week::eight
Pseudo-classes, Pseudo-elements, & Advanced CSS

Introducing Pseudo-Classes & Pseudo-Elements

What are they?
- o A method of classifying and addressing elements and behaviors that are not (and cannot be) part of the HTML Document Tree.
  - ▪ Document tree elements are actual tags in the HTML page.
- o These includes **user actions** (mouse movement), the relative **position of page items** (first, last, etc), **HTML attributes**, and **states** (specifically, link states).
- o **Pseudo-classes** are preceded by a single colon (:), while **pseudo-elements** are preceded by a double colon (: :).

Pseudo-Classes

Defined
- o A selector that specifies a special *state* of an element.

Anchor Pseudo-Classes
- o The following pseudo-classes are well supported in all browsers

Pseudo-Class	Description
`:link`	Allows visual control over a normal link.
`:visited`	Allows visual control over a link that has been visited.
`:hover`	A dynamic pseudo-class; Allows control over a link at the moment a Web user moves their mouse over the link. These can be applied to any element—not just anchor tags.
`:active`	A dynamic pseudo-class; Allows visual control over a link at the moment a Web user clicks on a link.

Well-Supported Pseudo-Classes

Pseudo-Class	Description
`:first-child`	Selects the first child element of its parent
`:first-of-type`	Same as :first-child, but targets a specific element.
`:last-child`	Selects the last child element of its parent
`:last-of-type`	Same as :last-child, but targets a specific element.
`:nth-child(n)`	Matches the element that is the *nth* child of its parent.
`:nth-of-type(n)`	Same as :nth-child, but targets a specific element.
`:focus`	A dynamic pseudo-class; Allows visual control when an element becomes the focus of the cursor. Generally used with form fields.
`:checked`	Useful when styling HTML form radio buttons and check boxes .

— Lecture Outline —

Pseudo-Elements

Defined

- o   A selector that allows you to style elements of a document by its *context*.

Well-Supported Pseudo-Elements

Pseudo-Element	Description
`::before`	Creates a pseudo-element that is the first child of the element matched. Often used to add cosmetic content.
`::after`	Matches a virtual last child of the selected element. Like ::before, is often used to add cosmetic content.
`::first-line`	Matches the first formatted line of a paragraph. Only a small subset of CSS properties can be used with this selector.
`::first-letter`	Matches the first formatted letter of a paragraph.

CSS Code Samples

```
a:link {                             /* Apply to normal links
    color: #039;                     /* Colors links blue
    border-bottom: 1px dotted #bbb; /* Custom link underline
    text-decoration: none;           /* Removes the underline from links
    }
a:visited {                          /* Styles applied to visited links
    color: #606;                     /* Colors visited links dark purple
    }
a:hover {                            /* Styles applied on mouse over
    color: #003;                     /* Colors the links dark blue
    border-width: 0;                 /* Removes custom underline
    background-color: #97ceff;       /* Sets the background to light blue
    }
a:active {                           /* Styles applied to active links
    color: #606;                     /* Same as :visited
    }
nav#breadcrumb a::after {
    content: "→";                    /* Adds a Unicode arrow to the a tag
    }
table tr:nth-child(2n-1) td {        /* Automatic zebra-stripping of tables
    background-color: #f3f7fa;       /* A very light gray color
    }                                /* Does not work in IE8 or earlier
P::first-line {                       /* Affects only first line of a paragraph
    font-weight: bold;               /* First line of text appears bold
    }
p::first-letter {                     /* First letter of a paragraph appears
    font-size: 3em;                  /* larger than the rest
    }
input:focus {
    background-color: #fff7df        /* Field background become light yellow
    }
```

Attribute Selector

About

○ Select an HTML element based on an *exact* attribute/value pair.

Format

```
element[attribute="value"]
```

Example

```
<h1 class="lion" rel="bear">Some Text Here</h1>

h1[rel="bear"] { color: red; }
```

For More Information

```
https://css-tricks.com/attribute-selectors/
```

CSS Variables

About

○ Like in computer programming, CSS now supports basic variables — text that represents a value that can be used repeatedly.

○ Officially called "CSS Custom Properties"

Example

```
:root {
  --primary-color: #F3eBA2;      // define variable
}

header h1 {
  color: var(--primary-color);
}
article {
  background-color: var(--primary-color);
}
```