

Web Development

Bsc Applied, Forensics, Entertainment Systems, IOT

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CSS - Part 1

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Agenda

Use of CSS for styling

CSS

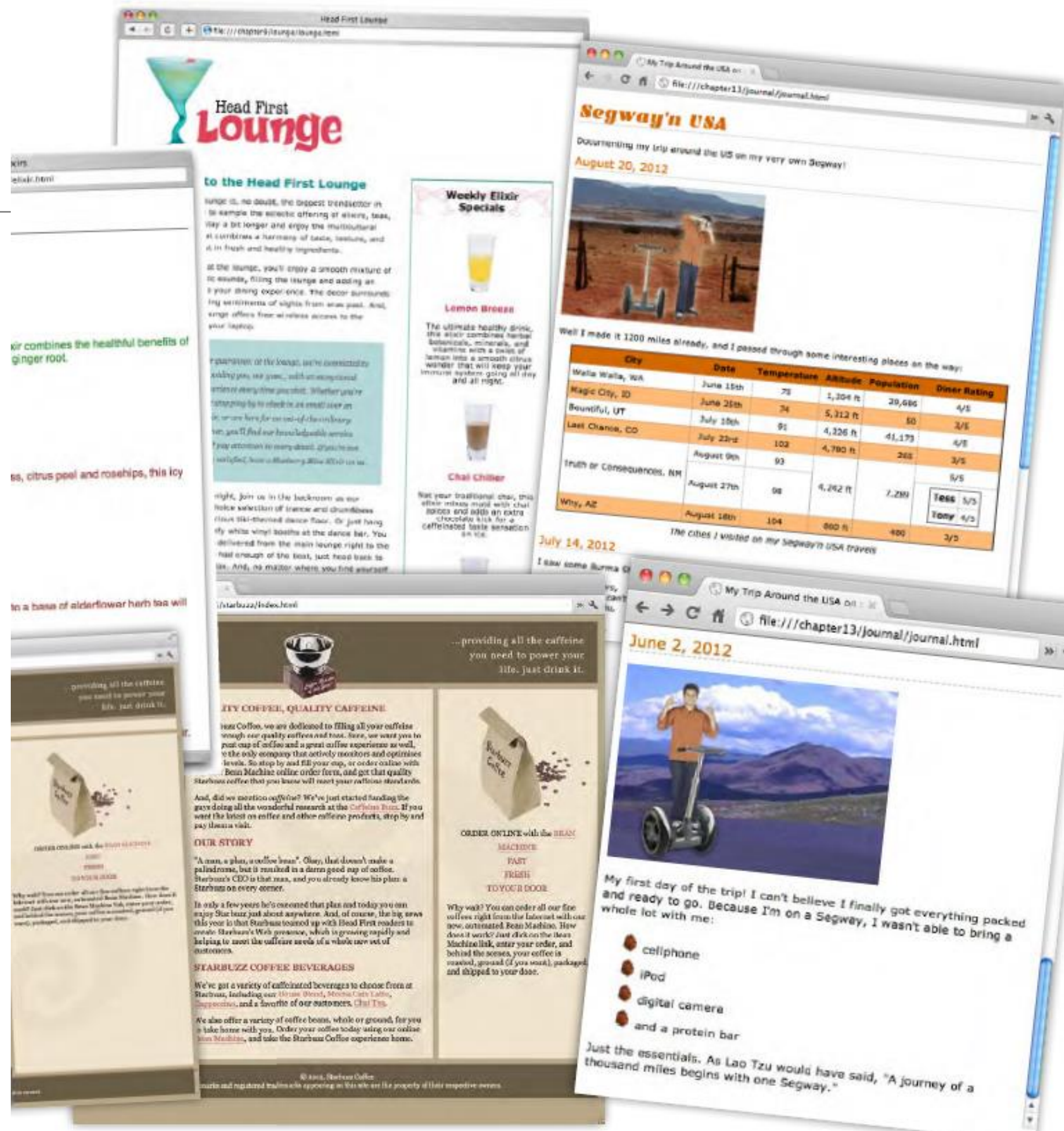
- Rules, Selectors, Declarations, Properties, Values
- CSS Binding

Agenda

Use of CSS for styling

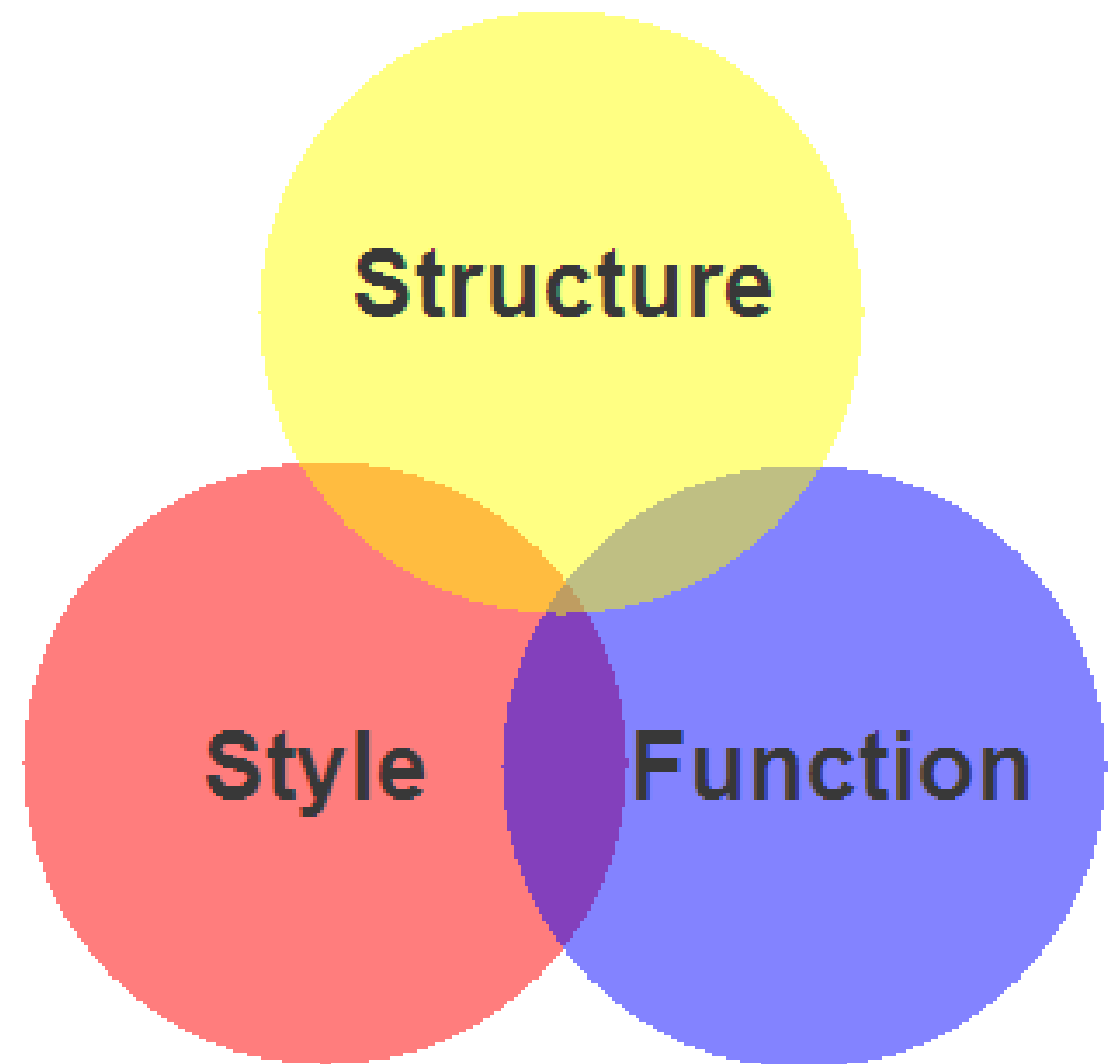
CSS

- Rules, Selectors, Declarations, Properties, Values



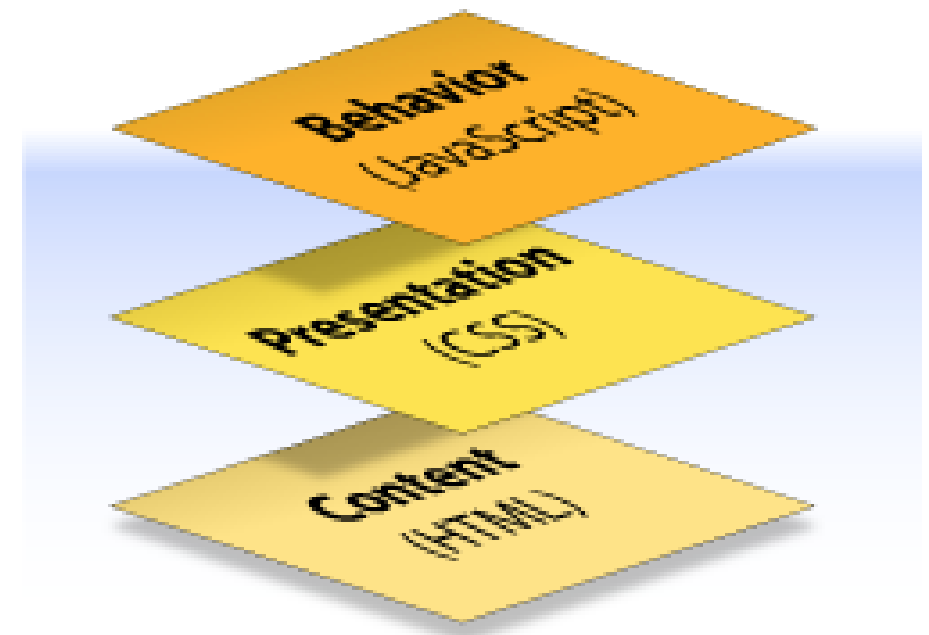
Markup, Style, Function

- Markup (XHTML, HTML)
 - Structure
 - Content
- Style (CSS)
 - Style
 - Presentation
 - Appearance
- Function (Javascript)
 - Actions
 - Manipulations



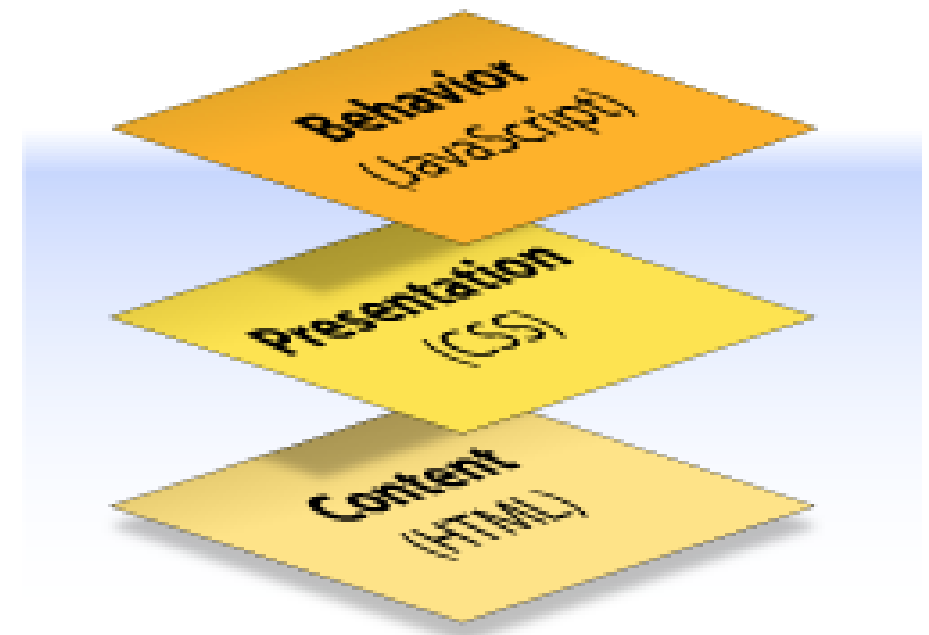
Content, Presentation, Behavior

- **Content** comprises the information the author wishes to convey to his or her audience, and is embedded within HTML or XHTML markup that defines its structure and semantics.
- Most of the content on the Web today is text, but content can also be provided through images, animations, sound, video, and whatever else an author wants to publish



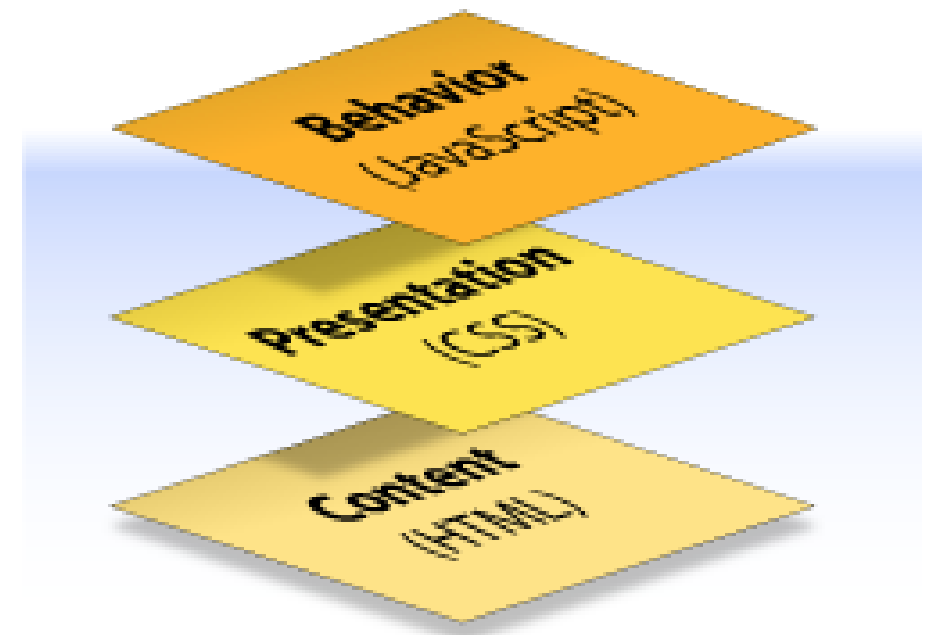
Content, Presentation, Behavior

- **Presentation** defines how the content will appear to a human being who accesses the document in one way or another
- The conventional way to view a web page is with a regular web browser, of course, but that's only one of many possible access methods. For example, content can also be converted to synthetic speech for users who have impaired vision or reading difficulties



Content, Presentation, Behavior

- **Behavior** layer involves real-time user interaction with the document.
- This task is normally handled by JavaScript.
- The interaction can be anything from a trivial validation that ensures a required field is filled in before an order form can be submitted, to sophisticated web applications that work much like ordinary desktop programs.



Separation of Concerns

- It's possible to embed all three layers within the same document
 - eg `` and `` can be used to control the presentation of text, and `<hr>` will insert a visible rule element.
 - Sometimes called *Presentation Markup*, these types of elements embed presentation-layer information within the content layer, they negate any advantage we may have gained by keeping the layers separate.
- Keeping them separate gives us one valuable advantage:
 - ***We can modify or replace any of the layers without having to change the others.***

What is CSS?

- Cascading Style Sheets is the recommended way to control the presentation layer in a web document.
- The main advantage of CSS over presentational HTML markup is that the styling can be kept entirely separate from the content.
- e.g. it's possible to store all the presentational styles for a 10,000-page web site in a single CSS file.
- CSS also provides far better control over presentation than do presentational element types in HTML.

Advantages of CSS

- All styling is kept in a limited number of style sheets.
- Saving on bandwidth: The style sheet is cached (kept on client machine) after the first request and can be reused for every page on the site, it doesn't have to be downloaded with each web page. Could reduce bandwidth usage—by more than 50% in many documented cases.
- The separation of content from presentation makes it easier for site owners to reuse the content for other purposes, such as RSS feeds or text-to-speech conversion.
- Separate styling rules can be used for different output media. We no longer need to create a special version of each page for printing—we can simply create a single style sheet that controls how every page on the site will be printed.

Separating Style Sheets from HTML

- Ideally, a site may have a single style sheet for most purposes. It is possible to include the css rules within your html files but this is not advisable.
- In a separate style.css file the rules are written.
- It is then necessary to link from the html file to the style.css file

<link> element

Use the link element to "link in" external information.

The type of this information is "text/css". In other words, a CSS style sheet.

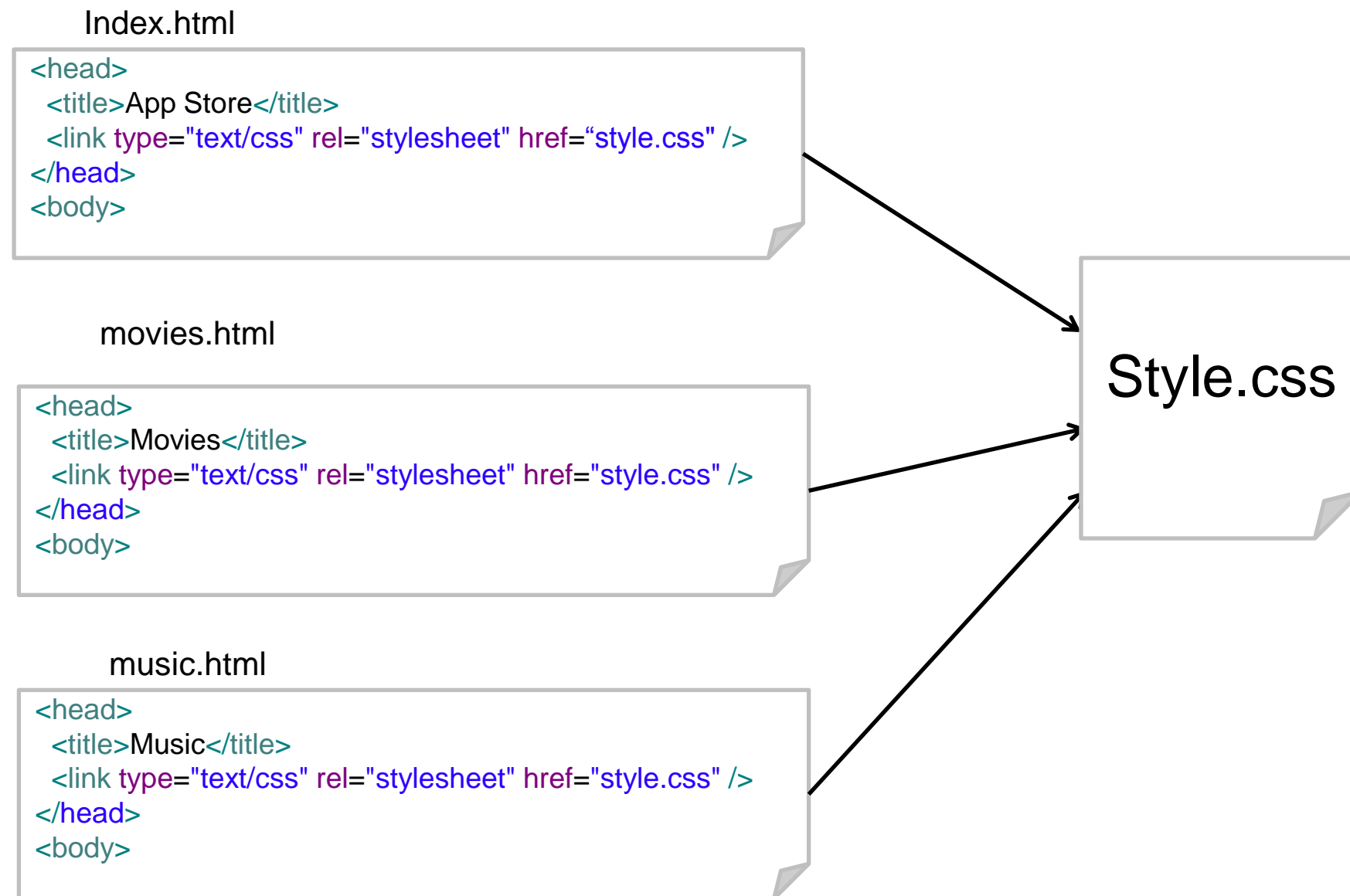
And the style sheet is located at this href (in this case we're using a relative link, but it could be a full-blown URL).

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

The rel attribute specifies the relationship between the XHTML file and the thing you're linking to. We're linking to a style sheet, so we use the value "stylesheet".

<link> is an empty element.

One Stylesheet - Multiple html pages



Agenda

Use of CSS for styling

CSS

- Rules, Selectors, Declarations, Properties, Values

Okay, let's get some design in this place...

```
bedroom {  
  drapes: blue;  
  carpet: wool shag;  
}
```

...and this bathroom needs some serious help!

```
bathroom {  
  tile: 1in white;  
  drapes: pink;  
}
```



Of course, in the Webville edition of the show, everyone talks about design in CSS. If you're having trouble understanding them, here's a little translation tip: each statement in CSS consists of a location (like bedroom), a property in that location (like drapes or carpet), and a style to apply to that property (like the color blue, or 1 inch tiles).

CSS Rule

```
p {  
    color: red;  
    background-color: blue;  
}
```

CSS
Rule

Selector and Declarations

Selector

Declaration

p

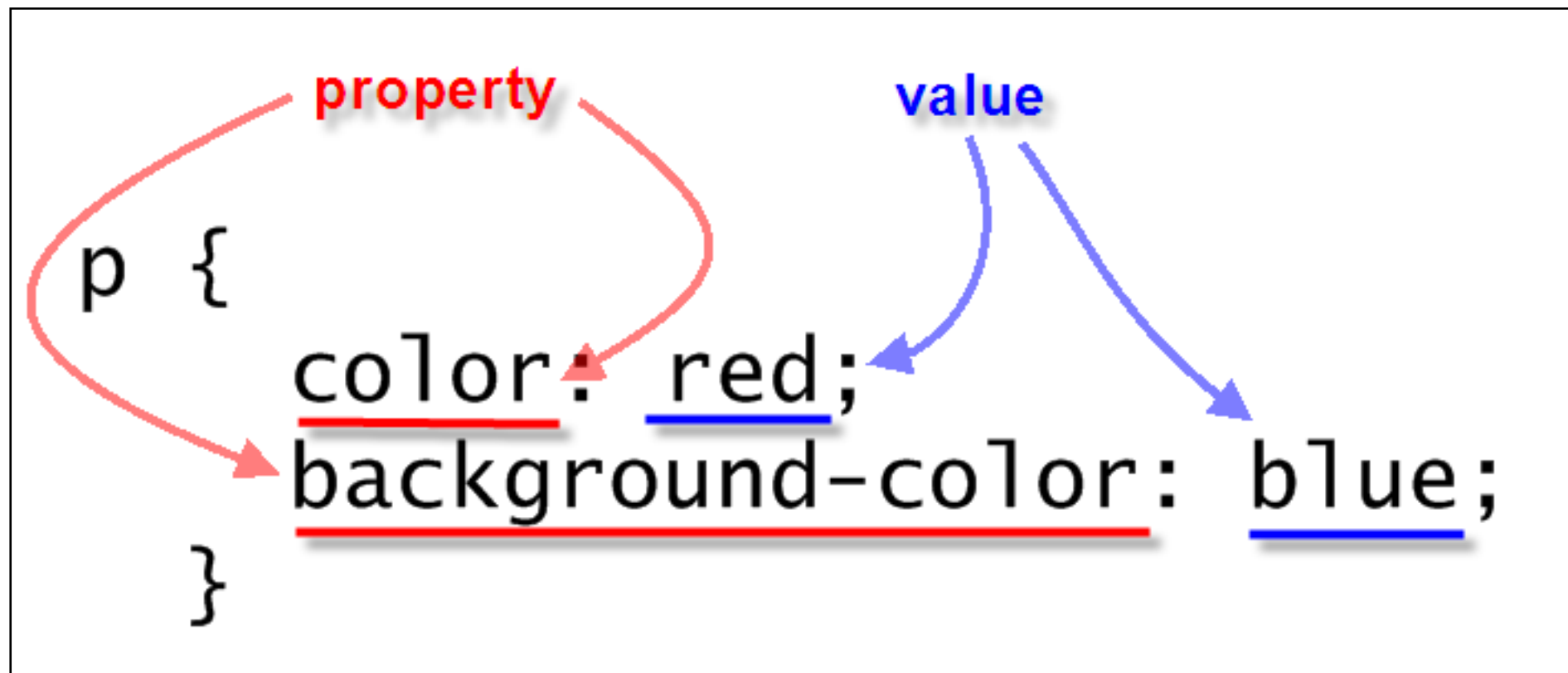
{

color: red;

background-color: blue;

}

Properties & Values



A CSS Rule

The first thing you do is select the element you want to style, in this case the <p> element. Notice in CSS, you don't put <> around the name.

p {

background-color: red;

}

Place all the styles for the <p> element in between { } braces.

Then you specify the property you want to style, in this case the <p> element's background color.

And you're going to set the background-color to red.

At the end, put a semicolon.

There's a colon in between the property and its value.

We call the whole thing a RULE.

More Properties...

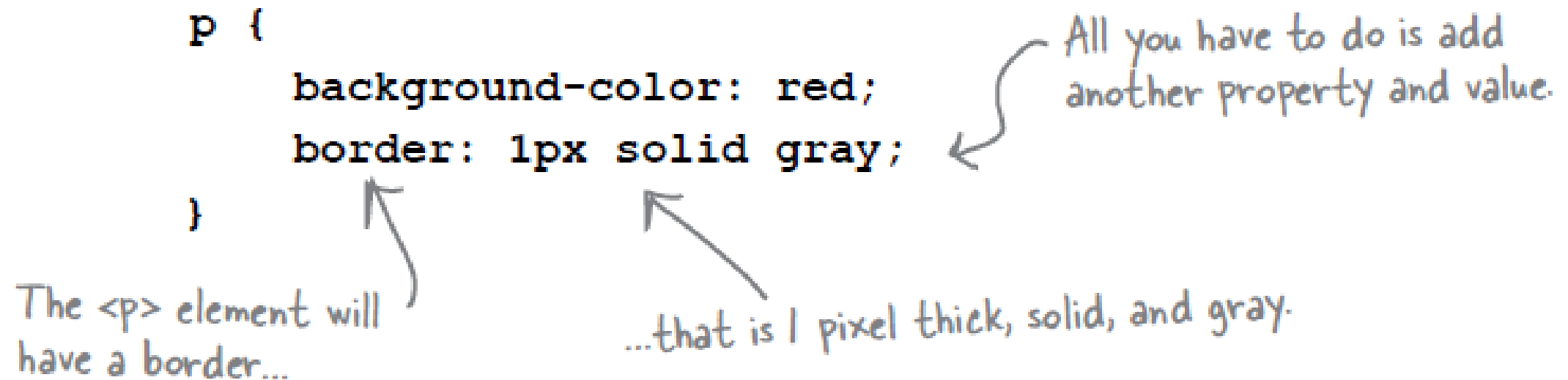
- You can add as many properties and values as you like in each CSS rule.
- To put a border around your paragraphs:

```
p {  
    background-color: red;  
    border: 1px solid gray;  
}
```

The <p> element will have a border...

...that is 1 pixel thick, solid, and gray.

All you have to do is add another property and value.

The diagram shows a CSS rule for a paragraph element. The code is:

```
p {  
    background-color: red;  
    border: 1px solid gray;  
}
```

 There are three handwritten annotations in blue ink. One arrow points from the text "The <p> element will have a border..." to the opening curly brace of the rule. Another arrow points from the text "...that is 1 pixel thick, solid, and gray." to the "1px" value in the border property. A third arrow points from the text "All you have to do is add another property and value." to the "border" property name.

If you have errors in your CSS, usually what happens is all the rules below the error are ignored. So, get in the habit of looking for errors now, by doing this exercise.



BE the Browser

Below, you'll find the CSS file "style.css", with some errors in it. Your job is to play like you're the browser and locate all the errors. After you've done the exercise, look at the end of the chapter to see if you caught all the errors.

The file "style.css" →

```
body {  
    background-color: white  
  
h1, {  
    gray;  
    font-family: sans-serif;  
}  
  
h2, p {  
    color:  
}  
  
<em> {  
    font-style: italic;  
}
```