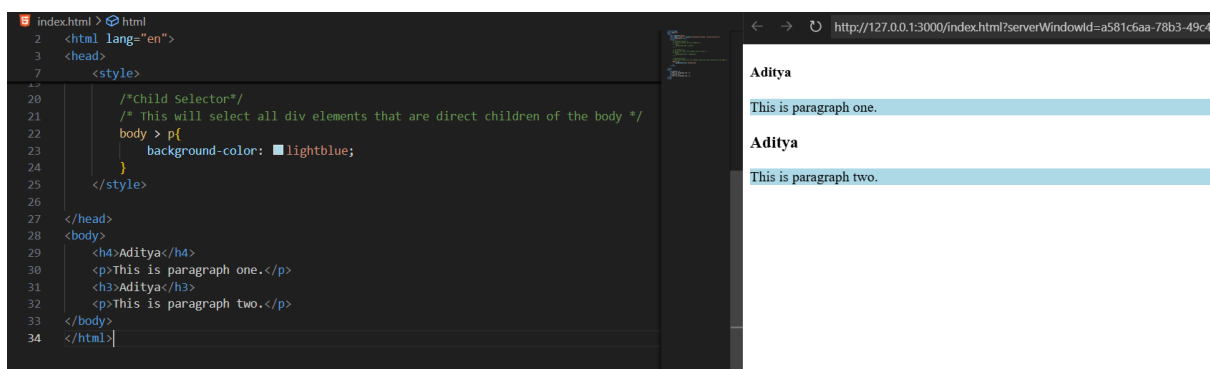
Example: targeting element using there class name, just write the name of class starting with “.”. It is an example of class selector.



Example: id selector, we just name the id inside the style tag using the # and add the properties we want

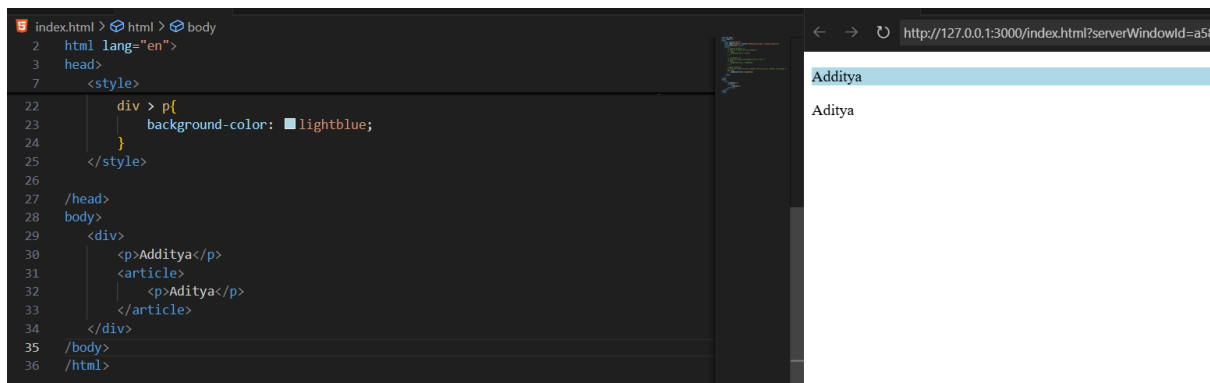


Example: child selector, This will select all div elements that are direct children of the body



For above example, in case we have <p> inside some other element, then it don't directly get applied.

Example: clearly `<p>` is inside the `<div>` and also inside the `<article>`, so inside the article one it don't get applied.

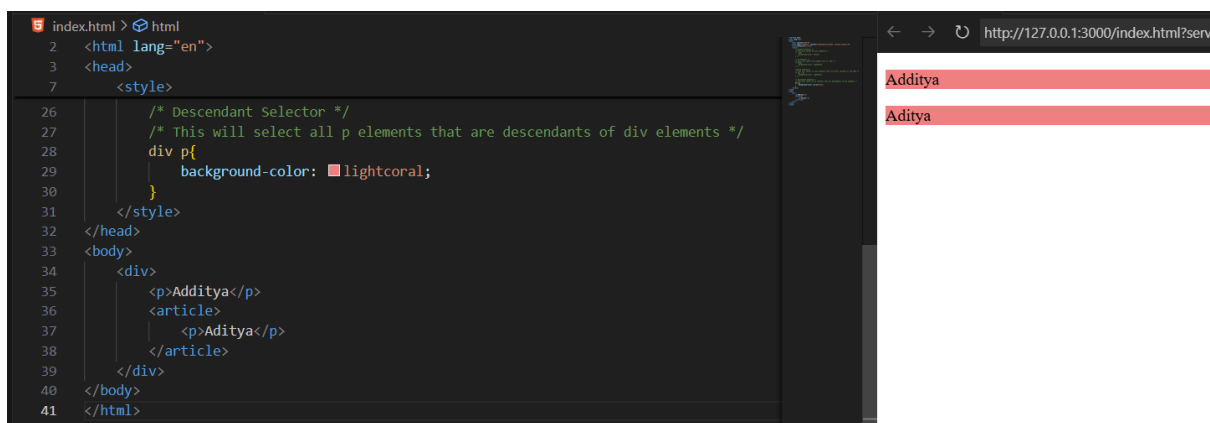


The screenshot shows a code editor with the following HTML structure:

```
2 <html lang="en">
3 <head>
7 <style>
22   div > p{
23     background-color: lightblue;
24   }
25 </style>
26
27 /head>
28 body>
29 <div>
30   <p>Additya</p>
31   <article>
32     <p>Aditya</p>
33   </article>
34 </div>
35 /body>
36 /html>
```

The browser view on the right shows the rendered output: "Additya" (highlighted in light blue) and "Aditya".

Example: Descendant selector, This will select all p elements that are descendants of div elements

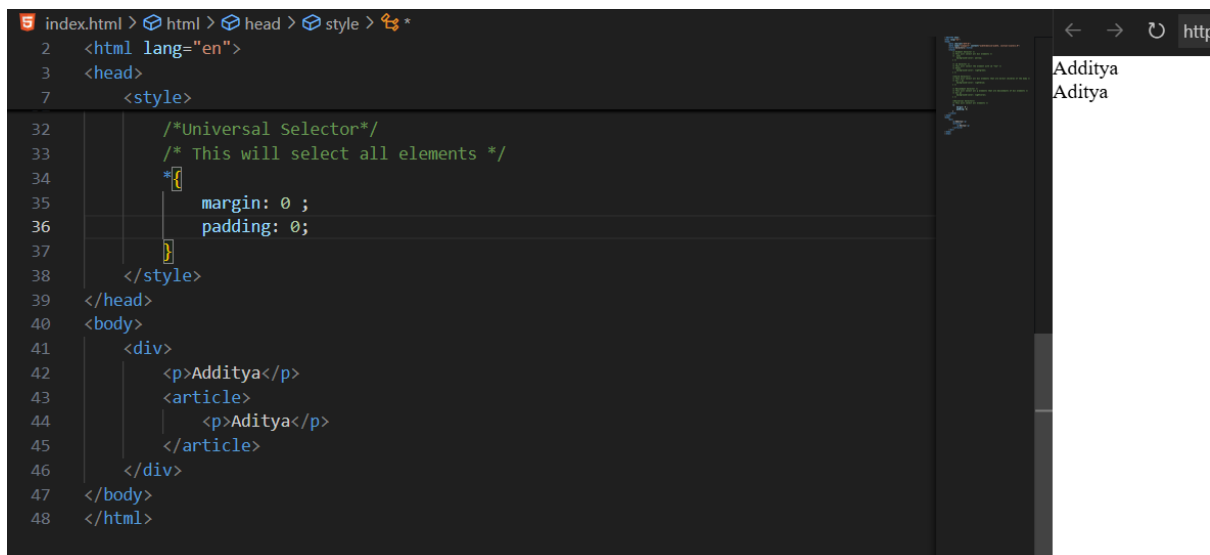


The screenshot shows a code editor with the following HTML structure:

```
2 <html lang="en">
3 <head>
7 <style>
26   /* Descendant Selector */
27   /* This will select all p elements that are descendants of div elements */
28   div p{
29     background-color: lightcoral;
30   }
31 </style>
32 </head>
33 <body>
34   <div>
35     <p>Additya</p>
36     <article>
37       <p>Aditya</p>
38     </article>
39   </div>
40 </body>
41 </html>
```

The browser view on the right shows the rendered output: "Additya" (highlighted in light coral) and "Aditya" (highlighted in light coral).

Example: universal selector, we just uses `*` in the `<style>` tag.



The screenshot shows a code editor with the following HTML structure:

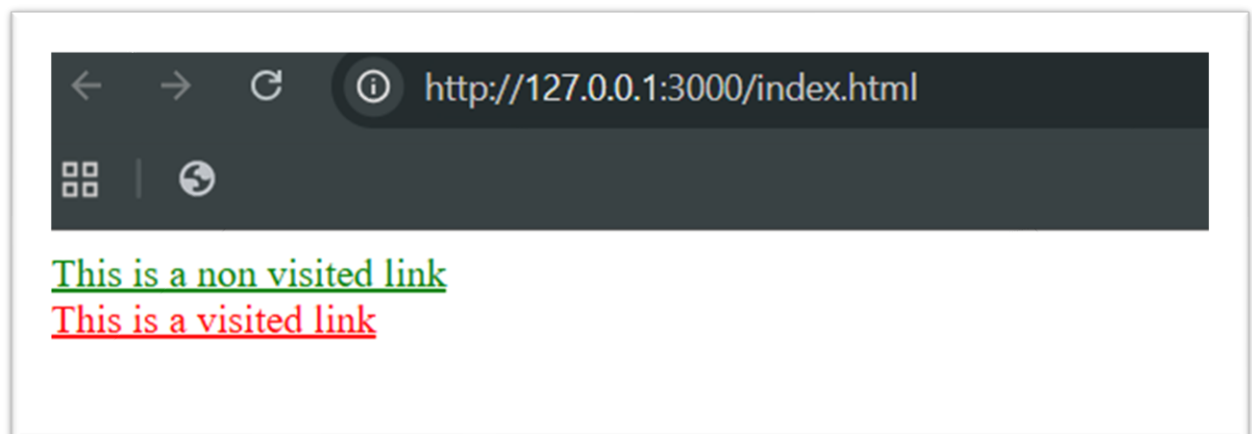
```
2 <html lang="en">
3 <head>
7 <style>
32   /*Universal Selector*/
33   /* This will select all elements */
34   *{
35     margin: 0 ;
36     padding: 0;
37   }
38 </style>
39 </head>
40 <body>
41   <div>
42     <p>Additya</p>
43     <article>
44       <p>Aditya</p>
45     </article>
46   </div>
47 </body>
48 </html>
```

The browser view on the right shows the rendered output: "Additya" and "Aditya".

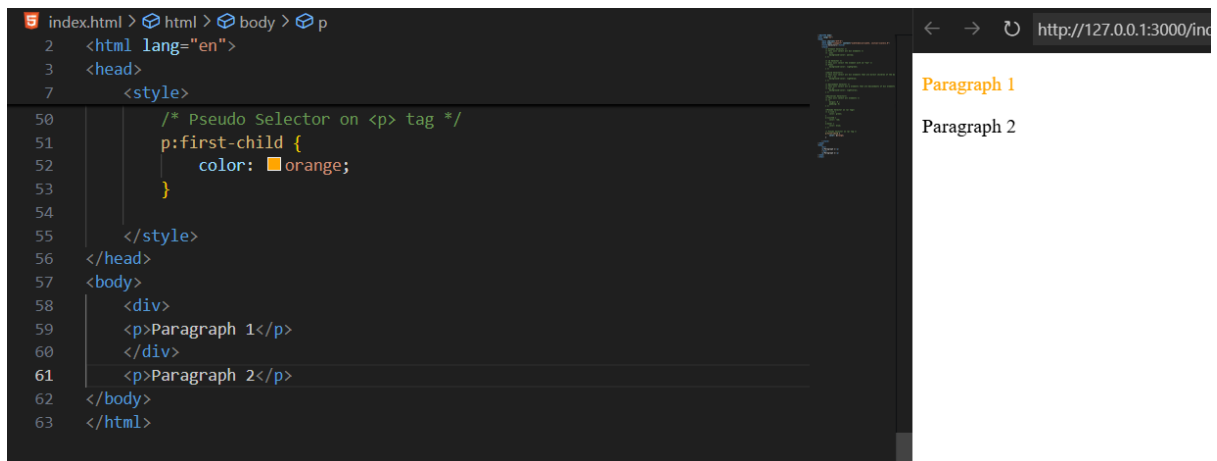
Example: pseudo selectors

```
index.html > html
2  <html lang="en">
3  <head>
7    <style>
39      /*Pseudo Selector on <a> tag*/
40      a:link {
41        color: green;
42      }
43      a:visited {
44        color: red;
45      }
46      a:hover {
47        color: blue;
48      }
49    </style>
50  </head>
51  <body>
52    <a href="#">This is a non visited link</a> <br>
53    <a href="https://www.google.com">This is a visited link</a>
54  </body>
55  </html>
```

Output:



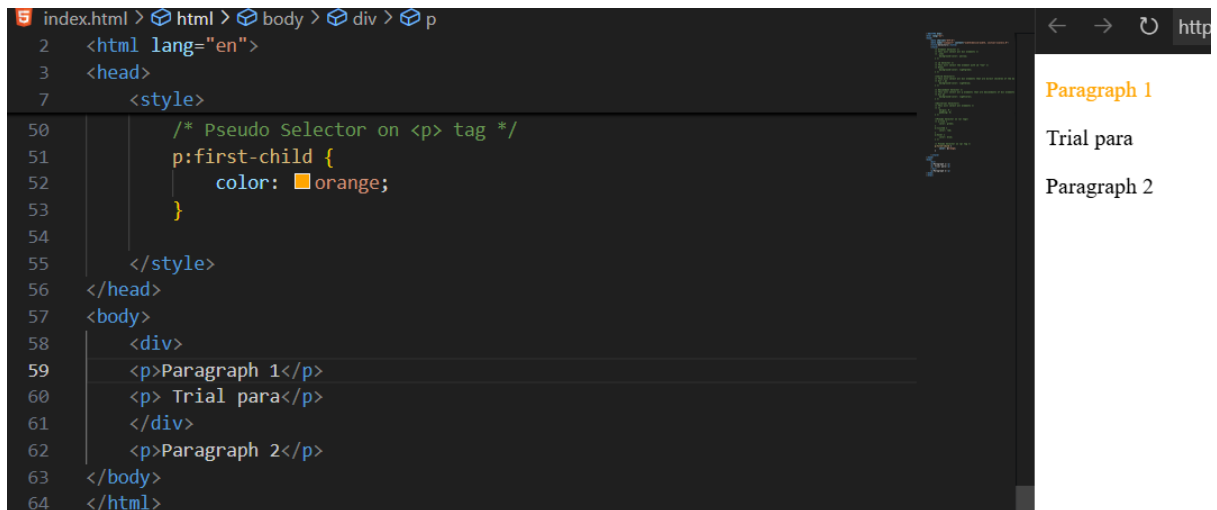
Example: pseudo selector usage in other tags, like <p> tag



The screenshot shows a web browser window with the URL `http://127.0.0.1:3000/index.html`. The browser displays two paragraphs: "Paragraph 1" in orange text and "Paragraph 2" in black text. The background code editor shows the following HTML and CSS:

```
index.html > html > body > p
2 <html lang="en">
3 <head>
7 <style>
50 /* Pseudo Selector on <p> tag */
51 p:first-child {
52   color: orange;
53 }
54
55 </style>
56 </head>
57 <body>
58 <div>
59 <p>Paragraph 1</p>
60 </div>
61 <p>Paragraph 2</p>
62 </body>
63 </html>
```

Example: trying one more <p> inside the <div>



The screenshot shows a web browser window with the URL `http://127.0.0.1:3000/index.html`. The browser displays three paragraphs: "Paragraph 1" in orange text, "Trial para" in black text, and "Paragraph 2" in black text. The background code editor shows the following HTML and CSS:

```
index.html > html > body > div > p
2 <html lang="en">
3 <head>
7 <style>
50 /* Pseudo Selector on <p> tag */
51 p:first-child {
52   color: orange;
53 }
54
55 </style>
56 </head>
57 <body>
58 <div>
59 <p>Paragraph 1</p>
60 <p> Trial para</p>
61 </div>
62 <p>Paragraph 2</p>
63 </body>
64 </html>
```

--The End--