

# Chapter 3

## Cascading Style Sheets (CSS)

INT150 Web Technologies (2/2024)

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# Topics

- What will you learn after finishing this class:
  - Cascading Style Sheets (CSS)
  - The benefits of CSS
  - How to use the Style Sheets
  - Concepts of CSS
  - Style Sheet Hierarchy
  - CSS for formatting Text

# Cascading Style Sheets (CSS)

- Cascading Style Sheets ([CSS](#))
  - is the [W3C](#) standard for defining the presentation of documents written in [HTML](#) and any [XML](#) language.
- Presentation refers to the way the document is displayed or delivered to the user on:
  - a computer screen
  - a cell phone display,
  - printed on paper
  - read aloud by a screen reader
- [CSS](#) is a separate language with its own syntax.

# The benefits of CSS

- Precise type and layout controls
  - can achieve print-like precision using CSS
- Less work
  - one style sheet can change the appearance of an entire site
- More accessible sites
  - can mark up the content meaningfully, making it more accessible for non-visual or mobile devices.
- Reliable browser support
  - Every browser supports CSS Level 2 and many cool parts of CSS Level 3

# How Style Sheets Work

1. Start with a **HTML** document
2. Write **style rules** how certain elements should look.
3. Attach the style rules to the **HTML** document. When the browser display the **HTML** document, it follows the **style rules** for rendering elements.

# CSS Rule sets

- A **style sheet** is made up of one or more **style instructions** (called **rules** or **rule sets**) that describe how an element or group of elements should be displayed.
- Each rule *selects* elements and *describes* how it should look.
- Examples

```
h1 { color: green; }
```

```
p { font-size: small; font-family: sans-serif; }
```

# CSS Rule Set

- Syntax

declaration

selector { property: value; }

selector { property1 : value1 ;  
property2 : value2 ;  
property3 : value3 ;  
}

declaration block

selector { property1: value1; property2: value2; property3: value3; }

- selector identifies the element or elements to be affected.
- declaration provides the rendering instructions. It is made up of a **property** (such as color) and **its value** (green), separated by a **colon** (:) and a **space**.  
**If the semicolon is omitted, the declaration and the one following it will be ignored.**

# CSS Rule Set

- Declaration block contains the curly brackets and one or more declarations separated by semicolon ( ; ).
- CSS ignores whitespace and line returns within the declaration block.
- Each declaration should be written in its own line. This makes it easier to find the properties applied to the selector and to tell when the style rule ends.
- Values are dependent on the property. When using a property, it is important to know which values it accepts.

# Comments in Style Sheets

- **Syntax:**

```
/* comment goes here */
```

- Sometime it is helpful to leave comments in a style sheet.
- Content between the `/*` and `*/` will be ignored when the style sheet is parsed (even within a rule).

```
body {  
    font-size: small;  
    /* font-size: large; */  
}
```

- One use for comments is to **label sections** of style sheet to make things easier to find later.

```
/* Footer Styles */
```

- CSS comments are also useful for temporarily hiding style declaration in the design process.

# Attaching the styles to HTML document

Three ways to apply the style information to an HTML document:

1. **Inline style sheets** - by using the style attribute in HTML documents

```
<h1 style="color:blue;">This is a Blue Heading</h1>
```

2. **Internal style sheets (or Embedded style sheets)** - by using a `<style>` element in the `<head>` section.

```
<head>
  <title>Title Go Her</title>
  <style>
    h1 { color: blue; }
  </style>
</head>
```

3. **External style sheets** - by using external **CSS** file. To use an external style sheet, add a link to it in the `<head>` section of the **HTML** page. **In this way, all the files in a website may share the same style sheet.**

```
<head>
  <title>Title Go Her</title>
  <link rel="stylesheet" href="styles.css">
</head>
```

[https://www.w3schools.com/tags/tag\\_link.asp](https://www.w3schools.com/tags/tag_link.asp)

# Concepts of CSS

- Fundamental concepts of **CSS** that control how **CSS** is applied to **HTML** and how conflicts are resolved.
  - Cascading (Last Rule)
  - Specificity
  - Inheritance

<https://www.w3.org/TR/CSS21/cascade>

<https://dev.to/frontendduke/important-css-concepts-to-learn-57j3>

[https://developer.mozilla.org/en-US/docs/Learn/CSS/Building\\_blocks/Cascade\\_and\\_inheritance](https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/Cascade_and_inheritance)

# Cascade

- Style sheets cascade
  - The order of CSS rules is important. When two rules apply that have equal specificity the **one that comes last in CSS is the one that will be used.**

```
h1 {  
    color: red;  
}  
h1 {  
    color: blue;  
}
```

**This is my heading.**

<h1>This is my heading.</h1>

[Demo](#)

# Specificity

- Specificity
  - is how the browser decides which rule applies if multiple rules have different selectors, but could still apply to the same element.
- Basic measure of how specific a selector's selection will be:
  - An element selector is less specific (or lower score)
  - A class selector is more specific (or higher score)
  - The higher score, the rule is applied to.

```
.main-heading {  
    color: red;  
}  
h1 {  
    color: blue;  
}
```

This is my heading.

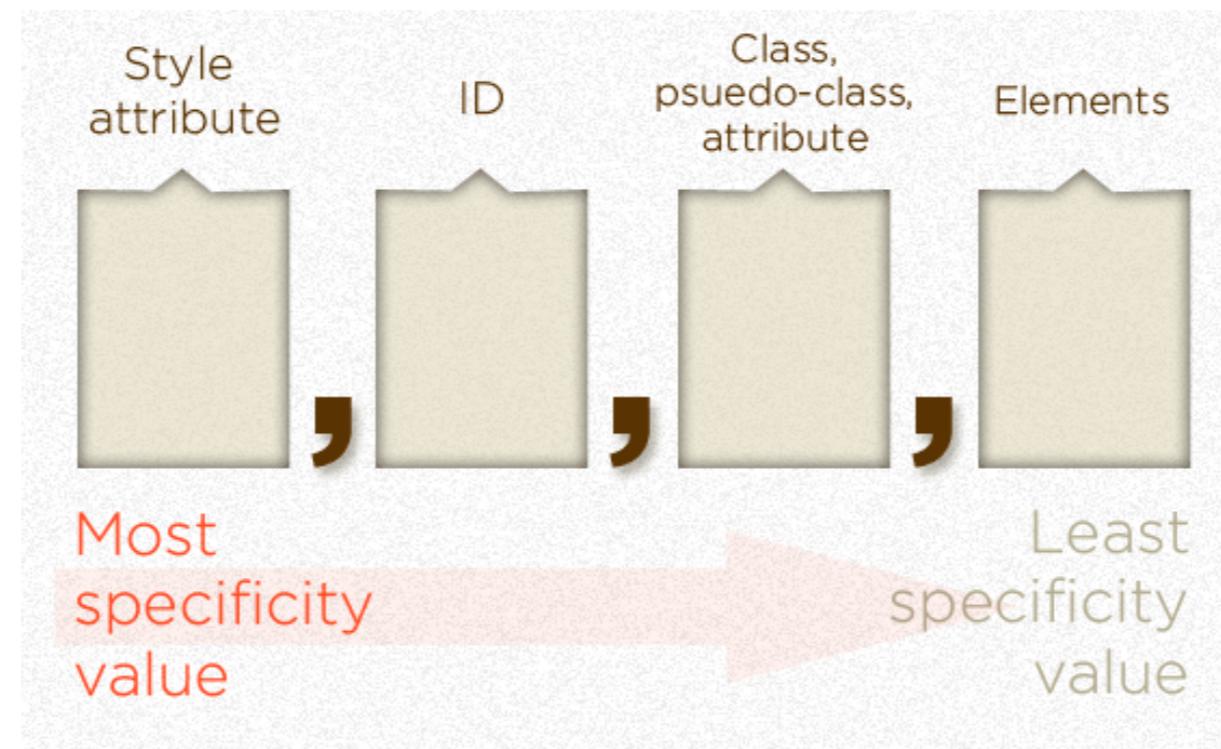
Specificity Ranking

1. Inline style ( <b>highest</b> )
2. IDs
3. Class and Pseudo Class's
4. Element selectors ( <b>lowest</b> )

```
<h1 class="main-heading">This is my heading.</h1>
```

[Demo](#)

# CSS Specificity Value



<https://css-tricks.com/specifics-on-css-specificity/>

- If the element has inline styling, that automatically<sup>1</sup> wins (1,0,0,0 points)
- For each ID value, apply 0,1,0,0 points
- For each class value (or pseudo-class or attribute selector), apply 0,0,1,0 points
- For each element reference, apply 0,0,0,1 point

<https://developer.mozilla.org/en-US/docs/Web/CSS/Specificity>

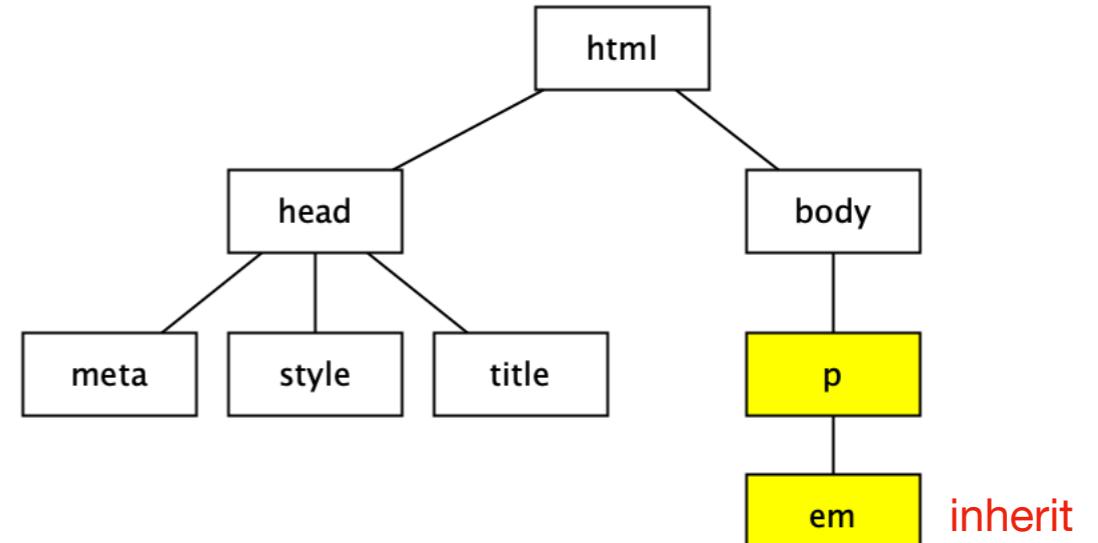
# Inheritance

- Inheritance is the mechanism by which certain CSS properties are automatically passed down from a parent element to its child elements.
  - Like parents pass down traits to their children such as eye color or hair color.
- This helps maintain consistency and reduces the need to repeatedly define styles for nested elements.

# Inheritance

- Inheritance
  - Some CSS property values set on parent elements **are inherited by** their child elements, some aren't.

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>HTMLLiveCode</title>
    <style type="text/css">
      p {
        color: blue;
      }
    </style>
  </head>
  <body>
    <p>This is <em>my</em> paragraph.</p>
  </body>
</html>
```



This is **my** paragraph.

Demo

# Important Note

- Some style sheet properties inherit and others do not.
- In general, properties related to the **styling of text** -- font size, color, style, etc. -- are **passed down** (inherited).
- Properties such as **borders**, **margins**, **backgrounds** and so on, that affect the **box area** around the element tend **not to be passed down**.
- Any property applied to a **specific element** will **override** the **inherited values** for that property.

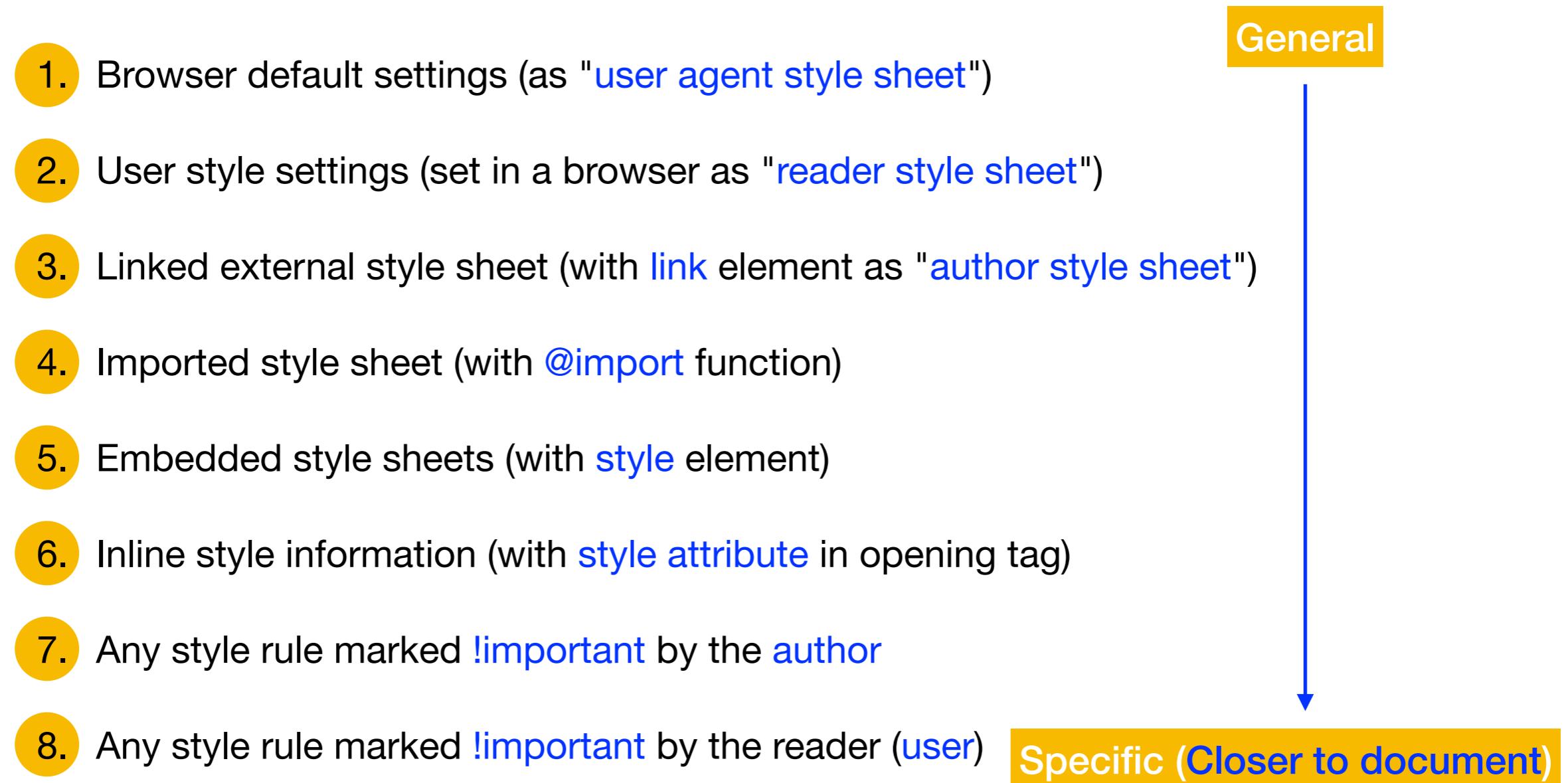
# Assigning Importance

- To prevent a specific rule from being overridden, include the **!important** indicator just after the property value and before semicolon for the rule.

```
p { color: blue !important ; }
```

# Style Sheet Hierarchy

- Style information can come from various sources, listed here from general to specific. Items lower in the list will override items above them:



# 5 override 3

```
/* css/mystyle.css */
p {
    color: blue;
}
```

## 3. Linked external style sheet

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8" />
        <title>HTMLLiveCode</title>
        <link rel="stylesheet" href="css/mystyle.css">
        <style type="text/css">
            p {
                color: red;
            }
        </style>
    </head>
    <body>
        <p>This is paragraph.</p>
    </body>
</html>
```

## 5. Embedded style sheets (with **style** element)

This is paragraph.

# 7 override 3

```
/* css/mystyle.css. */  
p {  
    color: blue !important ;  
}
```

7. Any style rule marked **!important** by the **author**

```
<!DOCTYPE html>  
<html>  
    <head>  
        <meta charset="utf-8" />  
        <title>HTMLLiveCode</title>  
        <link rel="stylesheet" href="css/mystyle.css">  
        <style type="text/css">  
            p {  
                color: red;  
            }  
        </style>  
    </head>  
  
    <body>  
        <p>This is paragraph.</p>  
    </body>  
</html>
```

3. Linked external style sheet

This is paragraph.

# 6 override 5

```
/* css/mystyle.css */
p {
    color: blue;
}
```

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8" />
        <title>HTMLLiveCode</title>
        <link rel="stylesheet" href="css/mystyle.css">
        <style type="text/css">
            p {
                color: red;
            }
        </style>
    </head>
    <body>
        <p style="color: purple;">This is paragraph.</p>
    </body>
</html>
```

5. Embedded style sheets (with **style** element)

6. Inline style information

This is paragraph.

# 7 override 6

```
/* css/mystyle.css */
p {
    color: blue;
}
```

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8" />
        <title>HTMLLiveCode</title>
        <link rel="stylesheet" href="css/mystyle.css">
        <style type="text/css">
            p {
                color: red !important ;
            }
        </style>
    </head>
    <body>
        <p style="color: purple;">This is paragraph.</p>
    </body>
</html>
```

7. Any style rule marked **!important** by the **author**

6. **Inline style information**

This is paragraph.

# Grouped selectors

- Grouped selectors
  - allows one rule with the same style properties to a number of elements by separating them with **commas**.
  - makes future edits more efficient and results in a smaller file size.

```
h1, h2, p, em { font-family: sans-serif; color: blue; }
```

# CSS: Formatting Text

- Several properties to control the appearance of text in HTML documents.
    - **font-related properties**
    - **text properties**
- font-family
  - font-size
  - font-weight
  - font-style
  - font-variant
  - font
  - color
  - line-height
  - text-indent
  - text-align
  - text-decoration
  - text-transform
  - letter-spacing
  - word-spacing
  - text-shadow

# font-family

Values: one or more font or generic font family names, separated by comma | inherit

Default: depends on the browser

Applies to: all elements

Inherits: yes

body { font-family: Arial; }

tt { font-family: Courier, monospace; }

p { font-family: “Duru Sans”, Verdana, sans-serif; }

[https://tympanus.net/codrops/css\\_reference/inherit/](https://tympanus.net/codrops/css_reference/inherit/)

# Value: inherit

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>HTMLLiveCode</title>
    <style>
      h1 {
        color: blue;
      }

      .extra h1{
        color: inherit;
      }
    </style>
  </head>
  <body>
    <h1>Hello</h1>
    <div class="extra">
      <h1>This is inherit</h1>
    </div>
  </body>
</html>
```



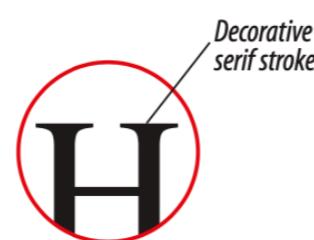
[http://web.sit.kmutt.ac.th/sanit/int102/demo/demo\\_inherit.html](http://web.sit.kmutt.ac.th/sanit/int102/demo/demo_inherit.html)

# Syntax notes

- All font names, with the exception of generic font families, **must be capitalized**.
- Use **commas** to separate multiple font names.
- Font names that **contain a character space** must appear within **quotation marks**. (such as "Duru Sans")
- The font-family property should hold **several font names as a list of "back-up" fonts**. If the browser does not support the first font, it tries the next font, and so on.
- Start with the font you want, and end with **a generic family**, to let the browser pick a similar font in the generic family, if no other fonts are available.

# Generic font families

Serif



Hello

Times

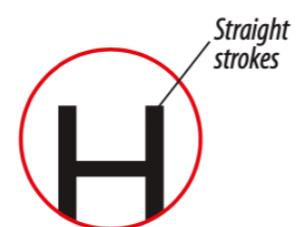
Hello

Georgia

Hello

Lucida (Mac)

Sans-serif



Hello

Veranda

Hello

Trebuchet MS

Hello

Arial

Hello

Arial Black

Monospace

Wi

Monospace font  
(equal widths)

Wi

Proportional font  
(different widths)

Hello

Courier

Hello

Courier New

Hello

Andale Mono

Cursive

Hello

Apple Chancery

Hello

Comic Sans

Hello

Snell

Fantasy

Hello

Impact

HELLO

Stencil

HELO

Mojo

# font-size

Values: length unit | percentage | xx-small | small | medium | large | x-large | xx-large | smaller | larger | inherit

Default: medium

Applies to: all elements

Inherits: yes

```
h1 { font-size: 1.5em; } /* length unit */
```

```
h1 { font-size: 150%; } /* percentage value */
```

```
h1 { font-size: x-large; } /* absolute keywords */
```

```
strong { font-size: larger } /* relative keyword (larger or smaller) */
```

# font-size

- The font-size value can be an absolute or relative size
- Absolute size
  - set the text to a specified size
  - does not allow a user to change the text size in all browsers
  - absolute size is useful when **physical size of the output is known or for print ( All of absolute units are outdated )**
- Relative size
  - is the **preferred value** in contemporary web design
  - Set the size relative to surrounding elements
  - allows a user to change the text size in browsers

[https://www.w3schools.com/css/css\\_font\\_size.asp](https://www.w3schools.com/css/css_font_size.asp)

# CSS Units of Measurement

- CSS provides a variety of units of measurement:

## Relative Units

px pixel (CSS 2.1) because it varies with display resolution

em a unit of measurement equal to the current font size

ex x-height; approximately the height of a lowercase "x" in the font

rem root em (CSS 3), equal to the em size of root element(html)

## Absolute Units

px pixel equal 1/96 of an inch (CSS 3)

pt points (1/72 inch in CSS 2.1)

pc picas (1 pica = 12 points)

mm milimeters

cm centimeters

in inches

# set font-size with em

- To allow users to resize the text in the browser menu, many developers use **em** instead of **pixels**.
- The **em** size unit is recommended by the W3C.
- **1em** is equal to the **current font size**. The default text size in browser is **16px**. so **1em** is **16px**.
- The **em** value works like a **scaling factor**, similar to **a percentage**.
- The **em** unit on the font-size property is **relative to the parent element's font size** (unlike all other properties, where they're relative to the font size on the element).

```
body { font-size: 100%; }      /* assume the default of 16px */
```

```
h1   { font-size: 2.5em }      /* 2.5x16p = 40px */
```

```
h2   { font-size: 1.875em }    /* 1.875x16p = 30px */
```

```
p    { font-size: 0.875em }    /* 0.875x16p = 14px */
```

# Em used on other properties than font-size

- When em units are used on other properties than font-size, the value is relative to the element's own font-size.
  - Em measurements are always relevant to the element's font size. An em for one element may not be the same for another.

```
h1, h2, p { margin-left: 2em; }
```

# set font-size with em

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>HTMLLiveCode</title>
    <style>
      div { font-size: 1.5em ;
      }
    </style>
  </head>
  <body>
    <span>Hello</span>
    <div>Hello</div>
    <div><div>Hello</div></div>
    <div><div><div>Hello</div></div></div>
  </body>
</html>
```



Hello  
Hello  
Hello  
Hello  
Hello

[https://web.sit.kmutt.ac.th/sanit/int102/demo/demo\\_fontsize.html](https://web.sit.kmutt.ac.th/sanit/int102/demo/demo_fontsize.html)

# font-weight (boldness)

Values:      **normal** | bold | bolder | lighter | 100 | 200 | 300 | **400** | 500 | 600 |  
700 | 800 | 900 | inherit

Default:      normal (equivalent of 400)

Applies to:    all elements

Inherits:      yes

body { font-weight: normal; }

p      { font-weight: bold; }

p      { font-weight: 900; }

<https://htmldog.com/references/css/properties/font-weight/>

# font-style (italics)

Values:      [normal](#) | italic | oblique | inherit

Default:      normal

Applies to:    all elements

Inherits:      yes

p { font-style: normal; }

p { font-style: italic; }

p { font-style: oblique; }

[https://en.wikipedia.org/wiki/Oblique\\_type](https://en.wikipedia.org/wiki/Oblique_type)

# font-variant (small caps)

Values:      [normal](#) | small-caps | inherit

Default:      normal

Applies to:    all elements

Inherits:      yes

```
p.normal { font-variant: normal; }  
p.small { font-variant: small-caps; }
```

# font-variant (small caps)

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>HTMLLiveCode</title>
    <style type="text/css">
      p.normal {
        font-variant: normal;
      }
      p.small {
        font-variant: small-caps;
      }
    </style>
  </head>

  <body>
    <p class="normal">My name is Hege Refsnes.</p>
    <p class="small">My name is Hege Refsnes.</p>
  </body>
</html>
```

My name is Hege Refsnes.  
MY NAME IS HEGE REFSNES.

[Demo](#)

# font (shortcut font)

- CSS provides the shorthand `font` property that compiles all the font-related properties into one rule.
- At minimum, the font property must include a `font-size` value and a `font-family` value, in that order.
- Omitting one or putting them in the wrong order causes the entire rule to be invalid.
- Once, the font property met the size and family requirements, the other values are optional and may appear in any order prior to the `font-size`.
- When style weight, or variant are omitted, they revert back to `normal`.
- The value appearing just after `font-size`, separated by a slash is `line-height` of the text line.

# font (shortcut font)

Values:     `font-style` `font-weight` `font-variant` `font-size/line-height` `font-family`  
              | `inherit`

Default:   depends on default value for each property listed

Applies to: all elements

Inherits:   yes

```
h3 { font: oblique bold small-caps 1.5em/1.8em Verdana,
```

```
    sans-serif; }
```

```
p { font: 1em sans-serif; } /* minimum properties */
```

# Changing Text color: color

Values: color value (name or numeric) | inherit

Default: depeds on the browser and user's preferences

Applies to: all elements

Inherits: yes

```
h1 { color: gray; }
```

```
h1 { color: #666666; }
```

```
h1 { color: #666; }
```

```
h1 { color: rgb(102,102,102); }
```

# Color Names

- CSS2.1 define 17 standard color names:

black	white	purple
lime	navy	aqua
silver	maroon	fuchsia
olive	blue	orange
gray	red	green
yellow	teal	

- The updated CSS3 color module allows name from a larger set of 140 color name to be specified in style sheets.

# color

- To change the color of all the text in a document by applying the color property to the body element.

```
body { color: fuchsia; }
```

- To apply properties to several elements at once, use grouped selectors:

```
p, ul, td, th { color: navy; }
```

- To apply a rule to a particular paragraph or paragraphs, use the following three sectors:

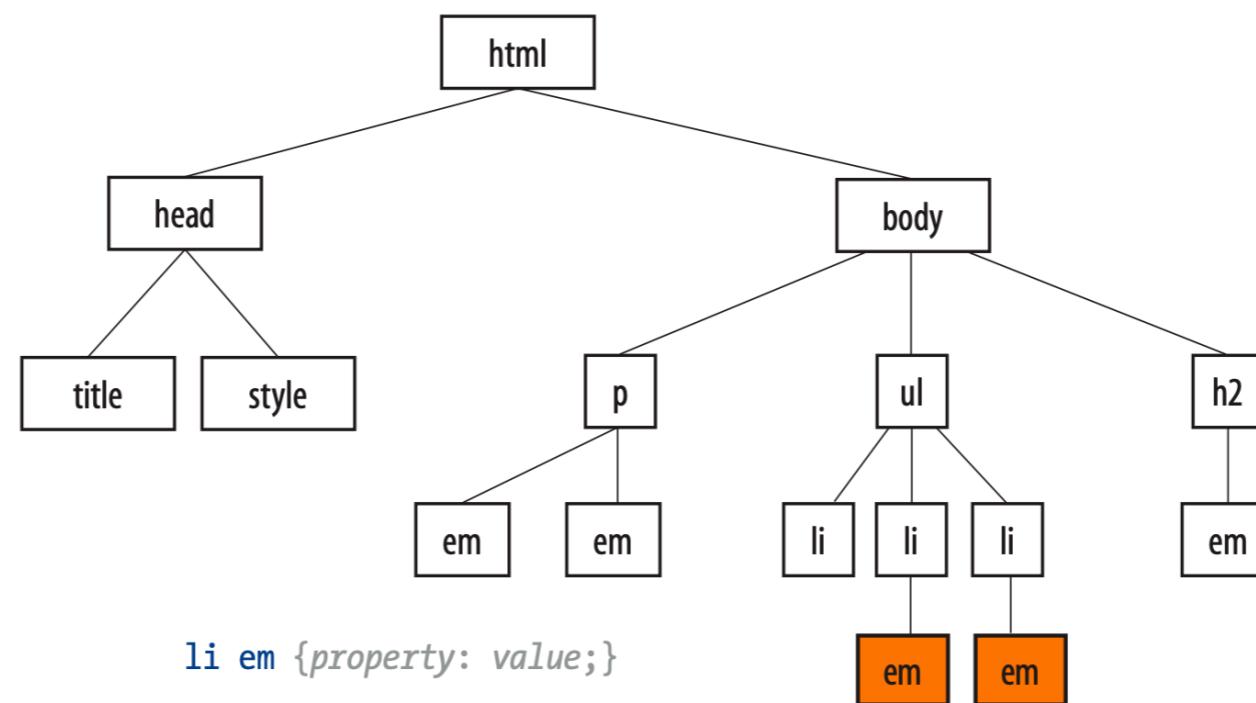
- Descendant selectors,
- ID selectors
- class selectors

# Descendant selectors

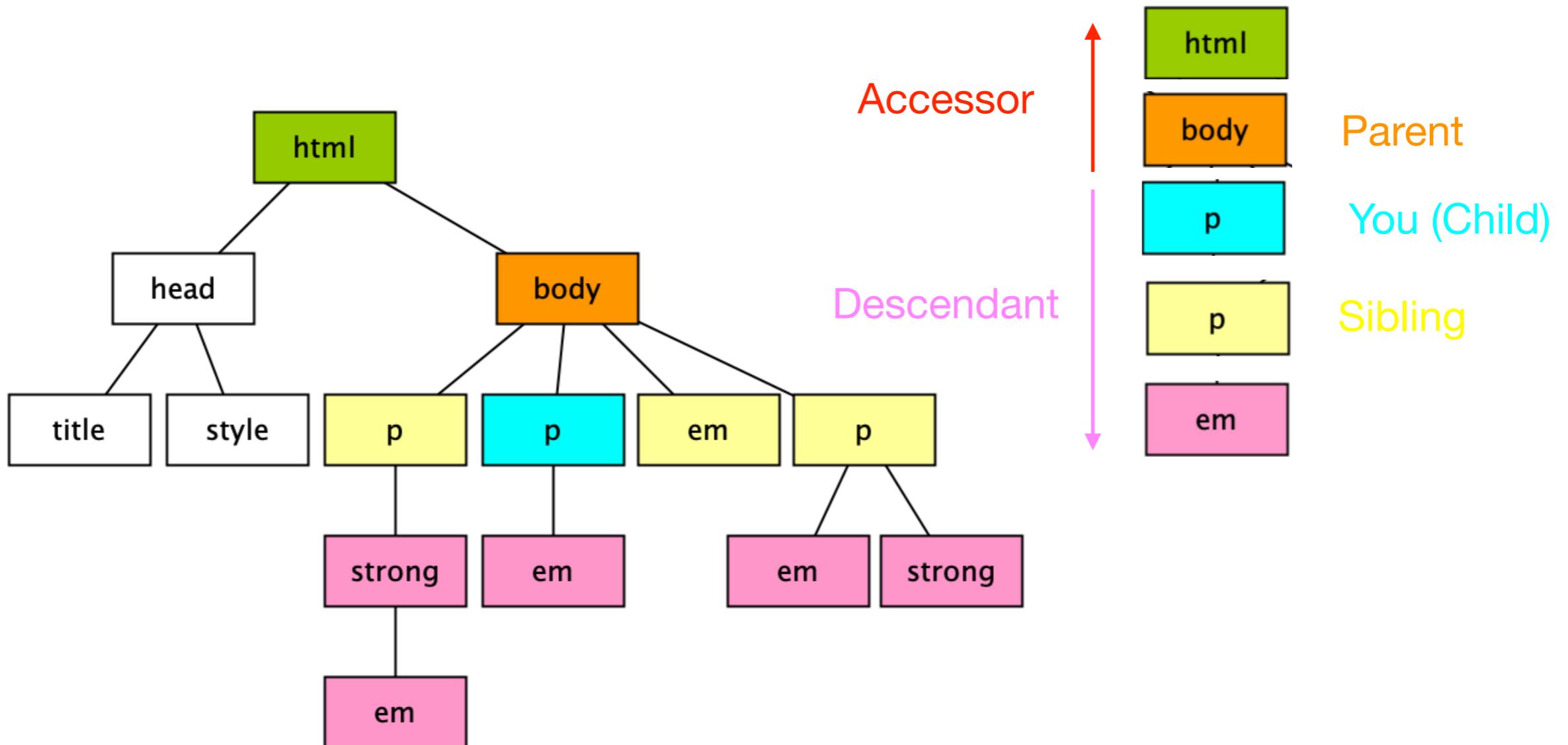
- A **descendant selector** targets elements that are **contained** within (and therefore are descendants of) another element.
- **Descendant selectors** are indicated in a list separated by a **character space**.

```
li em { color: olive; }
```

Only **em** elements within **li** element are selected. The other em elements are unaffected.



# Relationship



# Descendant selectors

- Descendant selectors can be grouped in a comma-separated list.

```
h1 em, h2 em, h3 em { color: red; }
```

- Descendant selectors can be nested.

```
ol a em { font-variant: small-caps; }
```

# Contextual Sectors

- **Contextual selector** selects the element based on its context or relation to another element.
- Four types of **contextual selectors** (called combinator in CSS3 specification)
  - **Descendant selectors** (character space, ' ')
  - li em { color: olive; }
  - **Child selectors** (greater-than symbol,>)
  - p > em { font-weight: bold; }
  - **Adjacent/Next sibling selectors** (plus sign,+)
  - h1 + p { font-style: italic; }
  - **General/subsequent sibling selectors (~) (New in CSS3)**
  - h1 ~ h2 { font-weight: normal; }

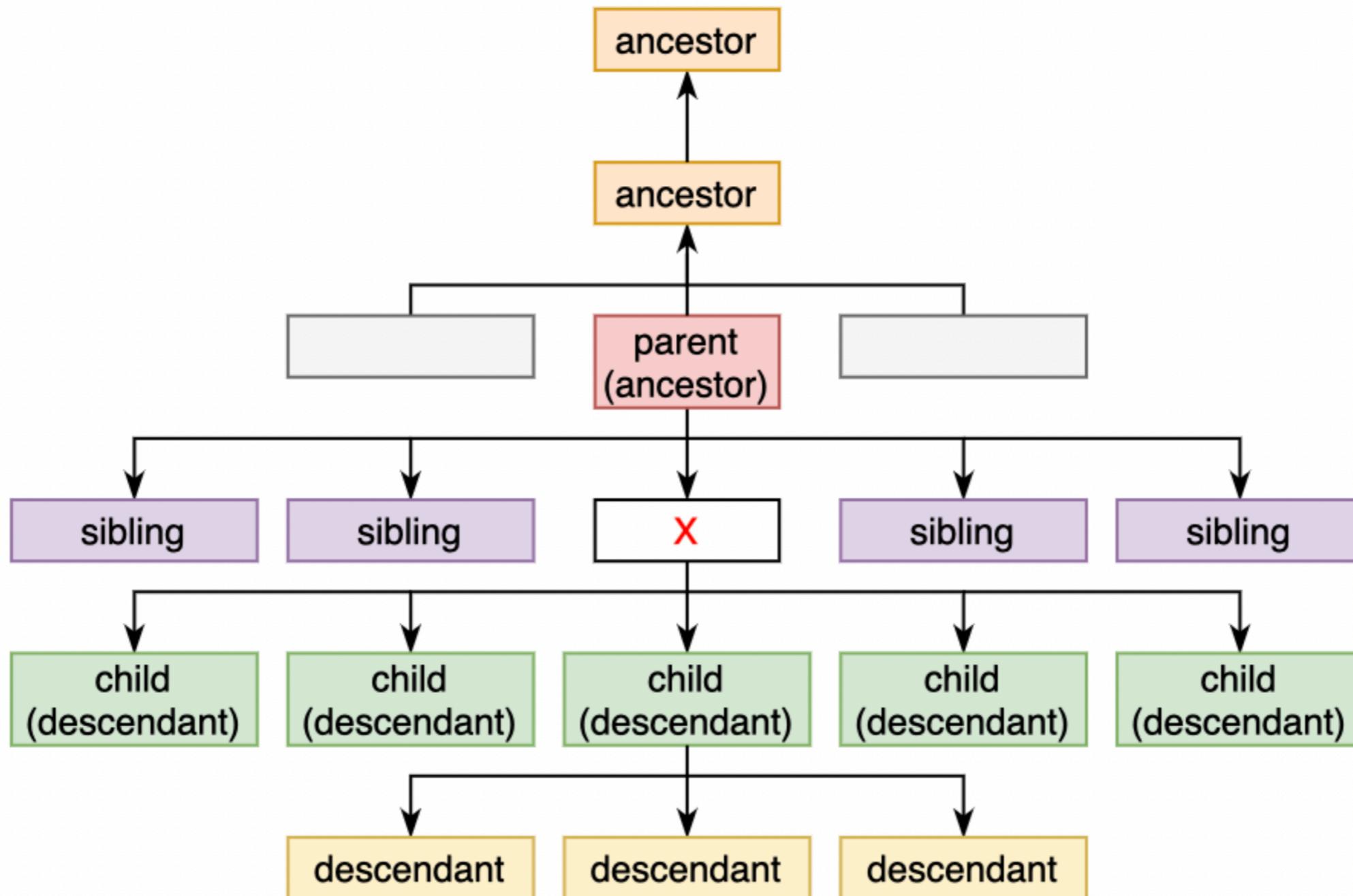
[https://www.w3schools.com/css/css\\_combinators.asp](https://www.w3schools.com/css/css_combinators.asp)

# Contextual Sectors

<b>Selector</b>	<b>Example</b>	<b>Example description</b>
<i>element element</i>	div p	Selects all <p> elements inside <div> elements
<i>element&gt;element</i>	div > p	Selects all <p> elements where the parent is a <div> element
<i>element+element</i>	div + p	Selects all <p> elements that are placed immediately after <div> elements
<i>element1~element2</i>	p ~ ul	Selects every <ul> element that are preceded by a <p> element

[https://itf-web-advanced.netlify.app/html\\_css/selectors.html#combinator-selectors](https://itf-web-advanced.netlify.app/html_css/selectors.html#combinator-selectors)

# Contextual Sectors



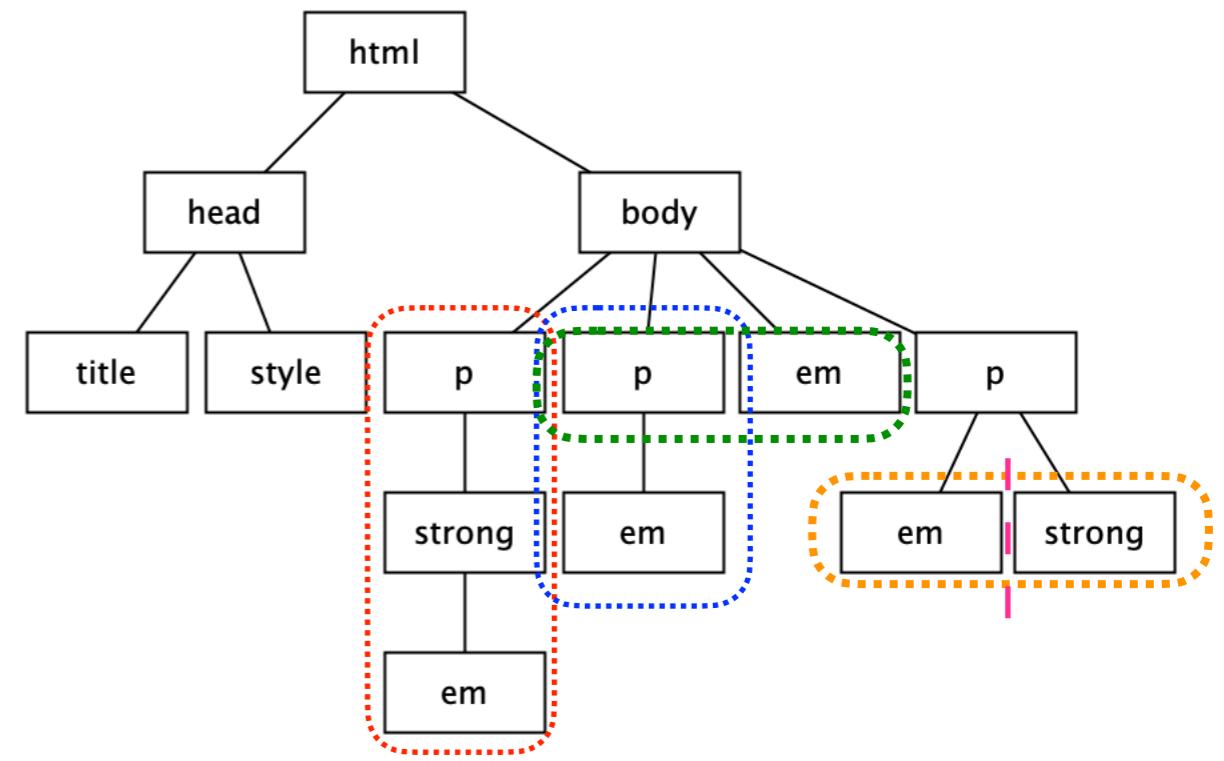
# Contextual Sectors

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>Contextual Selectors</title>
    <style type="text/css">
      p em { color: red; }
      p > em { color: blue; }
      p + em { color: green; }
      em ~ strong { color: orange; }
    </style>
  </head>

  <body>
    <p>
      <strong><em>descendant selector</em></strong>
    </p>
    <p>
      <em> child selector</em>
    </p>
    <em>adjacent sibling selector</em>
    <p>
      <em>child selector</em>
      <strong>general sibling selector</strong>
    </p>
  </body>
</html>
```

Demo

Demo2



***descendant selector***

***child selector***

***adjacent sibling selector***

***child selector general sibling selector***

# ID Selectors

- The `id` attribute gives an element a unique identifying name.
- The `id` attribute can be used with any `HTML` element.
- It is commonly used to give meaning to the generic `div` and `span` elements.
- `ID selectors` can be used to target elements by their id values.
- The symbol that identifies `ID selectors` is the hash symbol (#).

```
li#catalog1234 { color: red; } /* list item using an ID selector */
```

```
<li id="catalog1234">Happy Face T-shirt</li>
```

```
#catalog1234 { color: red; } /*id selector */
```

```
#links li { margin-left: 10px; } /*contextual selector with ID selector*/
```

# Class selectors

- The **class** identifier is used to classify elements into a conceptual group.
- Multiple elements can share a **class** name but **an element** may belong to **more than one class**.
- A **class selector** is used to target elements belonging to the same class.
- **Class name** are indicated with a period **(.)** at the beginning of the selector.

```
p.special { color: orange; } /* all paragraphs with class "special" */
```

```
.special { color: orange } /* all elements with class "special" */
```

# The Universal Selector

- CSS2 introduced a **universal element selector (\*)** that matches any element.

```
* { color: gray; } /* set the foreground of every element */
```

```
#intro * { color: gray; } /* select all elements in an "intro" section */
```

- The **universal selector** causes problems with form controls in some browsers. If the page contains form inputs, the safest way is to avoid the **universal selector**.

# line-height

Values: number | length measurement | percentage | normal | inherit

Default: normal

Applies to: all elements

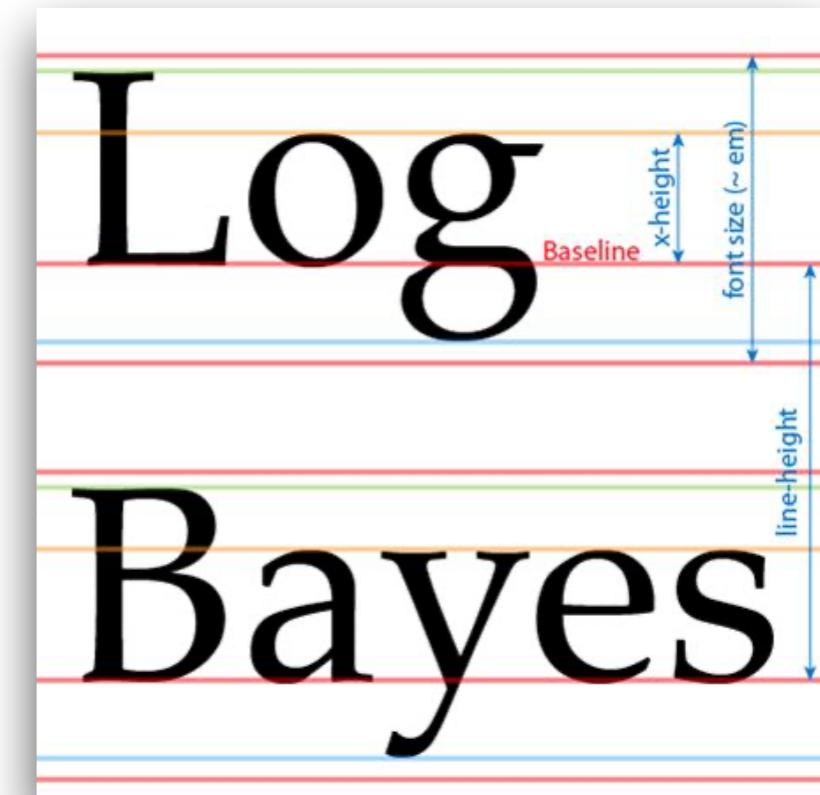
Inherits: yes

- The line-height property defines the minimum distance from baseline to baseline in text

```
p { line-height: 2; } /* 2*current font size */
```

```
p { line-height: 2em; }
```

```
p { line-height: 200%; }
```



# text-indent

Values: length measurement | percentage | inherit

Default: 0

Applies to: block-level elements, table cells, and inline blocks

Inherits: yes

```
p#1 { text-indent: 2em; }
```

```
p#1 { text-indent: 25%; }
```

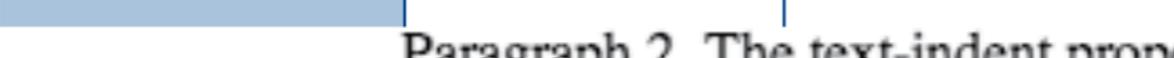
```
p#1 { text-indent: -35px; }
```

# text-indent

*2em*

  Paragraph 1. The text-indent property indents only the first line of text by a specified amount. You can specify a length measurement or a percentage value.

*25%*

 Paragraph 2. The text-indent property indents only the first line of text by a specified amount. You can specify a length measurement or a percentage value.

*-35px*

 Paragraph 3. The text-indent property indents only the first line of text by a specified amount. You can specify a length measurement or a percentage value.

# text-align

Values: left | right | center | justify | inherit

Default: **left** for languages that read left to right  
**right** for language that read right to left

Applies to: block-level elements, table cells, and inline blocks

Inherits: yes

```
h1 { text-align: left; }
```

```
h1 { text-align: right; }
```

```
h1 { text-align: center; }
```

```
p { text-align: justify; }
```

# text-align

*text-align:left*

Paragraph 1. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

*text-align:right*

Paragraph 2. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

*text-align:center*

Paragraph 3. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

*text-align:justify*

Paragraph 4. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

# text-decoration

Values: none | underline | overline | line-through | blink

Default: none

Applies to: all elements

Inherits: no, but since lines are drawn across child elements; they may look like they are "decorated" too

a { text-decoration: underline; }

# text-decoration

I've got laser eyes.

*text-decoration:underline*

I've got laser eyes.

*text-decoration:overline*

I've got laser eyes.

*text-decoration:line-through*

# text-transform

Values:      none | capitalize | lowercase | uppercase | inherit

Default:      none

Applies to:    all elements

Inherits:      yes

p { text-transform: none; }

p { text-transform: capitalize; }

p { text-transform: lowercase; }

p { text-transform: uppercase; }

# text-transform

And I know what you're thinking.

*text-transform: none* (as was typed in)

And I Know What You'Re Thinking.

*text-transform: capitalize*

and i know what you're thinking.

*text-transform: lowercase*

AND I KNOW WHAT YOU'RE THINKING.

*text-transform: uppercase*

# letter-spacing, word-spacing

Values: length measurement | normal | inherit

Default: normal

Applies to: all elements

Inherits: yes

```
p { letter-spacing: 8px; }
```

```
p { word-spacing: 1.5em; }
```

# letter-spacing, word-spacing

*letter-spacing: 8px;*

B l a c k   G o o s e   B i s t r o   S u m m e r   M e n u

*word-spacing: 1.5em;*

Black   Goose   Bistro   Summer   Menu

# text-shadow

Values: 'horizontal offset' 'vertical offset' 'blur radius' 'color' | none

Default: none

Applies to: all elements

Inherits: yes

```
h1 { text-shadow: .2em .2em silver; }
```

```
h1 { text-shadow: -.3em -.3em silver; }
```

```
h1 { text-shadow: .2em .2em .05em silver; }
```

# text-shadow

The Jenville Show

text-shadow: .2em .2em silver

The Jenville Show

text-shadow: -.3em -.3em silver;

The Jenville Show

text-shadow: .2em .2em **.05 em** silver

The Jenville Show

text-shadow: .2em .2em **.15 em** silver

The Jenville Show

text-shadow: .2em .2em **.3 em** silver