MILSETONE 5

- Selectors and Combinators

- Pseudo Classes and Elements

- !important

- CSS Functions

- Comments

1. Selectors and Combinators:
- Simple selectors
- Combinator selectors
- Pseudo – class selectors
- Pseudo – element selectors
- Attribute selectors
  - Simple selector – select elements based on name, id, class
    - `<p> hello </p>`
      p{ color: red;} → p is a element selector
    - `<p id="para1"> hello </p>`
      #para1{ color: red;} → para1 is id selector
    - `<p class="para1"> hello </p>`
      .para1{ color: red;} → para1 is class selector
    - selector – selects all HTML elements on page
        *{ color: red;}
    - Grouping selector – h1, p, h2{ color: red;}
  - Combinator selector
    - descendant selector (space)
    - child selector (>)
    - adjacent sibling selector (+)
    - general sibling selector (~)
      - Descendant selector – matches all elements that are descendants of a specified element

```
<!DOCTYPE html>
<html>
<head>
<style>
div p {
  background-color: yellow;
}
</style>
</head>
<body>

<h2>Descendant Selector</h2>

<p>The descendant selector matches all elements that are descendants of a specified
element.</p>

<div>
  <p>Paragraph 1 in the div.</p>
  <p>Paragraph 2 in the div.</p>
  <section><p>Paragraph 3 in the div.</p></section>
</div>

<p>Paragraph 4. Not in a div.</p>
<p>Paragraph 5. Not in a div.</p>

</body>
</html>
```

Descendant Selector

The descendant selector matches all elements that are descendants of a specified element.

Paragraph 1 in the div.

Paragraph 2 in the div.

Paragraph 3 in the div.

Paragraph 4. Not in a div.

Paragraph 5. Not in a div.

As p1, p2, p3 is only under div. they have been changed to background-color yellow

- Child selector (>)
  div > p { background-color: yellow; }
  <div>
    <p>Paragraph 1 in the div.</p>
    <p>Paragraph 2 in the div.</p>
    <section>
      <!-- not Child but Descendant -->
      <p>Paragraph 3 in the div (inside a section
  element).</p>
    </section>
    <p>Paragraph 4 in the div.</p>
  </div>
- General sibling selector (~)- it selects next siblings of element
  div ~ p {
    background-color: yellow;
  } <div>
    <p>Paragraph 2.</p>
  </div>
  <p>Paragraph 3.</p>
  <p>Some code.</p>
  <p>Paragraph 4.</p>
- Adjacent sibling selector (+) – selects an element that is immediately after another specific element
  div+p{ background-color: yellow};
  <div>

```
<p>para 1 </p>
</div>
<p>para2</p>
```

2. **Pseudo classes**

   o Pseudo-classes are used to define a special state of an element
     SYNTAX: selector: pseudo-class {property: value;}
     EX: For anchor tag pseudo classes
     a:link→a:visited→a:hover→a:active. Because active has least
     priority
   o :first-child – matches an element that is first child of any element
     p:first-child{color: blue};
     ```
     <div>
     <p>hello</p>
     </div>
     ```

3. **Pseudo elements**
   - Pseudo elements are used to style a specific part of an element.
   - Syntax : `selector::pseudo-element {`
       `property: value;`
     `}`
   - ::after, ::before, ::marked, ::selection:: first-line::first-letter

4. **!important**
   - The !important rule in CSS is used to add more importance to a property/value than normal.
   - It will override all previous styling rule for that specific property on that element.

5. **CSS Functions:**
   1. " (" attr(href) ")" – adds URL which is taken from the HTML element.
   2. conic-gradient()
   3. counter()
   4. linear-gradient()
   5. max()
   6. min()
   7. rgba()

Pseudo classes –

- defined with single colon (:)
- Used to style target state like hover, link, visited, first-child etc.,
    - o :active – when clicking whether the element is active/ not. Used in a, button
    - o :fullscreen – matches an element that is in fullscreen mode requestFullScreen() API is used in JS.
    - o :any-link – combination of :link(unvisited) & :visited
    - o :autofill – if input is filled automatically by PC/ lap. Then its border/ smth can be changed
    - o :checked – matches when an element such as checkboxes and radio button are toggled on
    - o :modal – used to open and style dialog box created with <dialog> tag → uses JS API showmodal()
    - o Input tags have
        - ▪ :enabled
        - ▪ :disabled
        - ▪ :read-only
        - ▪ :read-write
        - ▪ :placeholder-shown
        - ▪ :checked, :default → used to style/ highlight when a field is checked/ not.
        - ▪ **EX:** <input id="secret" name="secret" type="text" value="test" pattern="[a-z]+" /> **CSS** – input:invalid{ color:red;}
        - ▪ :in-range, :out-range → to check and validate the contents
        - ▪ :focus-within → to focus the complete element. No only input field. But also label by CSS label:focus-within{font-weight:bold};

Pseudo elements –

- defined with two colon (::)
- Used to target specific part of an element. Like ::first-line, ::first-letter
    - o **EX:** ::marker { color: red;}

        Coffee
        Tea
        Milk

OUTPUT:

- Coffee
- Tea
- Milk

1. First
2. Second
3. Third

- **EX:** ::selection {
    color: red;
    background: yellow;
  }

```
<!DOCTYPE html>
<html>
<head>
<style>
::selection {
  color: red;
  background: yellow;
}
</style>
</head>
<body>

<h1>Select some text on this page:</h1>

<p>This is a paragraph.</p>
<div>This is some text in a div element.</div>

</body>
</html>
```

Select some text on this page:

This is a paragraph.

This is some text in a div element.