1. Pseudo-Classes

Definition: A pseudo-class is used to define the special state of an element, like when it is hovered over, visited, or focused.

2. Pseudo-Elements

Definition: A pseudo-element is used to style specific parts of an element, like the first letter or line.

!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Pseudo-Classes and Pseudo-Elements</title>

<style>

/\* Pseudo-Classes \*/

a:hover {

color: red; /\* Changes color when hovered \*/

}

input:focus {

border: 2px solid green; /\* Highlights input field when focused \*/

}

li:nth-child(2) {

color: blue; /\* Styles the second item in the list \*/

}

p:first-child {

font-weight: bold; /\* Styles the first paragraph inside the container \*/

}

p:last-child {

font-style: italic; /\* Styles the last paragraph inside the container \*/

}

div:not(.excluded) {

background-color: lightyellow; /\* Styles all divs except the one with the class 'excluded' \*/

}

/\* Pseudo-Elements \*/

h1::before {

content: "→ "; /\* Adds an arrow before the heading \*/

color: darkblue;

}

h1::after {

content: " ←"; /\* Adds an arrow after the heading \*/

color: darkblue;

}

p::first-letter {

font-size: 2em; /\* Enlarges the first letter of the paragraph \*/

color: green;

}

p::first-line {

font-weight: bold; /\* Styles the first line of the paragraph \*/

}

::selection {

background: yellow; /\* Styles text when selected \*/

color: black;

}

</style>

</head>

<body>

<h1>Pseudo-Classes and Pseudo-Elements</h1>

<!-- Links -->

<a href="#">Hover over this link</a><br><br>

<!-- Input Field -->

<input type="text" placeholder="Focus on me"><br><br>

<!-- List -->

<ul>

<li>First item</li>

<li>Second item</li>

<li>Third item</li>

</ul>

<!-- Paragraphs -->

<div>

<p>This is the first paragraph (styled by :first-child).</p>

<p>This is the middle paragraph.</p>

<p>This is the last paragraph (styled by :last-child).</p>

</div>

<!-- Div with :not -->

<div>This div is styled (not excluded).</div>

<div class="excluded">This div is excluded from styling.</div>

<!-- Paragraph with Pseudo-Elements -->

<p>Only the first letter and first line of this paragraph are styled.</p>

</body>

</html>

---

What Happens in the Program:

1**. Pseudo-Classes:**

Hover over the link to see it turn red.

Focus on the input field to see a green border.

The second list item is styled in blue.

The first paragraph in the div is bolded.

The last paragraph in the div is italicized.

The div without the class excluded has a yellow background.

2**. Pseudo-Elements:**

The h1 has arrows (→ and ←) added before and after its content.

The first letter of the last paragraph is larger and green.

The first line of the last paragraph is bolded.

Text selection is highlighted in yellow.