

# Cascade Style Sheets (CSS)

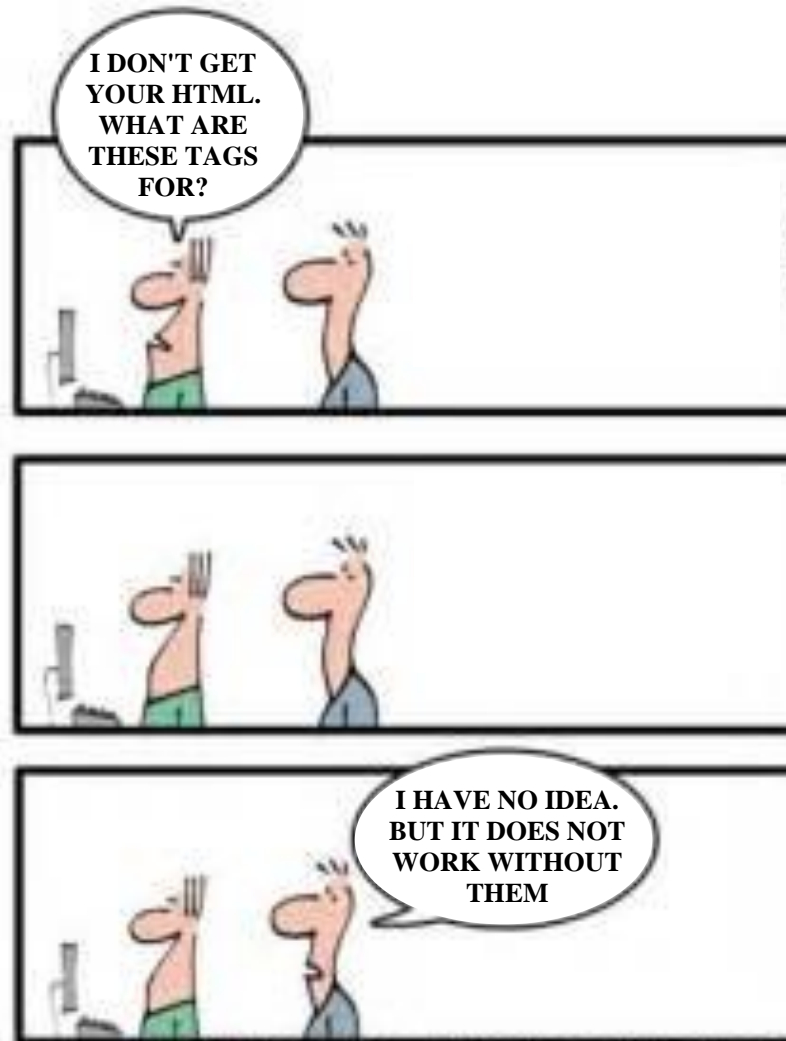
Web Authoring and Design

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# Outline

- Review
- What are Cascade Style Sheets (CSS)?
- How to add CSS sheets to your HTML
- CSS Examples
- Summary
- Review/Discussion

# Know 'YOUR' HTML

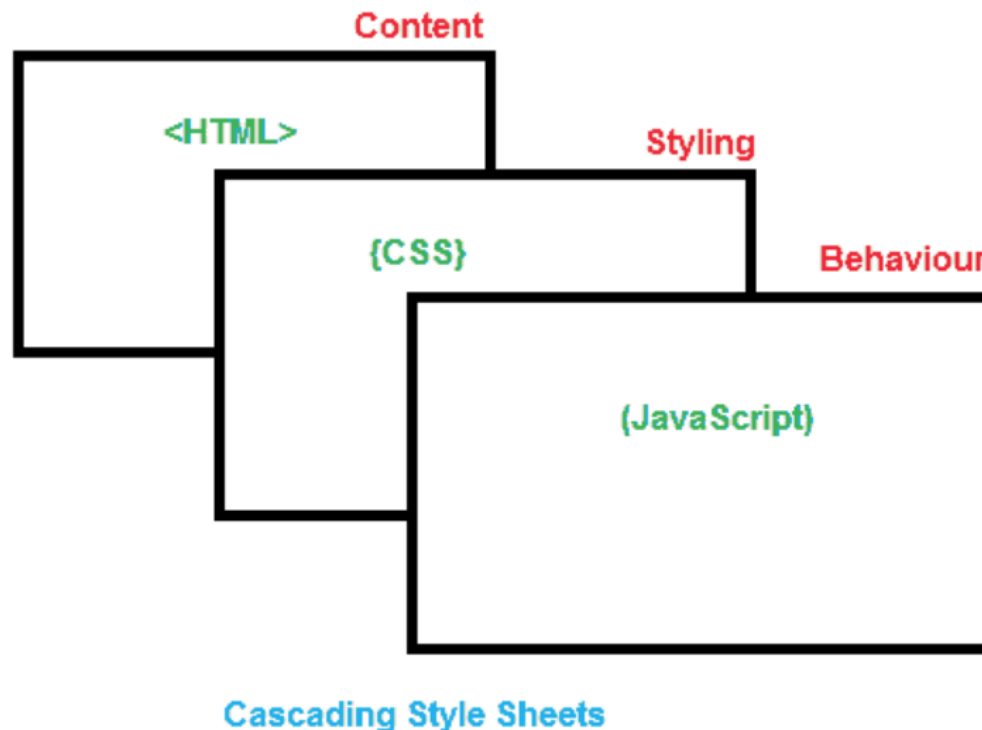


# HTML Evolved

- As HTML evolved, it came to encompass a **wider variety of stylistic capabilities** to meet the **demands** of web programmers
- Split a web document into 3 layers:
  - ▷ content layer
  - ▷ presentation layer
  - ▷ behavior layer

# Standard

- Sheets are now the official and standard mechanism for formatting text and page layouts



# Divide and Conquer

- While it's possible to include all three **layers** within the same web document, but breaking them separate gives us one important advantage

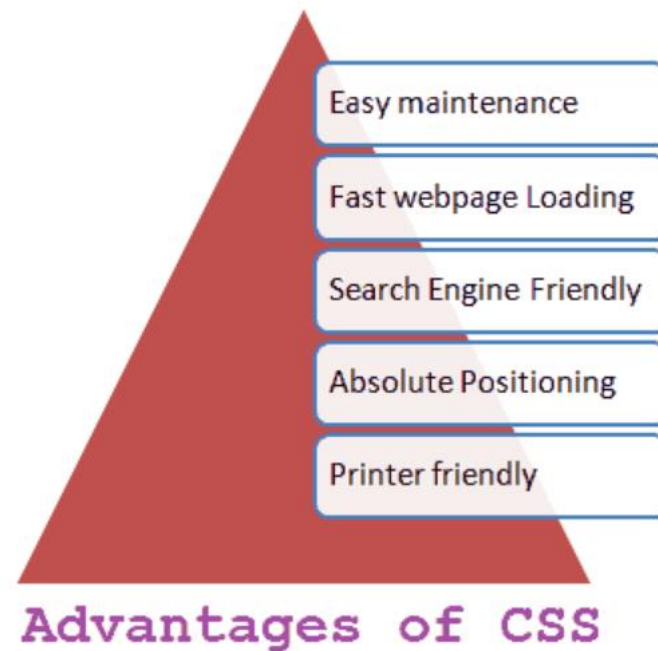
## CSS

```
hr {color:#FF0066}
```

## HTML

```
<hr color="#FF0066">
```

# Advantages of CSS



# Why use CSS?

- One of the primary advantages of CSS is that it allows developers to **separate** content from its presentation **layer**
- Edit multiple HTML pages at one time by editing a single Style Sheet file
- Reduces file sizes and bandwidth usage.
- CSS enable you to lay out web pages exactly as you want them



# Control

- Cascading Style Sheet (CSS) is a **separate language** with its own syntax, which is enable you to lay out web pages exactly as you want them.

# Compatibility



Chrome



Firefox



Internet Explorer



Opera



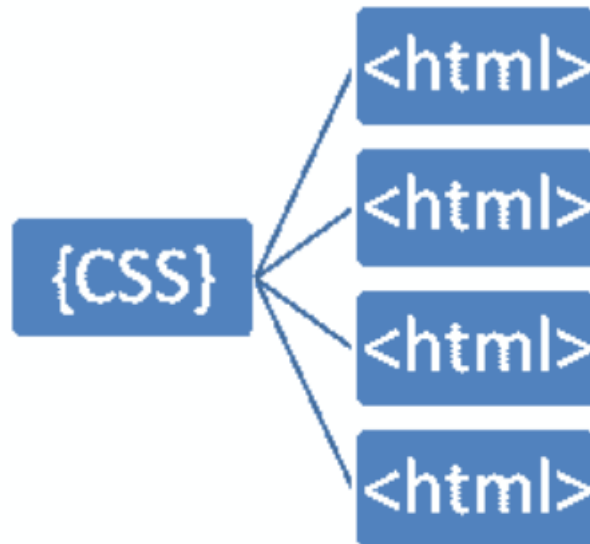
Safari

# World Wide Web Consortium (W3C)

- World Wide Web Consortium (W3C) controls the standard for defining the presentation of documents written in HTML.
- CSS controls the **presentation layer** in a web document so that the web developer gains more degree of control over how the website would appears.

# Separating Content & Presentation Layers

- Style sheets (CSS) are designed primarily to enable the separation of HTML document content from document presentation layer



# Fact

- One single style sheet and it will reduce their size and bandwidth usage by more than **50%** in many cases

# File Extension

- Cascade Style Sheets have a **.css** file extension . CSS has a simple syntax like HTML and uses a number of English keywords to specify the names of various style properties

# CSS Versions

- CSS Level 1 (CSS1) was officially released in 1996
- CSS level 2 (CSS2) specification was developed by the W3C and published as a recommendation in 1998
- The earliest CSS level 3 (CSS3) drafts were published in 1999
  - ▷ CSS level 3 is divided into several separate documents called modules
- There is no single CSS4 specification (yet)

# How does CSS Work?

- Cascading Style Sheet (CSS) is a completely different approach to webpage styling and layout
- Document`s HTML content must combine with style information
- For example:
  - ▷ Content of a page goes into an HTML file, and the style information goes into a style sheet



# Linking

- Cascading Style Sheet (CSS) works by allowing you to **associate rules** with the **tags** that appear in an HTML document

Selector

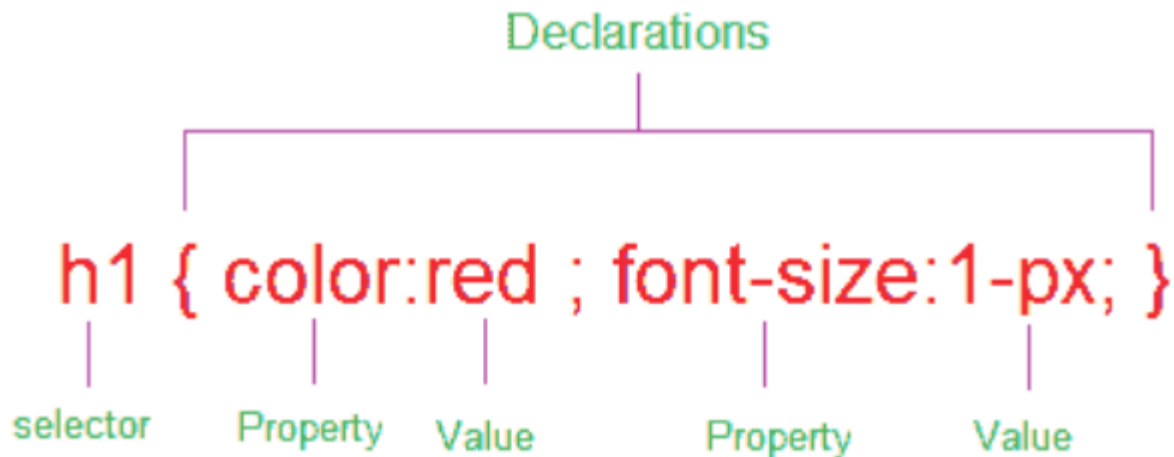
```
h1
```

Declaration

```
{  
  color:red;  
}
```

# CSS Rules

- Rules govern how the content of those elements should be rendered. A rule set consists of a selector followed by a declaration block



# Declarations & Properties

- CSS selectors are patterns used to select the elements you want to style:

▷ `h1 {color:red}` - here `h1` is the selector

- Declarations, which sets out how the elements referred within the selector should be styled

▷ `h1 {color:red}` - here `color:red` is declaration

- Declaration is also split into two parts, separated by a **colon** : property and value

# Example

- A simple example Applying CSS and HTML tags in an HTML page

```
<html>
  <body>

    // CSS implementation
    <hr style="color:#FF0066;">

    // HTML implementation
    <hr color="#FF0066">

  </body>
</html>
```

# 1. Inline Style

```
<p style="color: #0000FF">...</p>
```

## 2. Embedded Style

```
<style>.....</style>
```

```
<head>  
    <style>  
        .....  
        .....  
    </style>  
</head>
```

# Embedded Style Example

```
<html>
  <head>
    <title>Embedded Style Sample</title>
    <style type="text/css">
      h1{
        color: #0000FF;
      }
      h2{
        color: #00CCFF;
      }
    </style>
  </head>
  <body>
    <h1>Embedded Style testing</h1>
    <h2>Next Line</h2>
  </body>
</html>
```

# 3. External Style

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



# Example

## ■ .css File

```
h1{  
color: #0000FF;  
}  
h2{  
color: #00CCFF;  
}
```

## ■ .html File

```
<html>  
  <head>  
    <title>Embedded Style Sample</title>  
    <link rel="stylesheet" type="text/css"  
          href="styles.css" />  
  </head>  
  <body>  
    <h1>Embedded Style Example</h1>  
    <h2>Next Line</h2>  
  </body>  
</html>
```

# Lengths and Units

Relative units  
Absolute units  
Percentages

# Examples

## ■ Relative units

▷ e.g., 'em'

```
p {  
    font-size: 0.8em;  
}
```

## ■ Absolute units

▷ e.g., 'mm', 'cm'

## ■ Percentages

▷ e.g., '%'

```
p {  
    font-size: 90%;  
}
```

# Summary

- Overview of Cascade Style Sheets
- Advantages and implementation of CSS in HTML
- Examples
- Hands-On/Practical

# This Week

- Review Slides
- Read Associated Chapters
- Do this weeks Tasks
  - ▷ Update Online GitHub Website
- Online Quizzes

# Questions/Discussion

