

Introduction to HTML5& CSS

Software Testing & Quality Assurance

HTML Attributes

HyperText Markup Language



The diagram consists of two overlapping circular shapes. The left shape is light gray and contains the text 'Global Attribute'. The right shape is yellow and contains the text 'Local Attribute'. The two shapes overlap in the center, with the yellow shape partially covering the gray one.

Global
Attribute

Local
Attribute

HTML Attributes

- Purpose of an attribute: provide additional information about a particular HTML element
- Always included within element's start tag
- Usually comes in name/value pair as follows:
name="value"
 - *name* – usually specifies the property of the element for which additional information is being provided
 - *value* –this is selected from set of possible values for given property

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`<p name="value"> This is a paragraph with a defined attribute </p>`

Core Attributes: title

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Test Title

"Welcome!"

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<h1 style="color:red; text-transform:capitalize">this is a heading</h1>
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This Is A Heading

Other properties of “style” attribute

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Hello <span style="color:white; background-color:green; font-family:verdana; font-size:200%">world!</span>
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Hello <span style="color:white; background-color:green; font-family:verdana; font-size:200%">world!</span>
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```
<p style="color:blue">1 is an odd number</p>
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<p style="color:white; background-color:blue">2 is an even number</p>
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Core Attributes: `id` and `class`

- Used to uniquely identify elements within an HTML document
- **`id`**
 - Provide ability to refer to specific element; `id` must be unique
 - Examples: header, footer
- **`class`**
 - Provide ability to refer to subgroups of elements within html document; does not have to be unique
 - Examples: comment, warning

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Summary

- You can use a tag's **attributes** to give it properties
- The **style** attribute allows you to change the appearance of the text within that element
- The **class** attribute allows you to group elements so that they can easily have the same style applied

Review

- You can use an HTML tag's **attributes** to give it properties
- The **style** attribute allows you to change the appearance of the text within that element
- The **class** attribute allows you to group elements so that they can easily have the same style applied

Plain HTML

Here are some memorable quotes from movies!

You can find more at the [Internet Movie Database \(IMDb\)](#).

You killed my father. Prepare to die.

Inigo Montoya in *The Princess Bride*

I've never been to this part of the castle. Well, not awake. I sleepwalk, you see. That's why I wear shoes to bed.

Luna Lovegood in *Harry Potter and the Half-Blood Prince*

Chewie... we're home

Han Solo in *Star Wars: The Force Awakens*

Stylish HTML

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What is CSS?

- **Cascading Style Sheets (CSS)** are a formatting language used to describe the appearance of content in an HTML file
- CSS has a standardized specification defined by the World Wide Web Consortium (W3C)

Why CSS?

- **HTML (“The Content”)**
 - What information does the page contain?
 - What is in the headings, body, etc.?
 - How is the information structured?
- **CSS (“The Presentation”)**
 - What does the page look like?
 - What *color, formatting, text size, etc.* should the various parts have?

How does CSS work?

- I. The Web Browser receives the HTML page from the server via HTTP

How does CSS work?

1. The Web Browser receives the HTML page from the server via HTTP
2. The HTML page can include CSS either in same file or with link to separate file
 - If it's a separate file, the web browser will request that file separately via HTTP

How does CSS work? (2)

3. When all HTML and CSS files are available, the browser will render the page
4. For each element in the HTML page, the web browser will display the content and use the CSS to style it
5. Ideally, exactly one set of CSS styles will apply to any given element
6. If there are conflicting styles defined, complex rules determine which gets applied

How do we use CSS?

1. **Inline:** use tag's “style” attribute to specify appearance
2. **Internal:** create <style> elements in HTML and assign to different tags, classes, etc.
3. **External:** specify styling in a separate CSS file

Review: Inline CSS as “style” attribute

- Include CSS within the element tag itself as a “style” attribute

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Analysis: Inline CSS as “style” attribute

- Advantages
 - Easy to use
 - Good for quick, one-off situations

Analysis: Inline CSS as “style” attribute

- Advantages
 - Easy to use
 - Good for quick, one-off situations
- Disadvantages
 - Mixing content and presentation: this should be avoided
 - Hard to manage for large, complex pages

Review: Internal CSS using `<style>` tag

- Include CSS within the head of the HTML using `<style>` elements

Review: Internal CSS using <style> tag

- Include CSS within the head of the HTML using <style> elements

```
<head>
...
  <style>
    h1 {
      color: red;
      text-transform: capitalize;
    }
  </style>
...
</head>
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<h1>
  Here are some memorable
  quotes from movies!
</h1>
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Review: Internal CSS using <style> tag

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Here Are Some Memorable Quotes From Movies!

You can find more at the [Internet Movie Database \(IMDb\)](#).

You killed my father. Prepare to die.

Inigo Montoya in *The Princess Bride*

I've never been to this part of the castle. Well, not awake, I sleepwalk, you see. That's why I wear shoes to bed.

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CSS Syntax

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<style>

  h1 {

    color: red;
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  }

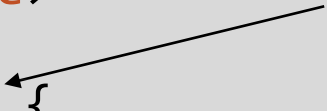
</style>
```

CSS Syntax

- Selector (e.g., h1)

```
<style>  
  h1 {  
    color: red;  
    text-transform: capitalize;  
  }  
</style>
```

CSS Selector



CSS Syntax

- Selector (e.g., h1)
- Properties and Values (e.g., color:red)

```
<style>
h1 {
  color: red;
  text-transform: capitalize;
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</style>
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CSS Selector

property:value

The diagram illustrates the components of a CSS style block. An arrow points from the text 'CSS Selector' to the 'h1' selector in the code. Another arrow points from the text 'property:value' to the 'color: red;' and 'text-transform: capitalize;' lines, indicating that these lines represent a property and its value.

CSS Syntax

- Selector (e.g., h1)
- Properties and Values (e.g., color:red)

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<style>
h1 {
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CSS Selector

property:value

The diagram illustrates the components of a CSS style block. An arrow points from the label 'CSS Selector' to the 'h1' selector in the code. Another arrow points from the label 'property:value' to the 'color: red;' property-value pair. A third arrow points from the same 'property:value' label to the 'text-transform: capitalize;' property-value pair.

Analysis: Internal CSS using `<style>` tag

- Advantages
 - Separates content and presentation
 - Easy to use
 - In particular, if you want to apply the same style to all tags of a certain type (say `<p>`) it's easier to do it with internal CSS than inline CSS
 - Good if you only have a limited amount of CSS in the page

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 - Easy to use
 - In particular, if you want to apply the same style to all tags of a certain type (say `<p>`) it's easier to do it with internal CSS than inline CSS
 - Good if you only have a limited amount of CSS in the page
- Disadvantages
 - Hard to manage for large, complex pages
 - Cannot reuse across multiple pages

External CSS

- Include CSS in a separate file and link the file in the head of the HTML file

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movies.html

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- Advantages
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Analysis: External CSS

- Advantages
 - Separates content and presentation
 - Can include many different CSS pages with multiple `<link>` tags
- Disadvantages
 - Lots of different files to manage (which might be overkill for smaller pages)



Selectors

- Used to find (or select) HTML elements based on their element name, id, class, and more.



Element Name



IDs



Classes



IDs Selector

- The ID attribute is used to define a **unique** style for an element.

- Example:

- ✓ In the CSS

```
#myId {color: red}
```

- ✓ In the HTML

```
<div id="myId" >  
    This is the div with the id.  
</div>
```



Class Selector

- Classes allow you to define a style which can be applied to **multiple** elements on your page.
- Example:
 - ✓ In the CSS

```
.right {text-align: right}
.center {text-align: center}
```
 - ✓ In the HTML

```
<p class="right">
  This paragraph will be right-aligned.</p>
<p class="center">
  This paragraph will be center-aligned.</p>
```



Select Group

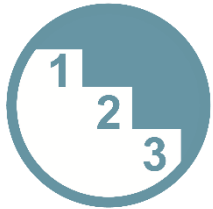
- Grouping selectors is done by separating each selector with a comma:

```
h1,h2,h3,h4,h5,h6 { color: green, font-family: "Ariel" }
```

CSS selectors

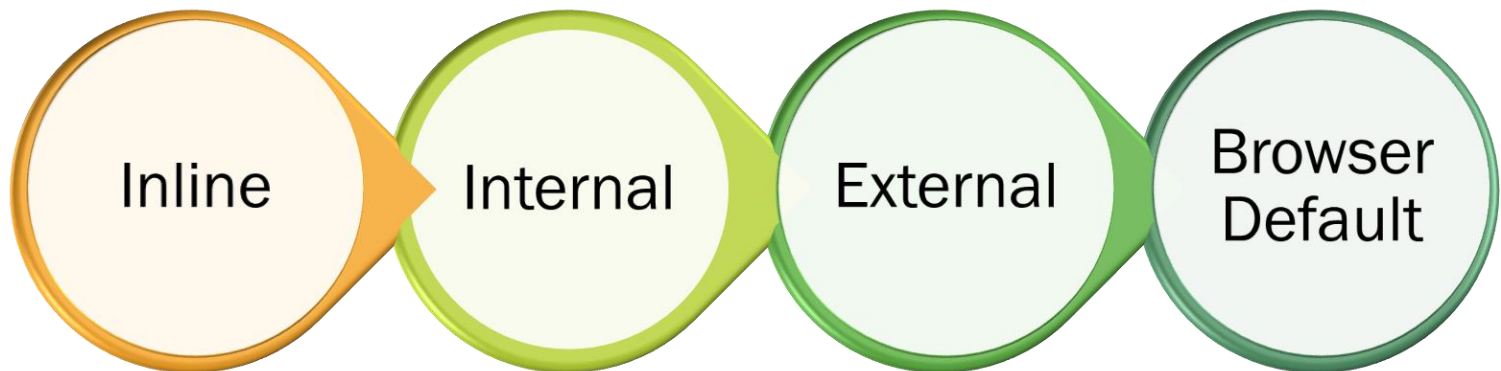
http://www.w3schools.com/cssref/css_selectors.asp



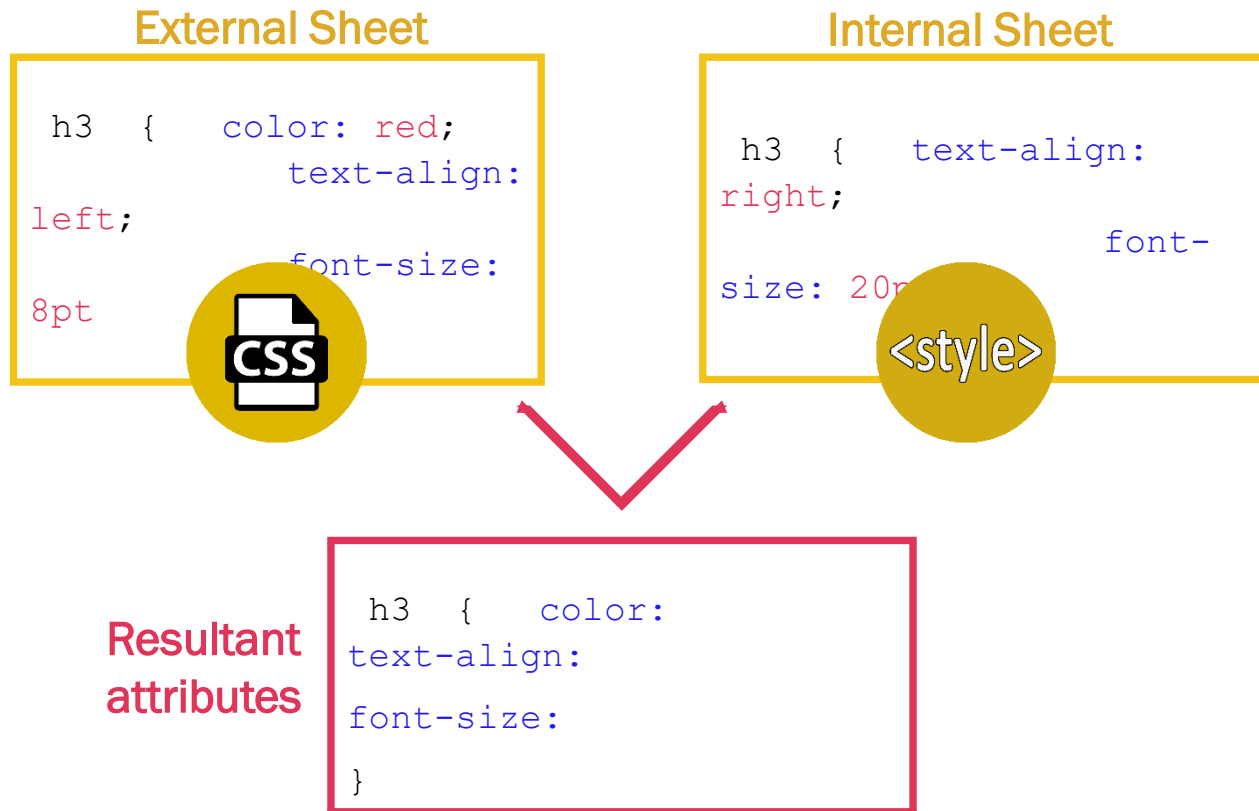


Cascading Order

- Styles will be applied to HTML in the following order:



Example



CSS Selectors

Type of Selector	What's in the CSS File?	What does this selector apply to?	What does the HTML file contain?
Element Selector	<code>h1 { color:red; }</code>	All <code><h1></code> elements	<code><h1> ... </h1></code>

CSS Selectors

Type of Selector	What's in the CSS File?	What does this selector apply to?	What does the HTML file contain?
Element Selector	<code>h1 { color:red; }</code>	All <code><h1></code> elements	<code><h1> ... </h1></code>
Class selector	<code>.address { ... }</code>	All elements in class "address"	<code><div class="address"> ... </div></code>

CSS Selectors

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Element Selector	<code>h1 { color:red; }</code>	All <code><h1></code> elements	<code><h1> ... </h1></code>
Class selector	<code>.address { ... }</code>	All elements in class "address"	<code><div class="address"> ... </div></code>
Id Selector	<code>#section1 { ... }</code>	Unique element with ID "section1"	<code><p id="section1"> ... </p></code>

Summary

- **Cascading Style Sheets (CSS)** are a formatting language used to describe the appearance of content in an HTML file
- We can include CSS formatting in HTML in three ways:
 1. inline as style attributes
 2. internal using the `<style>` tag
 3. external in a separate file linked with the `<link>` tag
- A CSS element consists of a selector and property:value pairs