Topic 8: Cascading Style Sheets

Selectors

Lecture Contents

- Basic

- Combined

- Attribute

- Pseudo-Classes

- Pseudo-Elements

Purpose of CSS

- HTML: Content
- **CSS: Style** (formatting)
- JavaScript: functionality

Syntax

- Basic Syntax:

    `selector { property: value; }`

    - selector: which element to apply the style to (e.g.: `h1`)
    - property: which aspect of style (e.g.: `background-color`)
    - value: what to set the property to (e.g.: `blue`)
    - declaration: a property: value pair.

Syntax

- Multiple selectors and properties:

```
h1, h2, h3 {
    color: red;
    background-color: yellow;
    text-align: center
}
```

  – Note the alignment and indentation
    - white space is ignored

Selectors

- Basic selectors
    - HTML elements are just their tag text: `body`, `h1`, `div`, etc.
    - IDs are preceded by a hash symbol: `#username`, `#login`, etc.
    - Classes are preceded by a period: `.sidebar`, `.highlight`, etc.

Selectors

- Combined selectors
    - Descendant:
        - `nav ul` – selects all `ul` elements contained within a `nav` element.
    - Child:
        - `form > p` – selects all **p** elements with a `form` element as a parent.
    - Adjacent Sibling:
        - `h1 + p` – selects the <u>first</u> **p** element immediately after each **h1** element.
    - General Sibling Selector:
        - `h3 ~ p` – selects all **p** elements preceded by a **h3** element (with the same parent).
    -

Selectors

- Attribute Selectors

```
<a href="https://example.com" target="#myFrame">Visit Example</a>
<a href="https://google.com">Google</a>
<a href="https://bing.com" target="_blank">Bing</a>
```

```
/* Style all <a> elements with a target attribute */
a[target] { color: blue; }
/* Style <a> elements with target="_blank" */
a[target="_blank"] { font-weight: bold; }
```

Pseudo-Classes

- Select based on states / characteristics
    - `:hover` – when mouse cursor is over it
    - `:active` – e.g. clicked
    - `:focus` – e.g. via keyboard navigation
    - `:visited` – visited links
    - `:first-child` – first child of element's parent
    - `:last-child` – last child of element's parent
    - `:nth-child($n$)` – based on position (n can be "`odd`")
    - `:not(selector)` – often used with a class, e.g: `:not(.hidden)`
    - `:empty` – elements with no children or text content
    - `:checked` – input elements (e.g. checkboxes) that are checked

Pseudo-Elements

- `::first-letter` – style the first letter of the element
- `::first-line`
- `::before {content:"\2605"; /* unicode star char */}`
- `::after`
- `::selection` – any selected text
- `::marker` – bullets or numbers
- `::placeholder` – for input placeholders

Summary

- HTML **elements** are just their tag text: `body`, `h1`, `div`, etc.

- **IDs** are preceded by a hash symbol: `#username`, `#login`, etc.

- **Classes** are preceded by a period: `.sidebar`, `.highlight`, etc.

- **Attributes** enclosed in square brackets: `[target="_blank"]`

- **Pseudo-classes** are preceded by a colon: `button:hover`

- **Pseudo-elements** are preceded by two colons: `h1::first-letter`

- **Descendants** separated by a space: `nav a`

- **Children**: `form > p`

- **Adjacent siblings** (first p after h1): `h1 + p`

- **General Siblings** (all p after h1): `h1 ~ p`

Topic 8: Cascading Style Sheets

Selectors