

# CSS Overview



CSS

## Introduction to Cascading Style Sheets Styling HTML with CSS

**Au Mau Duong**  
Technical Trainers

```
46  [ ] .chat-container .messages ul {  
47      list-style-type: none;  
48      margin: 0;  
49      padding: 15px;  
50  }  
51  [ ] .chat-container .messages ul li {  
52      border-bottom: 1px solid #333;  
53  }
```



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```
body { ... }  
font-family: Arial;  
margin: 2px; width: 150px;  
border: 1px solid blue;  
border: 0;  
background: #4ae871;  
position: absolute; left: 0;  
color: #2aa0bd;  
display: inline;
```

# Cascading Style Sheets

## Separating Content from Presentation



# CSS: Philosophy

- Separate content from presentation!

# Content (HTML document)

## Title

Lorem ipsum dolor sit amet,  
 consectetur adipiscing elit.  
 Suspendisse at pede ut purus  
 malesuada dictum. Donec vitae  
 neque non magna aliquam dictum.

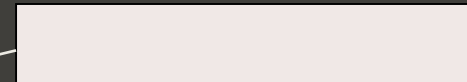
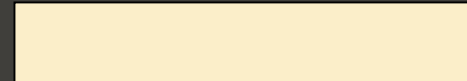
- Vestibulum et odio et ipsum
- accumsan accumsan. Morbi at
- arcu vel elit ultricies porta. Proin tortor purus, luctus non, aliquam nec, interdum vel, mi. Sed nec quam nec odio lacinia molestie. Praesent augue tortor, convallis eget, euismod nonummy, lacinia ut, risus.

# Presentation (CSS document)

**Bold**

## Italics

## Indent





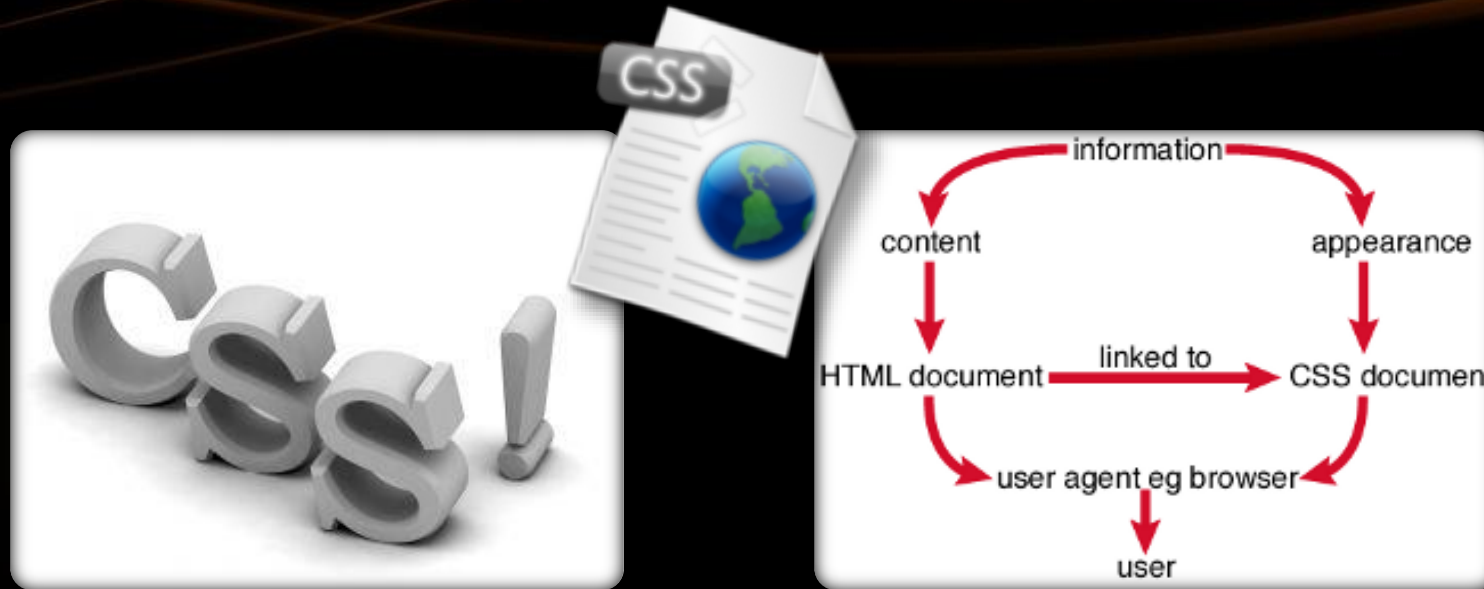
# The Resulting Page

## Title

Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.  
Suspendisse at pede ut purus  
malesuada dictum. Donec vitae neque  
non magna aliquam dictum.

- *Vestibulum et odio et ipsum*
- *accumsan accumsan. Morbi at*
- *arcu vel elit ultricies porta. Proin*

Tortor purus, luctus non, aliquam nec,  
interdum vel, mi. Sed nec quam nec  
odio lacinia molestie. Praesent augue  
tortor, convallis eget, euismod  
nonummy, lacinia ut, risus.



# CSS Intro

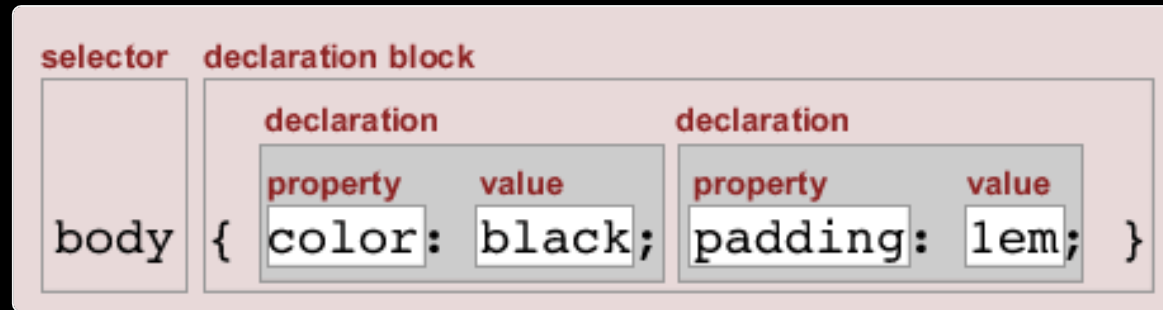
## Styling with Cascading Stylesheets

# CSS Introduction

- Cascading Style Sheets (CSS)
  - Used to describe the presentation of documents
  - Define sizes, spacing, fonts, colors, layout, etc.
  - Improve content accessibility
  - Improve flexibility
- Designed to separate presentation from content
- Due to CSS, all HTML presentation tags and attributes are deprecated, e.g. **<font>**, **<center>**, **<b>**, **<i>**, etc.

# CSS Style Sheets Syntax

- CSS Stylesheets consist of **rules**, **selectors**, **declarations**, **properties** and **values**



- Selectors are separated by commas
- Declarations are separated by semicolons
- Properties and values are separated by colons

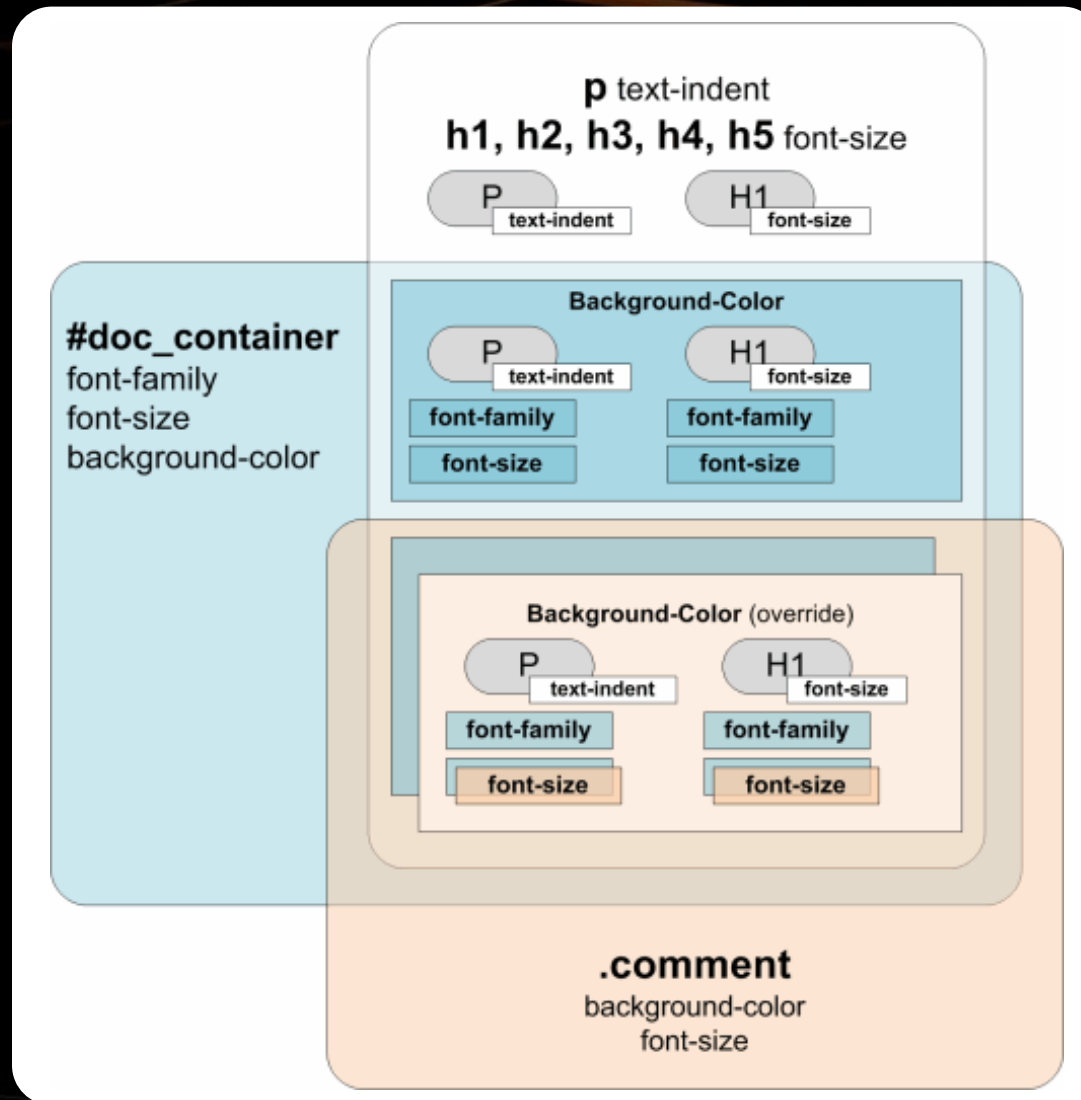
```
h1, nav h2, h3.big, #title { color: green; font-weight: bold }
```



# Why “Cascading”? (1)

- Priority scheme determining which style rules apply to element
  - **Cascade** priorities or specificity (weight) are calculated and assigned to the rules
  - Child elements in the HTML DOM tree **inherit** styles from their parent
    - Can override them
    - Control via **!important** rule

# Why "Cascading"? (2)



# Style Inheritance

- Some CSS styles are inherited and some are not
  - Text-related and list-related properties are inherited:
    - color, font-size, font-family, line-height, text-align, list-style, text-decoration etc.
  - Box-related and positioning styles are not inherited:
    - width, height, border, margin, padding, position, float, etc.
  - <a> and <input> elements do not inherit color and text-decoration

# Style Inheritance: Example

```
<div>
```

Here is `<span>a span element</span>` which is blue, as span elements are set to be.

```
</div>
```

```
<div class="extra" style="color:green">
```

Here is `<span>a span element</span>` which is green, because it inherits from its parent.

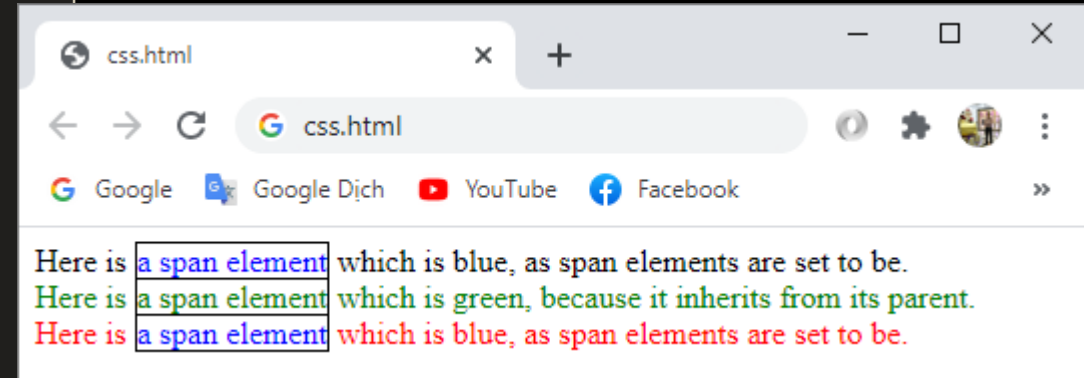
```
</div>
```

```
<div style="color:red">
```

Here is `<span>a span element</span>` which is blue, as span elements are set to be.

```
</div>
```

```
<style>
span {
    color: blue;
    border: 1px solid black;
}
.extra span {
    color: inherit;
}
</style>
```





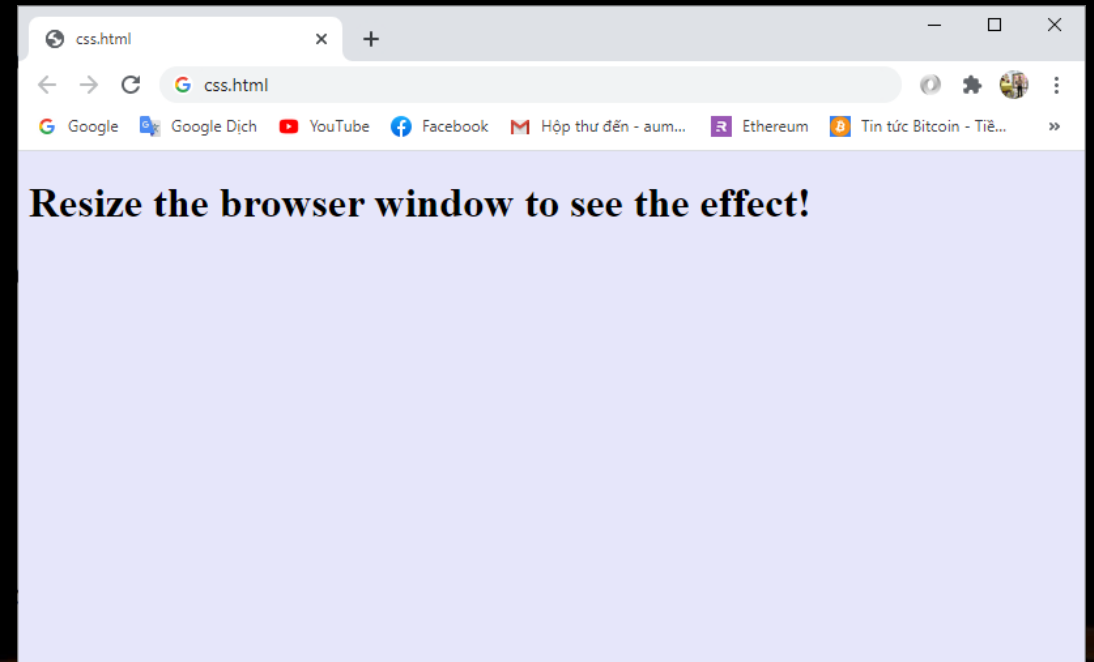
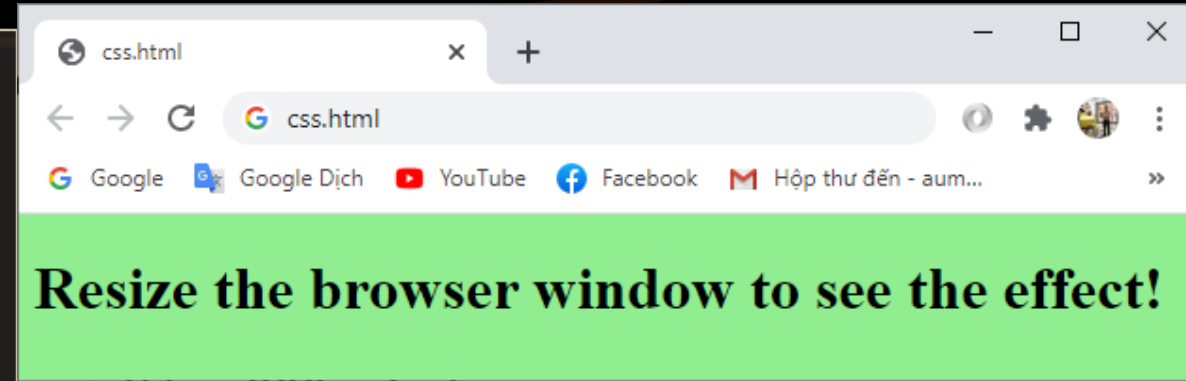
# CSS, HTML and Media

- CSS can be applied to any XML document
  - Not just to HTML / XHTML
- CSS can specify different styles for different **media**
  - On-screen
  - In print
  - Handheld, projection, etc.
  - ... even by voice or Braille-based reader
  - **@media screen / @media print / @media tv**

# CSS, HTML and Media: Example

```
<h1>Resize the browser window to see the effect!</h1>
```

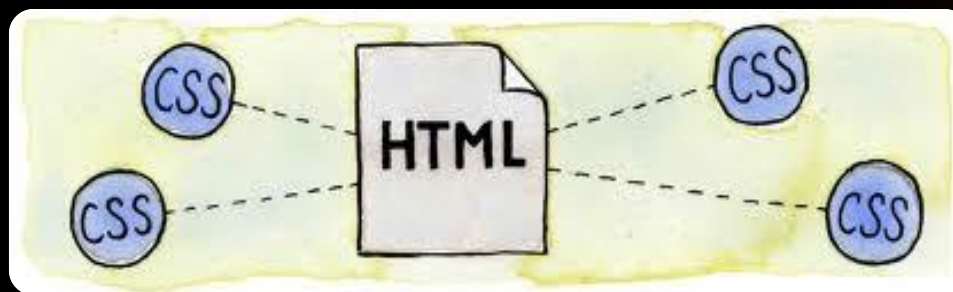
```
<style>
body {
  background-color: lightblue;
}
@media screen and (min-width: 400px) {
  body {
    background-color: lightgreen;
  }
}
@media screen and (min-width: 800px) {
  body {
    background-color: lavender;
  }
}</style>
```





# Importing CSS Into HTML

How to Use CSS with HTML?



# Importing CSS Into HTML

- CSS (presentation) can be put in HTML (content) in three ways:
  - **Inline**: the CSS rules in the **style** attribute
    - No selectors are needed
  - **Embedded (internal)**: in the **<head>** in a **<style>** element
  - **External**: CSS rules in separate file (best)
    - Usually a file with **.css** extension
    - Linked via **<link rel="stylesheet" href="...">**
    - Via the **@import** directive in embedded CSS block



# Linking HTML and CSS

- Using external CSS files is highly recommended
  - Simplifies the HTML document
  - Improves page load speed (CSS files are cached)

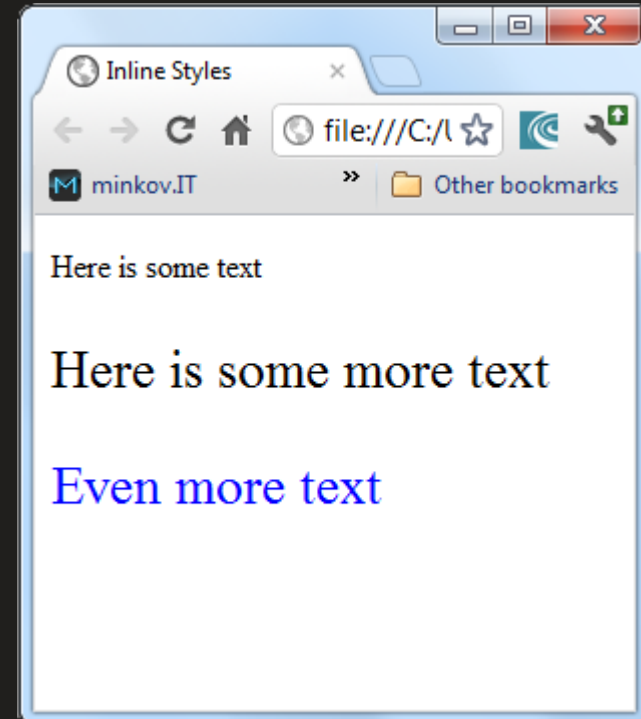


HTML links to an  
external CSS file



# Inline Styles: Example

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Inline Styles</title>
</head>
<body>
  <p>Here is some text</p>
  <!--Separate multiple styles with
    a semicolon-->
  <p style="font-size: 20pt">Here
    is some more text</p>
  <p style="font-size: 20pt; color:
    #0000FF">Even more text</p>
</body>
</html>
```



# Embedded Styles

- Embedded in the HTML in the `<style>` tag:

```
<style type="text/css">
```

- The `<style>` tag is placed in the `<head>` section of the document
- **type** attribute specifies the MIME type
  - MIME describes the format of the content
  - Other MIME types: **text/html**, **image/gif**, **text/plain**, ...
  - Not required in HTML5
- Used for document-specific styles

# Embedded Styles: Example (1)

```
<!DOCTYPE html>
<html>
<head>
  <title>Style Sheets</title>
  <style type="text/css">
    em {background-color:#8000FF; color:white}
    h1 {font-family:Arial, sans-serif}
    p  {font-size:18pt}
    .blue {color:blue}
  </style>
</head>
```

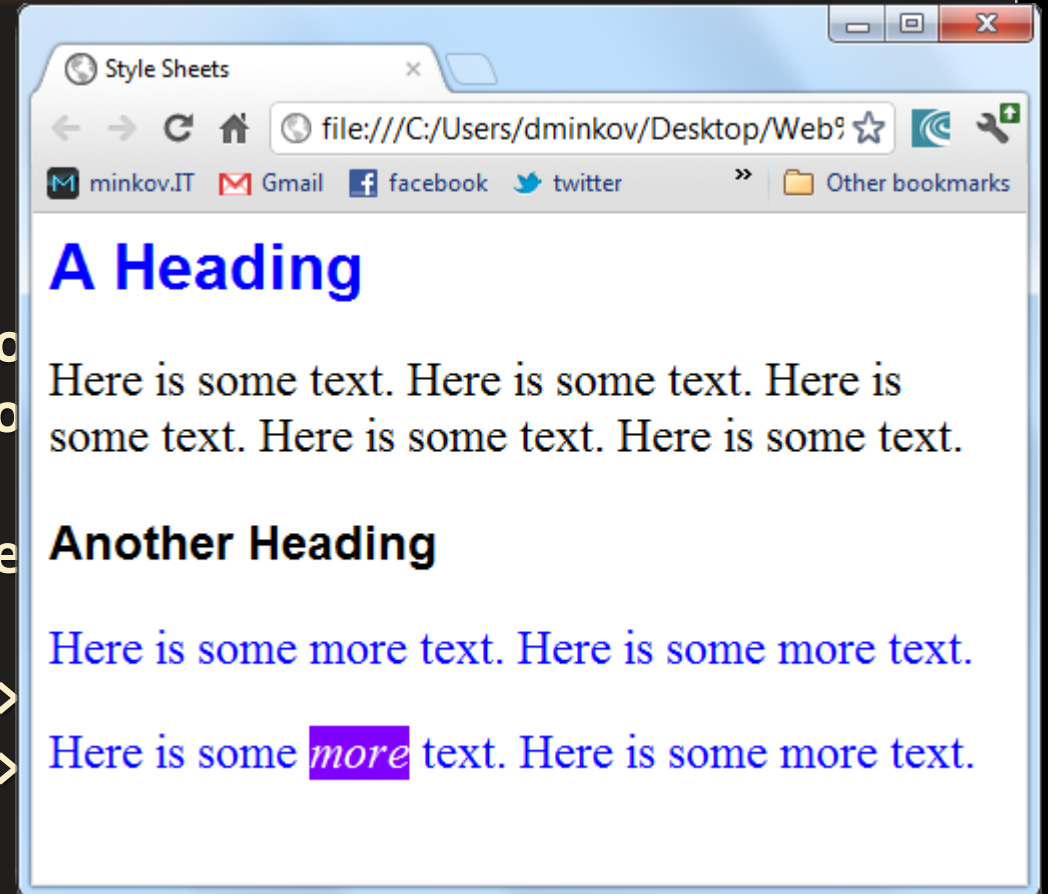


# Embedded Styles: Example (2)

```
...  
<body>  
  <header>  
    <h1 class="blue">A Heading</h1>  
  </header>  
  <article>  
    <p>Here is some text. Here is some text. Here is some text.  
      Here is some text. Here is some text.</p>  
    <h1>Another Heading</h1>  
    <p class="blue">Here is some more text.  
Here is some more text.</p>  
    <p class="blue">Here is some <em>more</em>  
text. Here is some more text.</p>  
  </article>  
</body>  
</html>
```

# Embedded Styles: Example (3)

```
...  
<body>  
  <header>  
    <h1 class="blue">A Heading</h1>  
  </header>  
  <article>  
    <p>Here is some text. Here is so  
      Here is some text. Here is so  
    <h1>Another Heading</h1>  
    <p class="blue">Here is some more  
      Here is some more text.</p>  
    <p class="blue">Here is some <em>  
      text. Here is some more text.</p>  
  </article>  
</body>  
</html>
```



# External CSS Styles (1)

- External linking
  - Separate pages can all use a shared style sheet
  - Modify a single file to change the styles across your entire Web site
- **<link rel="stylesheet">**
  - Specifies a relationship between documents (HTML and CSS)

```
<link rel="stylesheet" type="text/css" href="styles.css">
```

- The **<link>** elements should be in the **<head>**

# External CSS Styles (2)

## @import

- Another way to link external CSS files
- Insert a CSS file into another CSS file:

```
<style type="text/css">  
  @import url("styles.css");  
  /* same as */  
  @import "styles.css";  
</style>
```

- Ancient browsers do not recognize @import



# External Styles: Example (1)

```
/* CSS Document */

a      { text-decoration: none }

a:hover { text-decoration: underline;
          color: red;
          background-color: #CCFFCC }

li em   { color: red;
          font-weight: bold }

ul      { margin-left: 2cm }

ul ul   { text-decoration: underline;
          margin-left: .5cm }
```

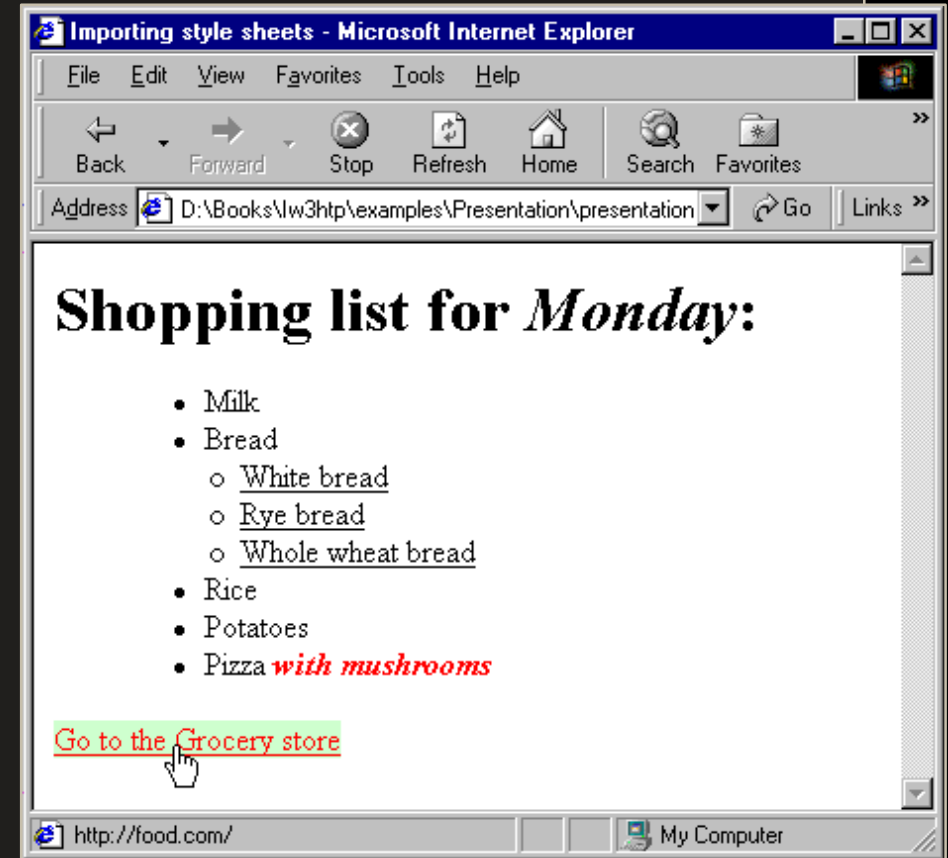
## External Styles: Example (2)

```
<!DOCTYPE html>
<html>
<head>
  <title>Importing style sheets</title>
  <link type="text/css" rel="stylesheet" href="styles.css" />
</head>
<body>
  <h1>Shopping list for <em>Monday</em>:</h1>
  <li>Milk</li>
  ...

```

# External Styles: Example (3)

```
...  
<li>Bread  
  <ul>  
    <li>White bread</li>  
    <li>Rye bread</li>  
    <li>Whole wheat bread</li>  
  </ul>  
</li>  
<li>Rice</li>  
<li>Potatoes</li>  
<li>Pizza <em>with mushrooms</em></li>  
</ul>  
<a href="http://food.com" title="grocery  
  store">Go to the Grocery store</a>  
</body>  
</html>
```



# CSS References

- CSS Tricks
  - <http://css-tricks.com>
- The CSS documentation at WebPlatform.org:
  - <http://docs.webplatform.org/wiki/css>
- CSS documentation at Mozilla
  - <https://developer.mozilla.org/en-US/docs/CSS>
- CSS3 tutorial
  - <http://www.w3schools.com/css3/>

# Summary

## 1. What is Cascading Style Sheets (CSS)?

- Define sizes, spacing, fonts, colors, layout, etc.

## 2. CSS Style Sheets Syntax

## 3. Style Inheritance

- Inherited: Text-related and list-related properties
- Not inherited: Box-related and positioning styles

## 4. CSS stylesheets can be external, internal and inline

- External CSS files are recommended in most cases





# CSS Overview



Questions?

