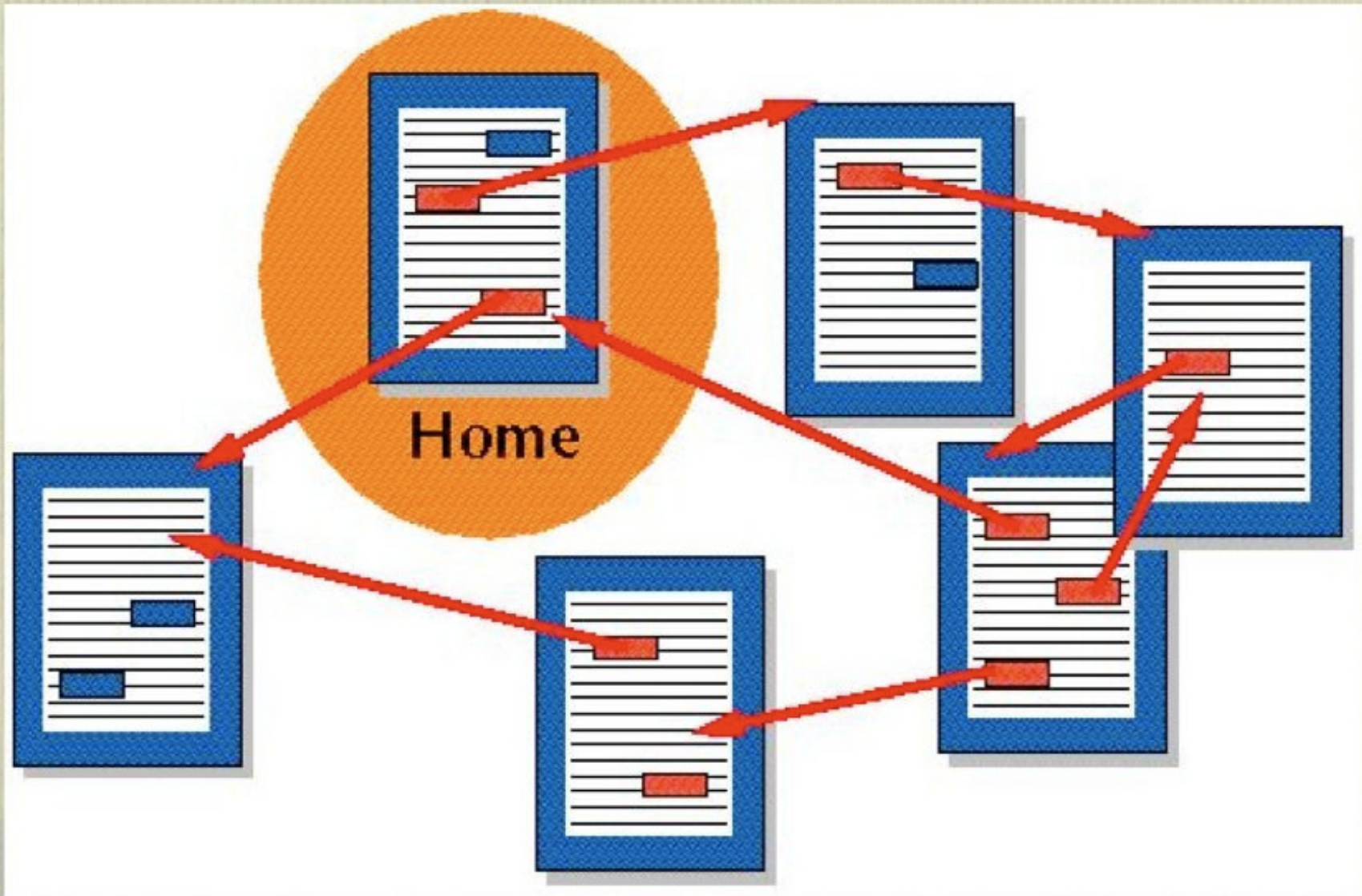


CSS

Styling Static Websites



Hypertext



HTML Document Structure

<!DOCTYPE ...>

← Abbreviated!

<html>

<head>

[HEAD ELEMENTS]

←

Meta

Information

Only <title>

is ever seen

by users!

</head>

<body>

[BODY ELEMENTS]

←

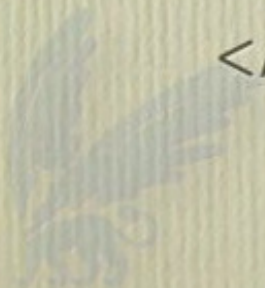
Contents of

The

Document

</body>

</html>



Use a Complete Doc Type

- HTML 4.01 Strict:

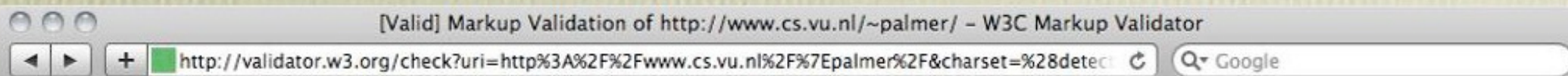
```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"  
"http://www.w3.org/TR/html4/strict.dtd">
```

- XHTML 1.0 Strict:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

- Validate your HTML!

<http://validator.w3.org>



HTML Head Elements

- `<title>` Used to specify the title of the window. Very important to search engines
- `<script>` Used to link in external Javascript
- `<style>` Used to link in external CSS
- `<meta>` Used to specify metadata. Some are important to search engines.
- `<link>` A resource reference. Subsumes `<script>` and `<style>`
- `<base>` The base URL for relative URLs

**No OTHER Elements Allowed!
Not Allowed OUTSIDE of head!**

Marquee Tag

- Non-Standard (MS extension)
- Not Valid according to W3C standard!
 - Widely supported
- Breaks Separation of Concerns!
 - Movement is presentation not structure
- Effect can be achieved with JavaScript
- CSS Effect designed but not implemented

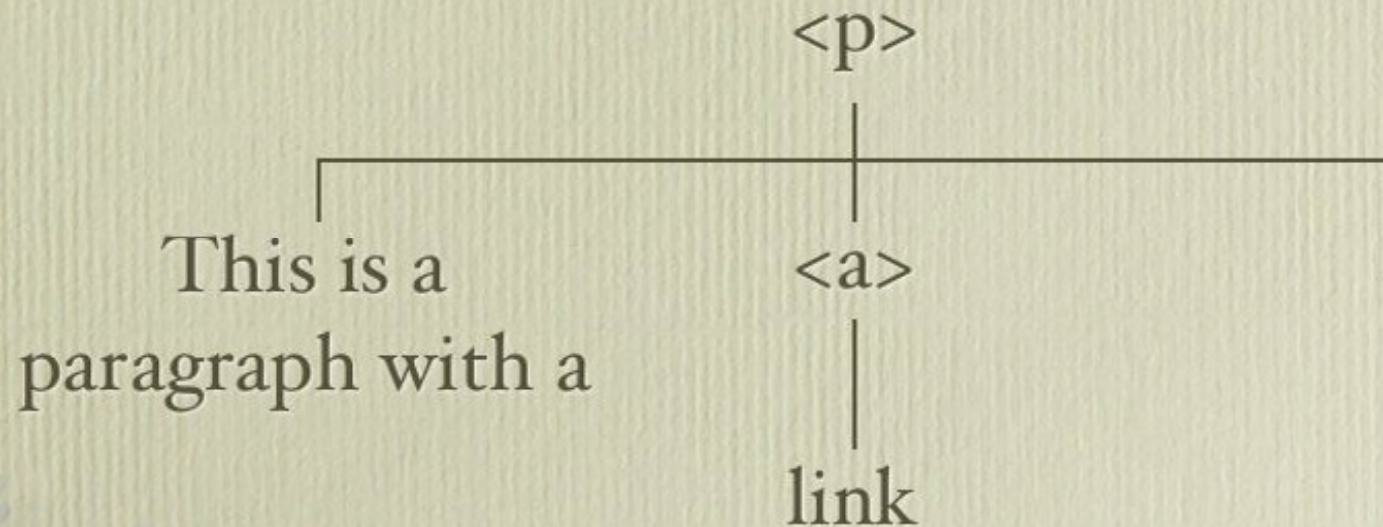
HTML Elements

- Elements run from open tag to close tag
 - Element content is everything between
- Open and Close tags must be **PAIRED!**
- Most can be nested inside each other
 - Only a **FEW** are allowed in head!
 - Those are not allowed **OUTSIDE** head!



HTML Elements

```
<p>This is a paragraph with a  
<a href="link.html">link</a>.</p>
```



URLs: Relative vs Absolute

- URLs come in two forms
 - Relative to current document
 - Same folder: myImage.jpg
 - Sub-folder: images/myImage.jpg
 - In the parent folder: ../myImage.jpg
 - From root of web server: /myImage.jpg
 - Absolute which includes SCHEME
 - <http://some.site.com/path/page.html>



Invalid URLs

- ``
 - Not Relative!
 - Not Absolute!
 - Needs file SCHEME
 - Won't work when you put it on a server!



What URLs to Use

- Links to your own content
 - Use Relative URLs
- Links to content on other sites
 - Use Absolute URLs



CSS

Styling HTML Structure



CSS: Cascading Style Sheets

- Used to style the display of HTML
- Added in HTML 4
- Comes in several versions as well!
 - 1 and 2 largely supported now



CSS: Solving a Problem

- Tags like `` or those for color attributes or bold and italic added to HTML 3.2 made maintenance a pain!
- CSS allows all presentation in another file
- The CSS file is then linked to all HTML documents on a site



CSS: Presentation Control

css Zen Garden: The Beauty in CSS Design

http://csszengarden.com/?cssfile=/213/213.css&page=0

RSS

Google



A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

DOWNLOAD THE SAMPLE HTML FILE AND CSS FILE



THE ROAD TO ENLIGHTENMENT

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.



SELECT A DESIGN

- Under the Seal
by Eric Stoltz
- Make 'em Proud
by Michael McAgnon and
Scotty Reifsnyder
- Orchid Beauty
by Kevin Addison
- Oceanscape
by Justin Gray
- CSS Co., Ltd.

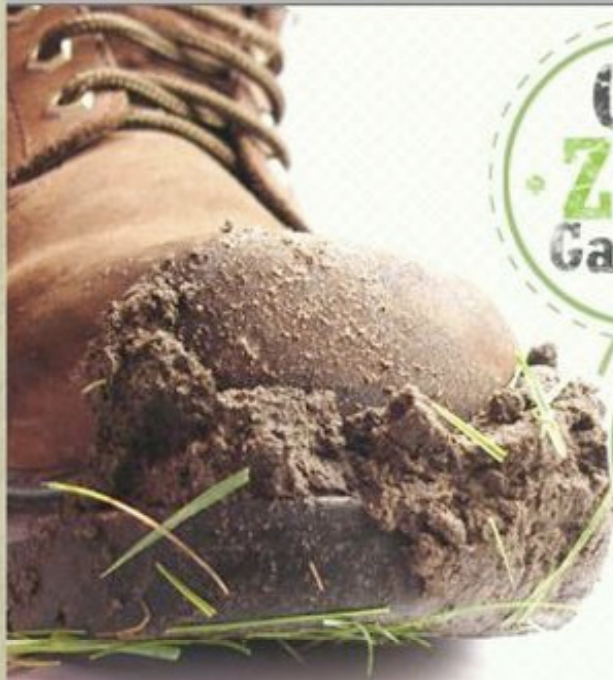
CSS: Presentation Control

css Zen Garden: The Beauty in CSS Design

http://csszengarden.com/?cssfile=/206/206.css&page=0

RSS

Google



CSS
ZEN
Garden

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

the beauty of
css design

Download the sample [html file](#) and [css file](#) ↓

The Road to Enlightenment

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Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

→ Select a Design:



[Under the Seal](#)
by [Eric Stoltz](#)



[Make 'em Proud](#)
by [Michael McAghon](#) and
[Scolly Reifsnnyder](#)



[Orchid Beauty](#)

This is not a design class!

- I will try to teach you mechanisms!
- I am not a designer.



CSS Properties & Values

- Properties specify what to style
- Values give the value for the property
- Notated:
 `property:value`
- Combined into lists with a ;
 - `property1:value1 ; property2:value2`

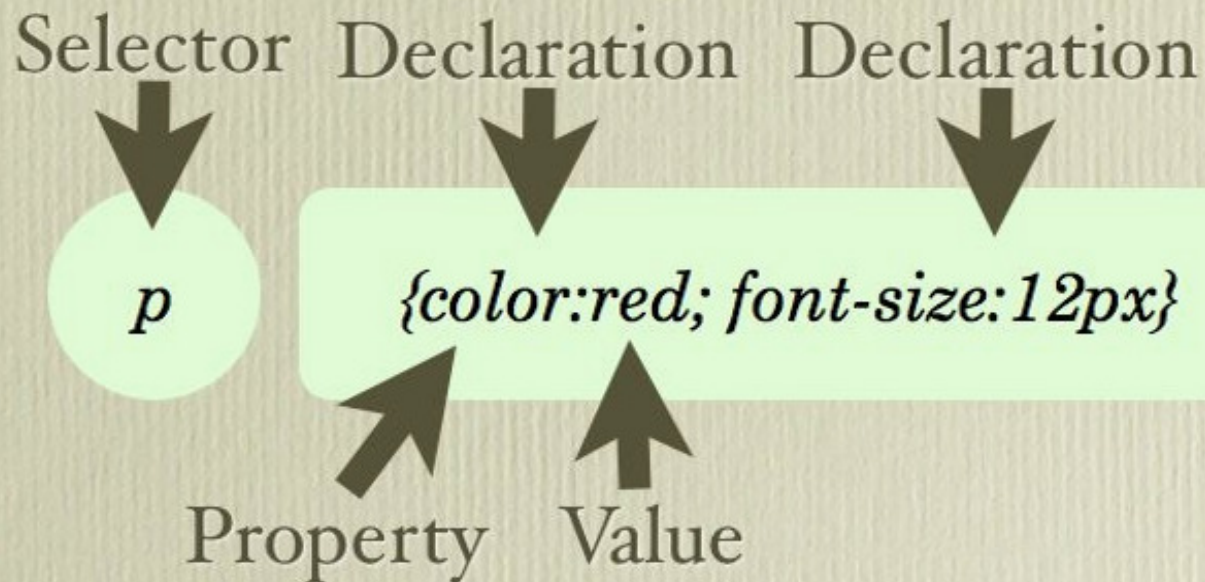


The Style Attribute

- Style Attribute on (almost) all elements
- Examples:
 - `style="background-color:yellow"`
 - `style="font-size:10px"`
 - `style="text-align:center;color:red"`
- Lots more properties available

CSS: Syntax

- Also Available In Another File!
 - But which elements does it apply to?
 - Selectors pick which elements!



CSS: Examples

- `p {color:blue}`
- `h1 {color:red; text-align:center}`
- `a {font-weight:bold}`



CSS: Comments & White Space

- Comments in CSS are “C Style”:
`/* This is a comment */`
- Multiple white spaces are ignored



CSS: Connecting to HTML

- External Style Sheet

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

- Internal Style Sheet

- `<head>`
`<style type="text/css">`
`hr {color:red;}`
`p {text-align:center;}`
`</style>`
`</head>`

- Inline Style Via Attribute (discouraged!)

- `<p style="text-align:center">`

CSS: Selectors

- Selectors allow you to “target” properties
 - By Element: e.g. p, h1, body
 - By Id: `<p id="paragraph-1">`
Denoted `#paragraph-1`
 - By Class: `<p class="centered">`
Denoted `.centered`
 - By combinations of these
e.g. `p.centered`



CSS: Pseudo Classes

- Special selectors such as for events
- Syntax: selector:pseudo-class {declarations}
- CSS 1: For Anchor Elements
 - a:link /* Unvisited link */
 - a:visited /* Visited link */
 - a:hover /* Hovered link */
 - a:active /* Selected Link */
- Unfortunately, order matters for a!



CSS: Pseudo Classes

- CSS 2 Added additional Pseudo Classes
 - :first-child styles the first sub-element of an element
 - :focus styles an item with keyboard focus
 - :lang style an element with a lang attribute
- CSS 3 adds even more but not well supported ... yet!

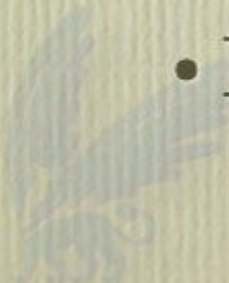
CSS: Selector Grouping and Nesting

- Selectors can be grouped by comma
 - `p,h1,h2 {color:blue;}`
- Selectors can be nested with white space
 - `p.blue a {color:yellow;}`
colors anchors within a paragraph of class blue







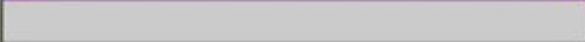

CSS: Style Properties

- >60 different properties in 7 Categories:
- Fonts
- Lists
- Text Alignment
- Margins & Padding
- Colors
- Backgrounds
- Borders



CSS: Colors

- Specified via name, hex or rgb value

Color	Color HEX	Color RGB
	#000000	rgb(0,0,0)
	#FF0000	rgb(255,0,0)
	#00FF00	rgb(0,255,0)
	#0000FF	rgb(0,0,255)
	#FFFF00	rgb(255,255,0)
	#00FFFF	rgb(0,255,255)
	#FF00FF	rgb(255,0,255)
	#C0C0C0	rgb(192,192,192)
	#FFFFFF	rgb(255,255,255)

- More than 150 cross browser names

<u>Chocolate</u>	<u>#D2691E</u>	
<u>Coral</u>	<u>#FF7F50</u>	
<u>CornflowerBlue</u>	<u>#6495ED</u>	
<u>Cornsilk</u>	<u>#FFF8DC</u>	
<u>Crimson</u>	<u>#DC143C</u>	
<u>Cyan</u>	<u>#00FFFF</u>	
<u>DarkBlue</u>	<u>#00008B</u>	
<u>DarkCyan</u>	<u>#008B8B</u>	
<u>DarkGoldenRod</u>	<u>#B8860B</u>	
<u>DarkGray</u>	<u>#A9A9A9</u>	
<u>DarkGreen</u>	<u>#006400</u>	
<u>DarkKhaki</u>	<u>#BDB76B</u>	

- But only 16 are W3C valid so use hex!

CSS: Properties

- Come in Short and Long Versions:

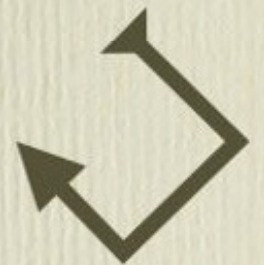
- Example using Margins:

- `margin-top: 25px;`
`margin-right: 50px;`
`margin-bottom: 75px;`
`margin-left: 100px;`

- `margin: 25px 50px 75px 100px;`

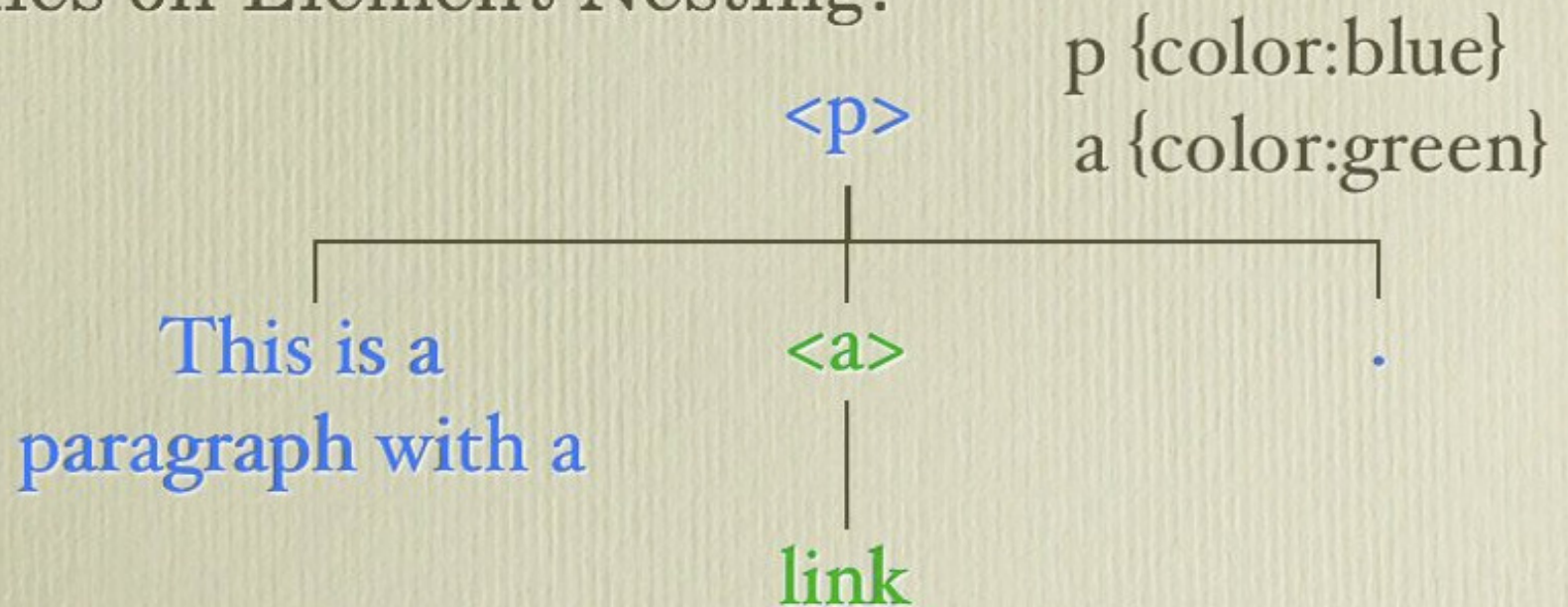
- `margin: 25px 50px;`

- `margin: 25px;`



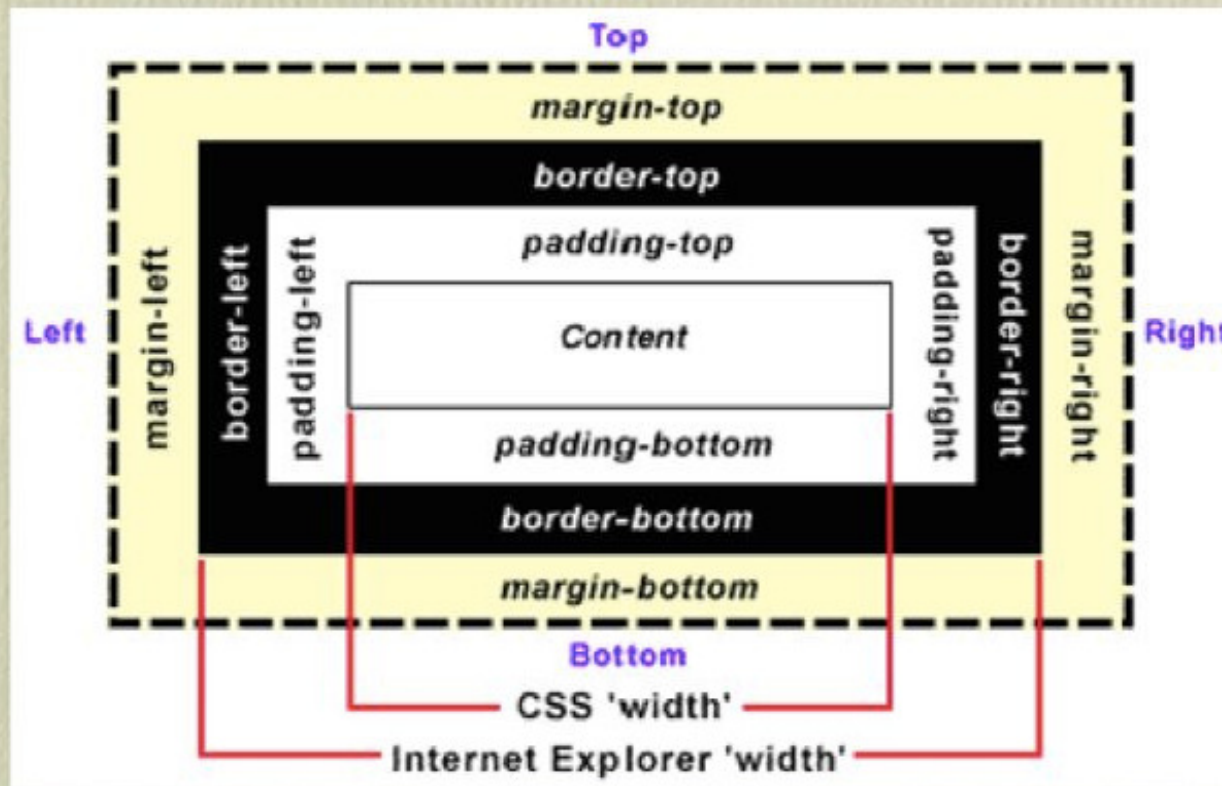
CSS: Cascading

- Styles “Cascade”:
all elements within an element inherit all style applied to their parent elements.
- Relies on Element Nesting!



CSS: Box Model

- All HTML elements are boxes



- Sizes are additive!

CSS: Dimensions

- Sizes can be specified in:
 - Absolutes (px, pt, em, etc...)
 - Percentage (of containing elements)



CSS: HTML For Style

- HTML offers two special Elements
 - `<div>` for large blocks (divisions)
 - Similar to `<p>` but without meaning
 - `` for inline sections
 - This is `Red`



CSS: Advanced Positioning

- Comes in 4 flavors:
 - Static (The Default)
 - Fixed (Fixed relative to Browser window)
 - Relative (Relative to containing element)
 - Absolute (Relative to first non-static parent)
- Easily gets confusing!

CSS: Floating

- float specifies how elements line up relative to each other



This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text.

This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text. This is some text.



- Can be turned off with clear



Validating CSS

- <http://jigsaw.w3.org/css-validator/>



The screenshot shows a web browser window displaying the W3C CSS Validator results for the URL <http://www.cs.vu.nl/~palmer/> (CSS level 2.1). The browser's address bar shows the URL <http://jigsaw.w3.org/css-validator/validator?uri=http%3A%2F%2Fwww.cs.vu.nl%2F%7Epalmer/>. The page header includes the W3C logo and the text "The W3C CSS Validation Service". Below the header, there are navigation links: "Jump to: Errors (20) Warnings (320) Validated CSS". The main content area displays the title "W3C CSS Validator results for <http://www.cs.vu.nl/~palmer/> (CSS level 2.1)". A red banner indicates "Sorry! We found the following errors (20)". Below this, a table lists the errors found in the CSS file <http://www.cs.vu.nl/en/css/default.css>.

Line	Selector	Error Description
1723	.alphabet_title	Value Error : font-weight none is not a font-weight value : none none
1883	.form_help	Value Error : display -moz-inline-block is not a display value : -moz-inline-block -moz-inline-block
1895	*	Parse Error *html .form_help, *+html .form_help { display: inline; }
1979	.person_info	Property _height doesn't exist : 135px 135px
1992	.person_info.with_photo	Property _height doesn't exist : 165px 165px
3104	.button div.btns	Property zoom doesn't exist : 1 1

IE Developer Tools

- Tools -> Developer Tools (F12)
 - Allows you to look at the tree of your document
 - Allows you to look at the CSS for an element



Firefox Firebug

- Extension to Firefox
- Similar to IE Developer Tools
 - Can see structure and CSS of document



Online References

- <http://www.w3schools.com>
 - http://w3schools.com/html/html_examples.asp
 - http://w3schools.com/css/css_examples.asp
- <http://htmlhelp.com/reference/html40>

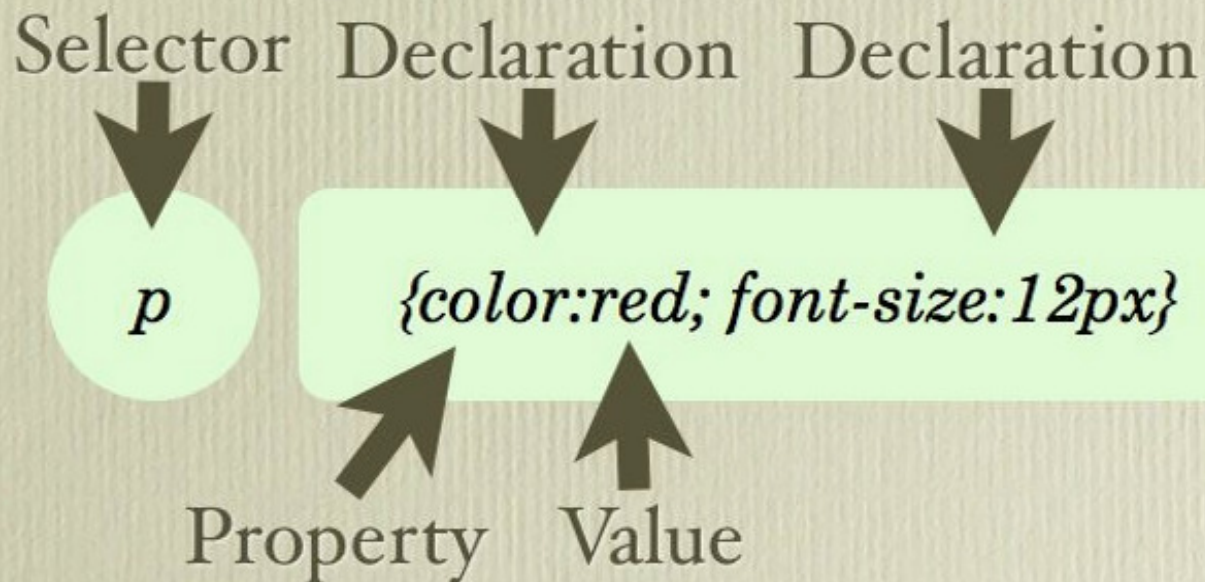


Important Concepts



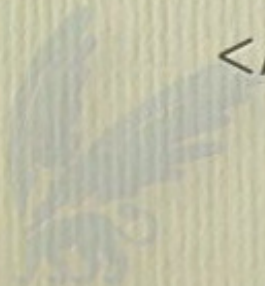
CSS: Styles HTML

- Styles HTML documents
- Consists of Selectors and Declarations
 - Declarations are Property:Value



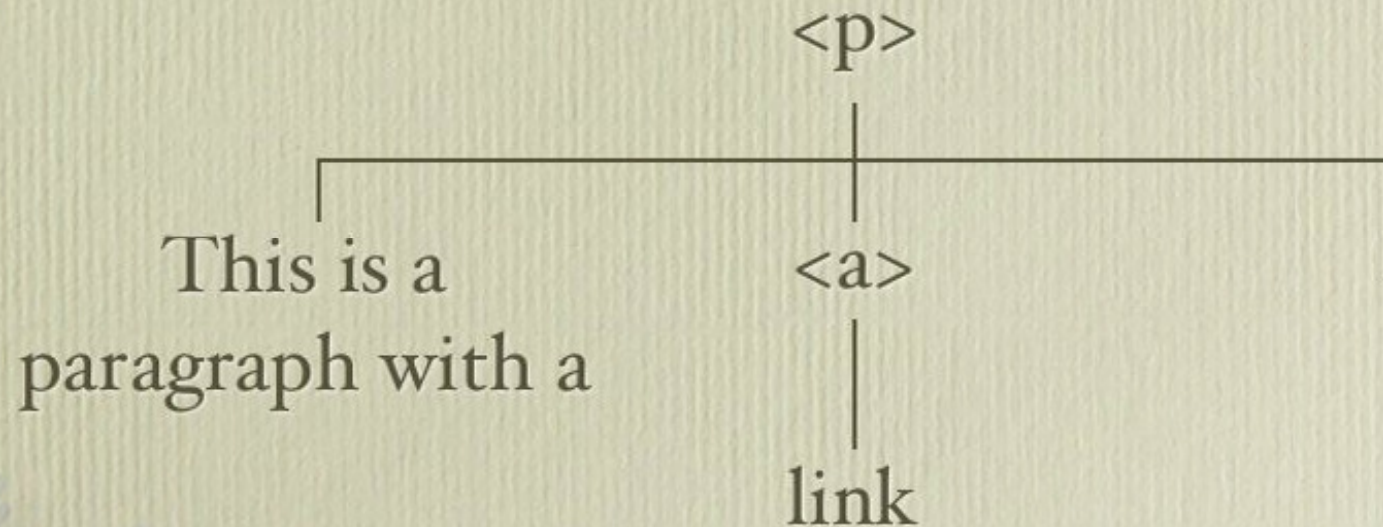
HTML Document Structure

```
<!DOCTYPE ...> ← Abbreviated!  
<html>  
  <head>  
    [HEAD ELEMENTS] ← Meta Information  
  </head>                                     Only <title>  
                                              ever seen by  
                                              users!  
  <body>  
    [BODY ELEMENTS] ← Contents of  
                                     the  
                                     Document  
  </body>  
</html>
```



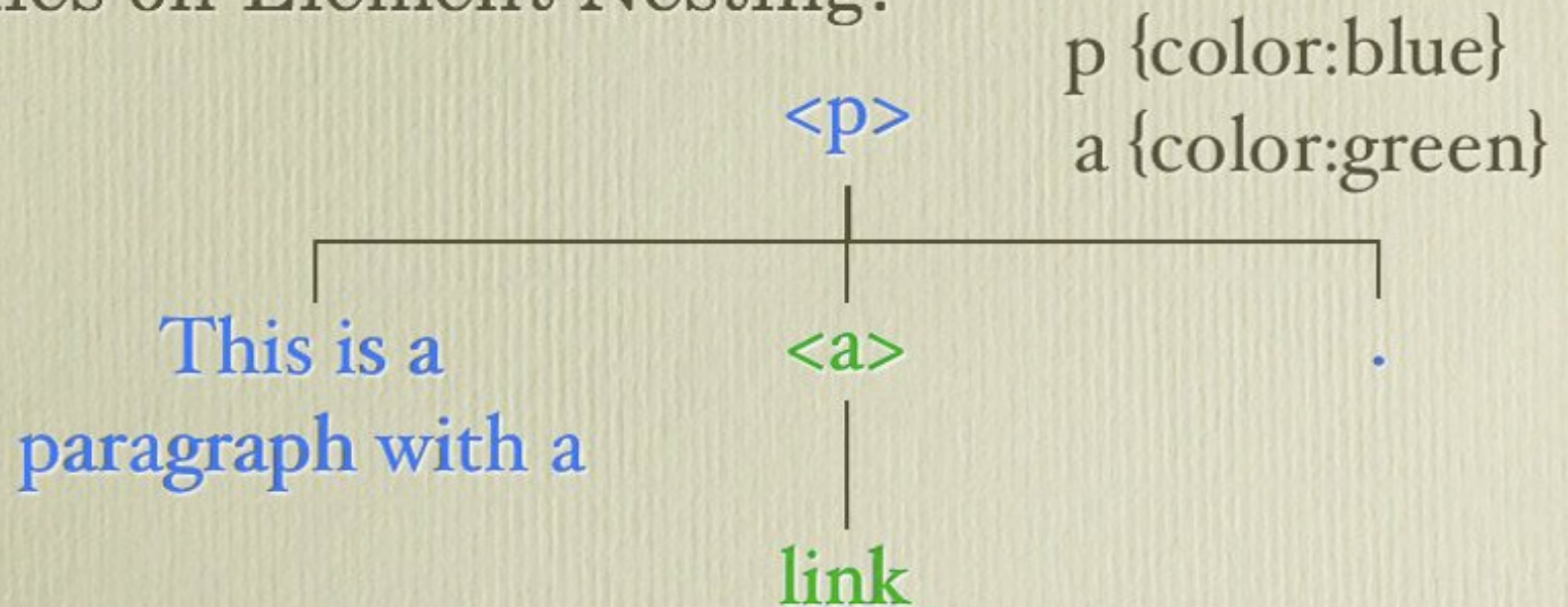
HTML Elements

`<p>`This is a paragraph with a
``link```</p>`



CSS: Cascading

- Styles “Cascade”:
all elements within an element inherit all style applied to their parent elements.
- Relies on Element Nesting!



Page Layout

- Can be done with a table
- Can be done with CSS
 - Preferred method but **MUCH** harder!



Page Layout With Tables

- Uses colspan attribute to make one column span multiple columns in the table
- `<table>`
 - `<tr><td colspan=3>Header</td></tr>`
 - `<tr><td>Left</td>`
 - `<td>Center</td>`
 - `<td>Right</td></tr>`
 - `<tr><td colspan=3>Footer</td></tr>`




Page Layout With A Table

page_layout.html

file:///Users/nick/Documents/VU/Spring%202010/My%20Slides/Final/Day%20-%20H Google

MY SITE

The Main document. Here I put an image



Navigation Bar
[Home](#)
[Products](#)
[Contact](#)
...

Secondary Bar
Contains minor information, such as news or ads

Bottom row. © Copyright information. Contact information...

Page Layout With CSS

- Much more complicated
- Uses div for each td section
- Uses CSS float to position the divs
- See the example `css_page_layout.html`

MY SITE

Navigation Bar

[Home](#)
[Products](#)
[Contact](#)

...

The Main document. Here I put an image



Secondary Bar

Contains minor information, such as news or ads