Cascade Style Sheets (CSS)
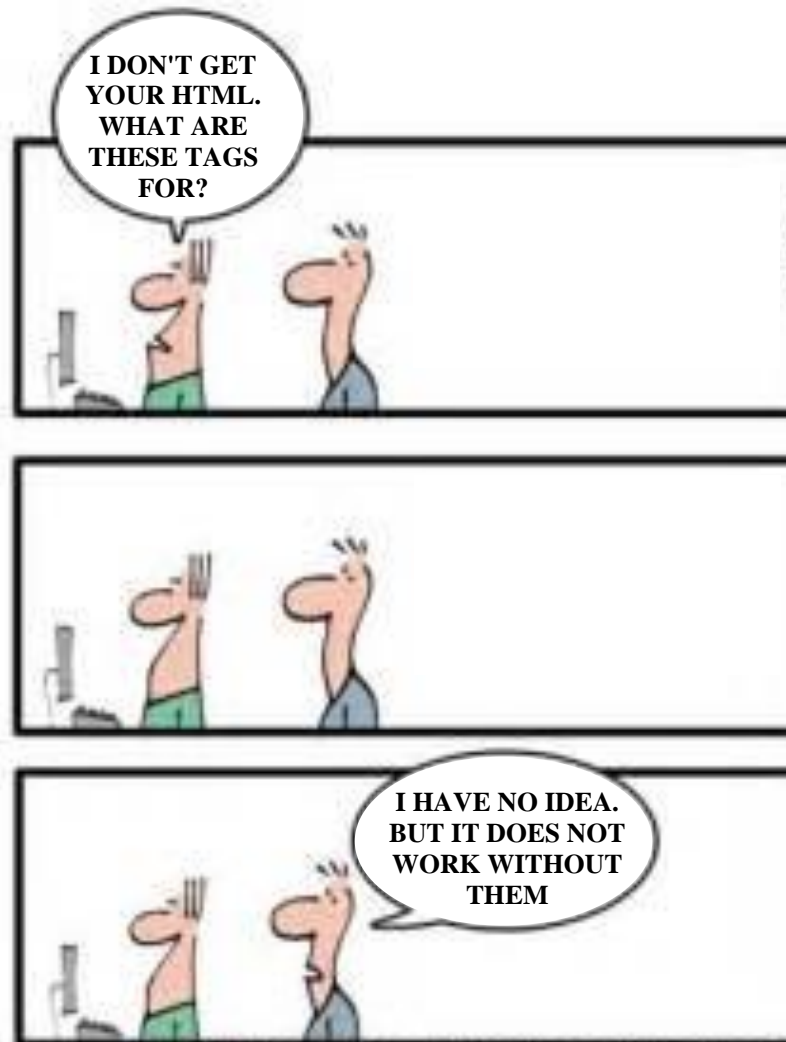
Web Authoring and Design
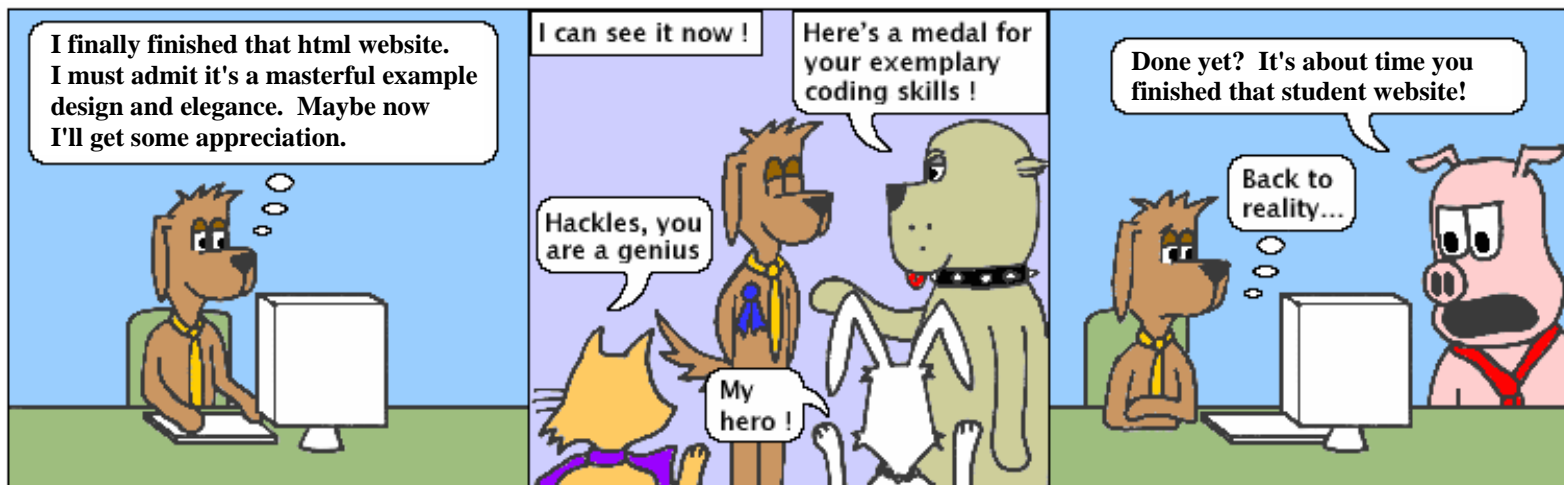
Benjamin Kenwright

Outline

- Review

- What are Cascade Style Sheets (CSS)?

- How to add CSS sheets to your HTML

- CSS Examples

- Summary

- Review/Discussion

Know `YOUR' HTML
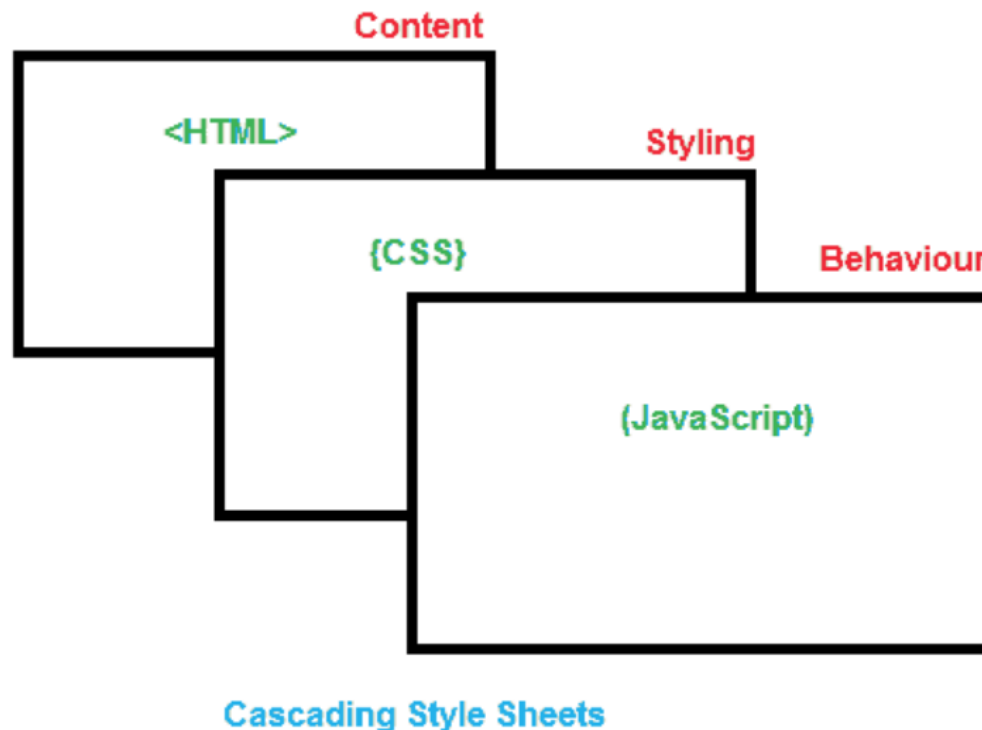
HTML Evolved

◼ 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

Content

<HTML>

Styling

{CSS}

Behaviour

(JavaScript)

Cascading Style Sheets

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
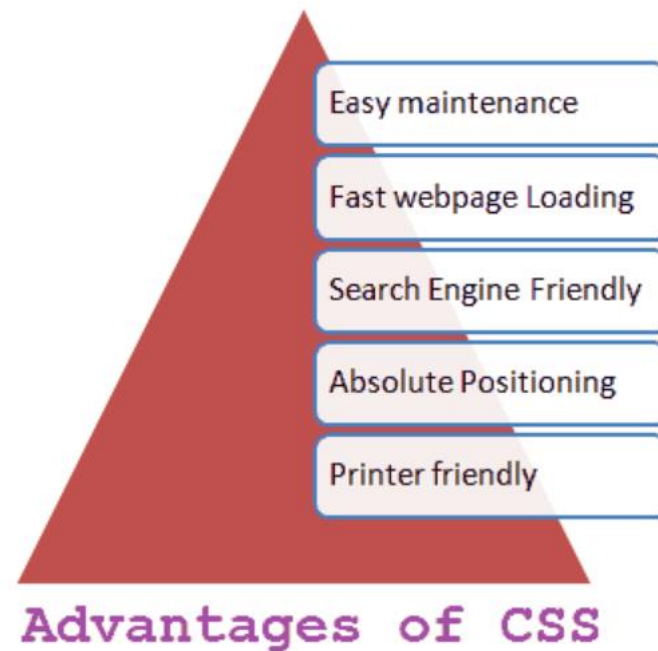
CSS
hr {color:#FF0066}

HTML
<hr color="#FF0066">

Advantages of CSS

Easy maintenance
Fast webpage Loading
Search Engine Friendly
Absolute Positioning
Printer friendly

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

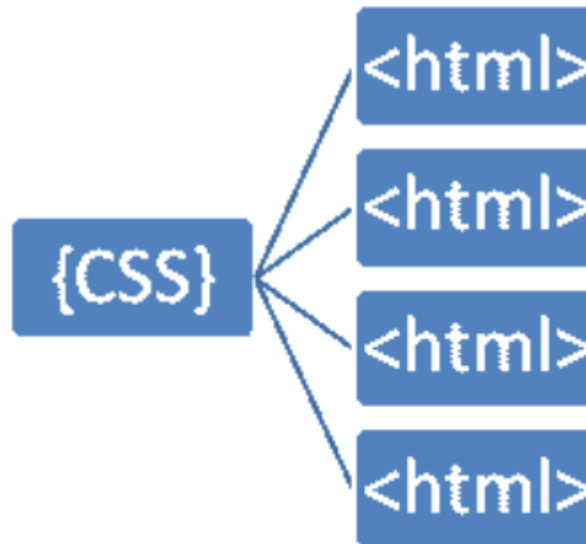Chrome   Firefox   Internet Explorer   Opera   Safari

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 reduces 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

Declaration

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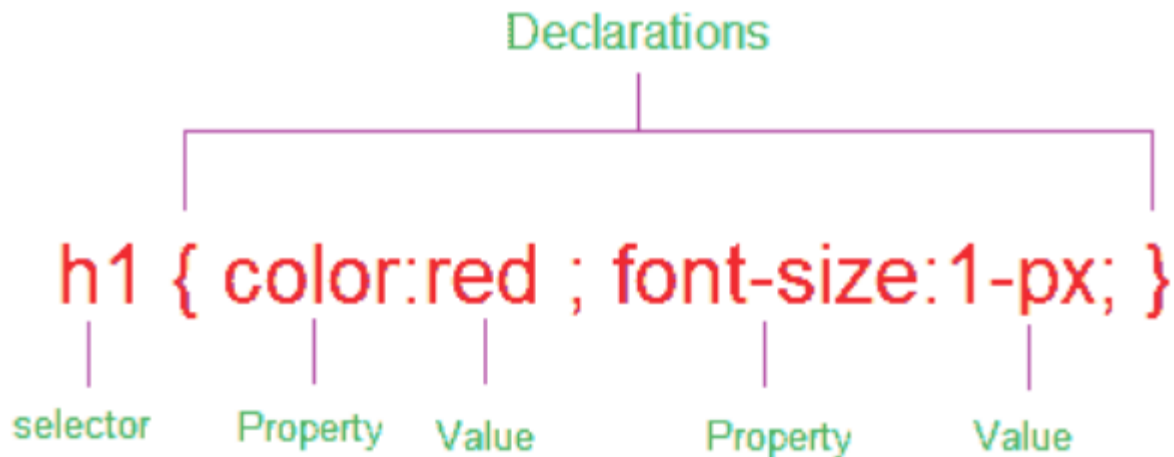
```
{
color:red;
}
```

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

h1 { color:red ; font-size:1-px; }

selector   Property   Value   Property   Value

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
<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;
}s
```

■ .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'
- ◼ Absolute units
  - ▷ e.g., 'mm', 'cm'
- ◼ Percentages
  - ▷ e.g., '%'

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

```
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