CSS Crash Course

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Part 1

Introduction to CSS

What is CSS/Why CSS?

- A language complementary to HTML
- Separation of structure (HTML) and style (CSS)
- Centralisation of style in one file
  - modifying one declaration can affect the whole site
- Allows allocating style to HTML elements defined by complex relationships
  - e.g. A list in a list
- Note: Like HTML, different browsers interpret CSS differently

Links

- What can you do with CSS?
  - http://meyerweb.com/eric/css/edge/
  - http://www.csszengarden.com/
- Good reference material
  - http://www.w3schools.com/css/
  - http://glish.com/css
  - http://www.blooberry.com/indexdot/css/

Kickstart: The HTML side

1. Create a basic HTML file with <head>, <body> etc and some basic content to test with
2. Add the following to the <head> section of your HTML page:

<link rel=”stylesheet” type=”text/css” href=”style.css”>

Remember to close with /> if you are using XHTML!

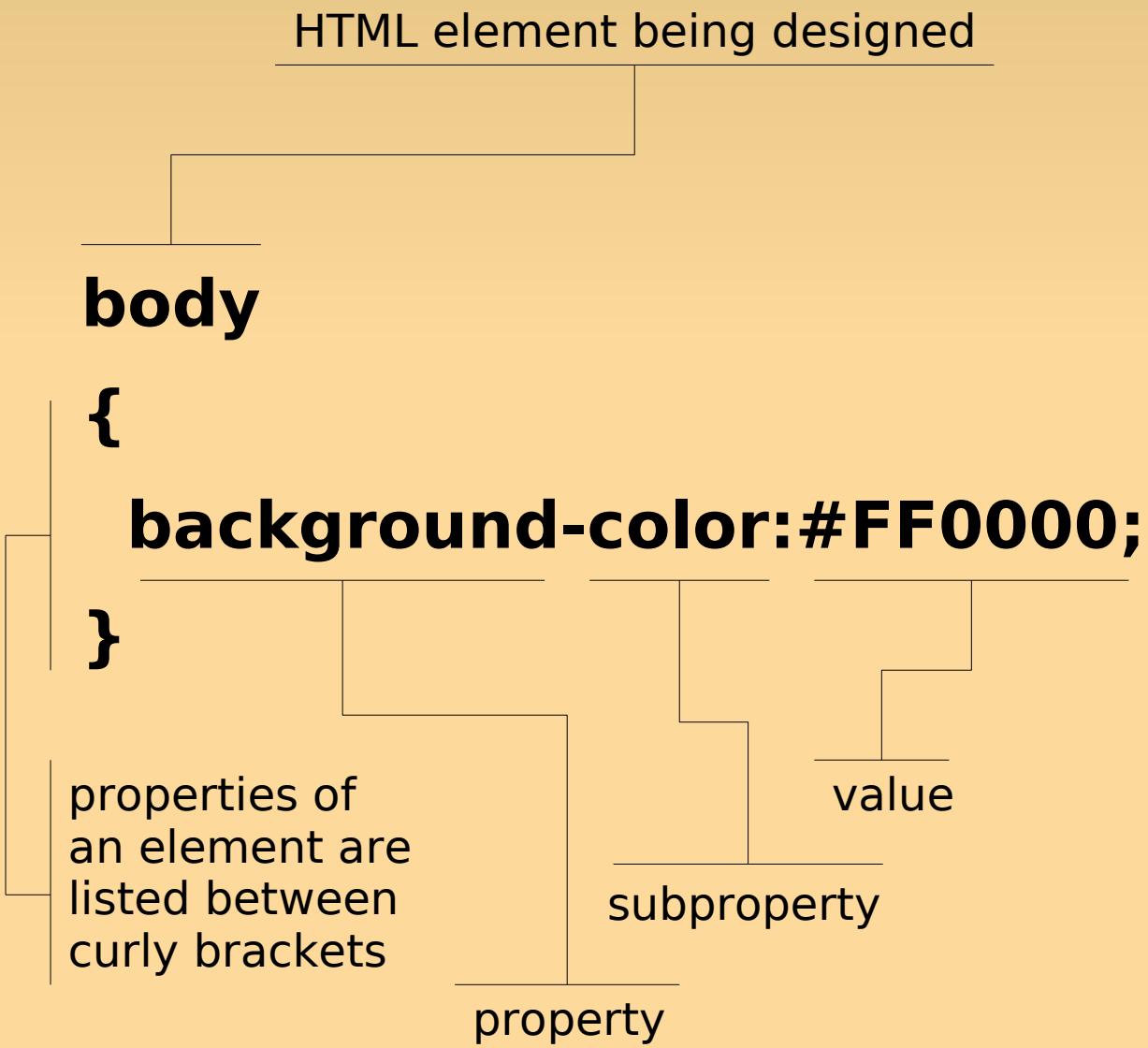
Kickstart: The CSS side

1. Create an empty text file called style.css
2. Add the following in the CSS file:

```
body
{
  background-color:#FF0000;
}
```

Your page background should become red
(equivalent to <body bgcolor=”#FF0000”>)

CSS Syntax explained



CSS Colours explained

3 types of colour values:

- hex values e.g. #FFFFFF
  - *shorthand: #xyz == #xxyyzz*
- RGB values e.g. rgb(255, 255, 255)
- colour names e.g. white

To set:

- foreground (text) colour use *color:*
- background colour use *background-color:*

More CSS examples

- background-color:#000000;
- color:#FFFFFF;
- text-decoration:underline;
- font-weight:bold;
- font-style:italic;
- margin-left:5px;
- padding-right:10%;

CSS property shorthand

Consider:

- font-weight:bold;
- font-style:italic;

...these are both subproperties of *font*.

Shorthand equivalent:

- font: bold italic;

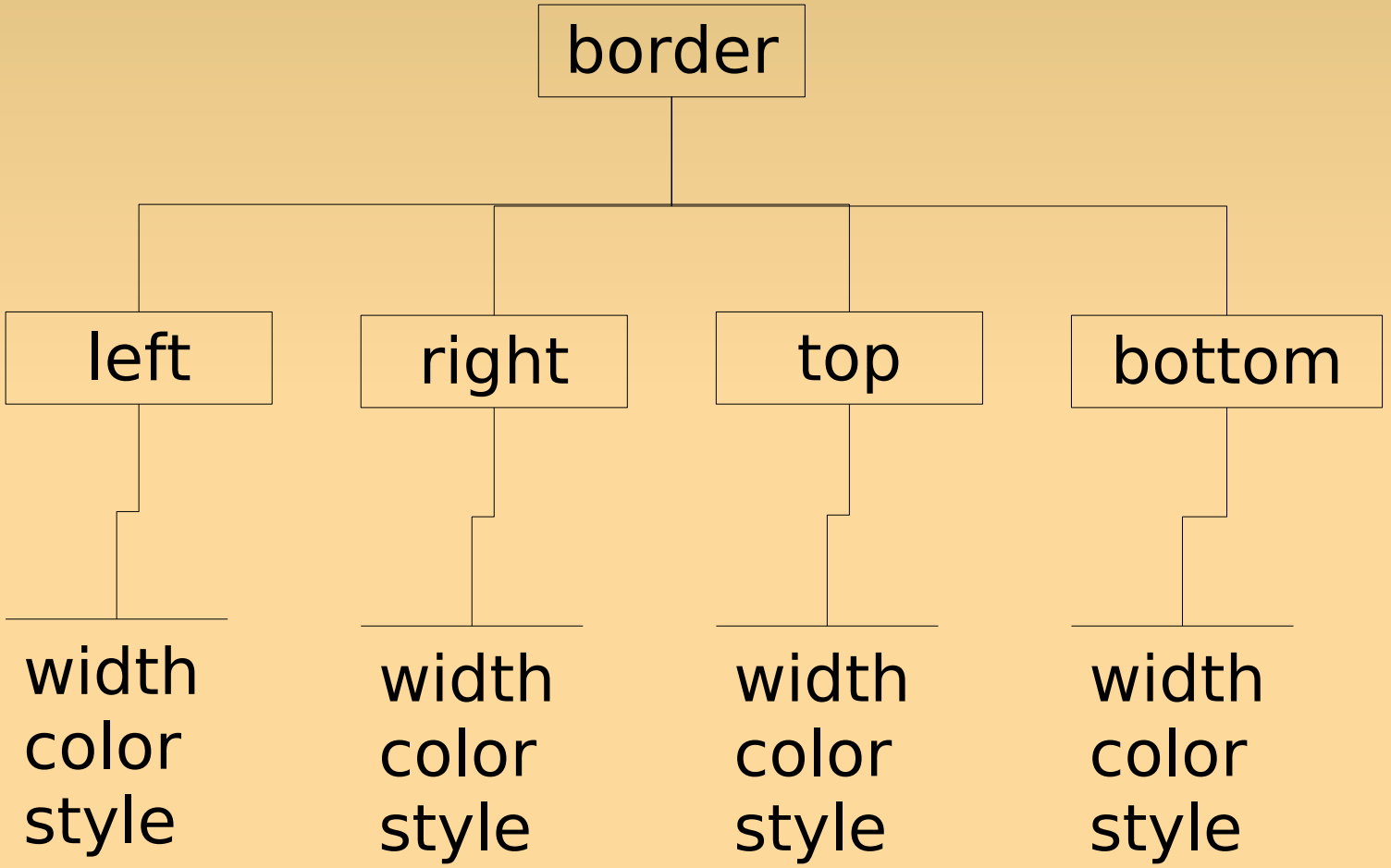
CSS Text Formatting

- Examples:
  - color:black;
  - font-weight:bold;
  - font-style:italic;
  - text-decoration:underline;
  - text-align:center;
  - font-family:Arial;
  - font-size:18px;
- References:
  - http://www.w3schools.com/css/css_font.asp
  - http://www.w3schools.com/css/css_text.asp

About Fonts

- Try to use cross-platform fonts (e.g. Arial) so that site can look the same on different operating systems
- You can define a list of fonts to use... if the first one is not found, the next one in the list is used
  - e.g. font-family: Verdana, Arial, Helvetica
- *monospace* is a family of fixed-width fonts
- *serif* vs *sans-serif*
  - *e.g. Times New Roman vs Arial*

CSS Borders


border
left
right
top
bottom
width
color
style
width
color
style
width
color
style
width
color
style

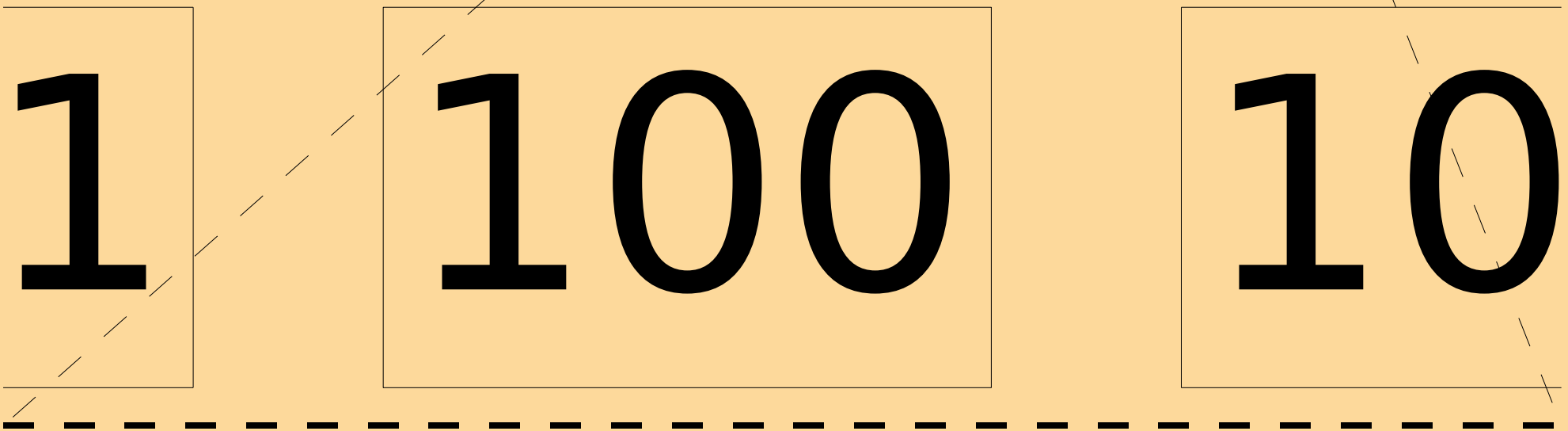
CSS Borders explained

- Define only one property of one border:
  - border-bottom-width:3px;
- Define one border entirely:
  - border: solid 2px #CC0000;
- Define one property of all borders:
  - border-style:dashed;
- Define all properties of all borders:
  - border: dotted 3px black;

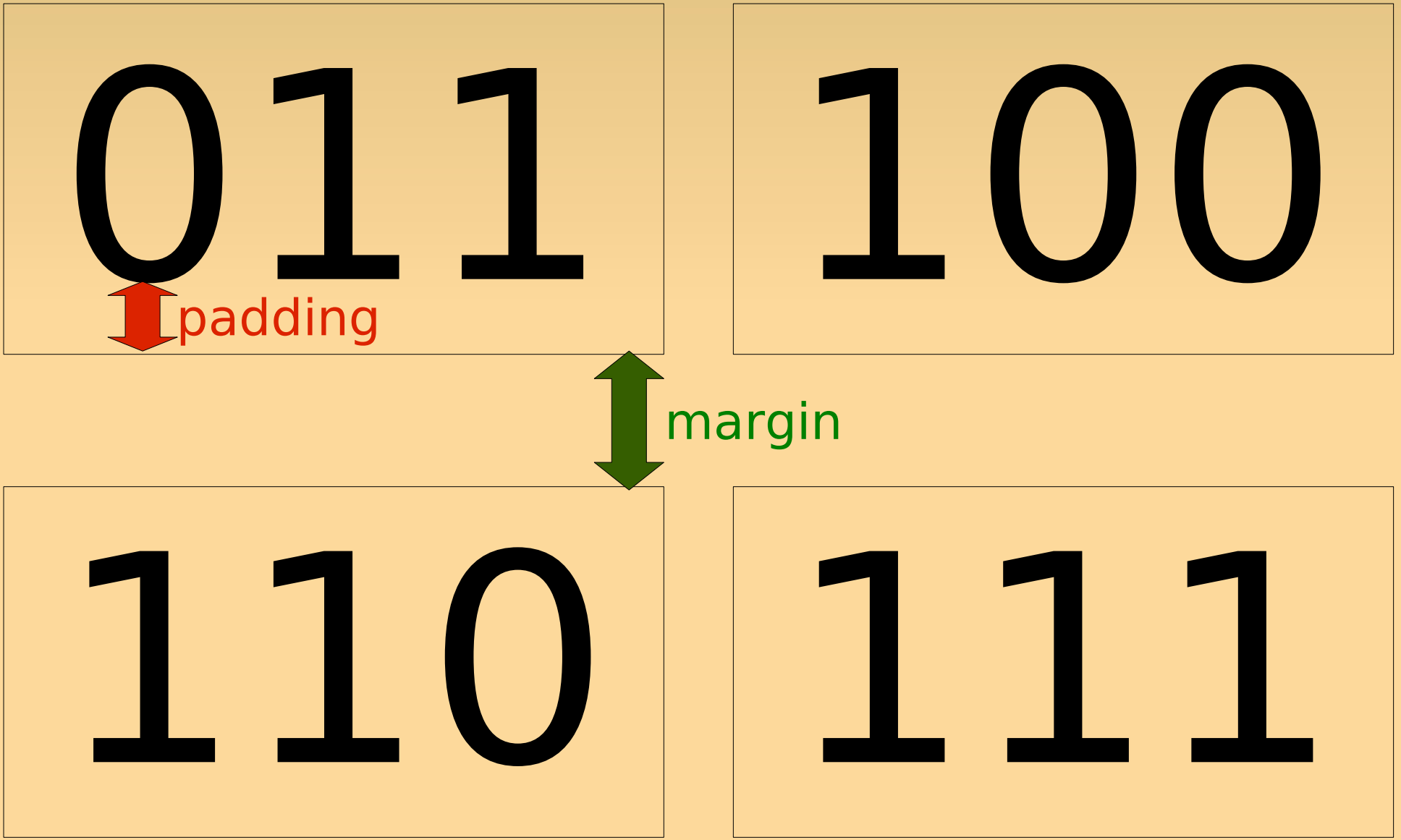
Margins vs Padding

Consider a table...

a	b	c	d	e
1	2	3	4	5
1	10	11	100	101
i	ii	iii	iv	v



Margins vs Padding



CSS Margins and Padding

- Set individual margins:
  - margin-left:2px;
  - margin-right:4px;
  - margin-top:3px;
  - margin-bottom:5px;
- Set all margins:
  - margin:5px;
- Set individual padding:
  - padding-left:2px;
  - padding-right:4px;
  - padding-top:3px;
  - padding-bottom:5px;
- Set all padding:
  - padding:5px;

CSS Links

- a:link {...}
  - unvisited link
- a:visited {...}
  - visited link
- a:hover {...}
  - mouseover link
- a:active {...}
  - link with focus

Reference:

http://www.w3schools.com/css/css_pseudo_classes.asp

Other useful CSS properties

- display (block, inline, ...)
- visibility (visible, hidden, ...)
- float
- overflow
- cursor
- list-style-type
- background (color, image, repeat)
- border-collapse (for tables)

CSS Complex Relationships

- p img {...}
  - Applies to <img>'s inside <p>'s
- td, th, table {...}
  - Applies to all of <td>, <th> and <table>
- p.myclass {...}
  - Applies to <p>'s using the *myclass* class
- p#myid {...}
  - Applies to <p>'s using the *myid* id

CSS Complex Relationships

- Note: p#myid != p #myid (with space)
  - p#myid -> all paragraphs defined as *myid*
  - p #myid -> all elements defined as *myid* which are in a paragraph
- Elements with particular attributes:
  - input[type=”text”] {...}
  - limited browser support

CSS Inheritance

- If a property is not defined, its value is usually inherited from that of the parent (containing) element
  - e.g. a paragraph may inherit the <body>'s text colour
- A value can be explicitly inherited from the parent element using the *inherit* keyword
  - e.g. color:inherit;
  - useful when a property already has a value but we want to override it with an inherited value

Advanced CSS

- Further Reading
  - Pseudo-classes
  - Pseudo-elements
  - Generated content

Part 2

CSS Techniques

HTML style attribute

- Can be used to use CSS directly in an HTML element
  - e.g. ...
- Useful for associating CSS with an HTML element that occurs only once (and which thus does not need to be defined in the external CSS file)
- Eliminates need for HTML layout tags/attributes in such situations

Internal Style Sheets

- For CSS to be used with only one HTML page
  - ...no need to use an external CSS file!
- Put the following in your <head> section:

```
<style type="text/css">
<!--
/* CSS code goes here */
-->
</style>
```

- HTML comments <!-- --> are important for old non-CSS browsers to ignore the CSS
- Note: CSS comments are like in C++: /* ... */

CSS Classes

- HTML side:
  - ...
- CSS side:
  - .fancy {...}
- Applies properties of class .fancy to any HTML element that uses that class
- Classes begin with a dot

CSS IDs

- HTML side:
  - <h2 id=”contents”>...</h2>
- CSS side:
  - #contents {...}
- Applies properties of class .fancy to any HTML element that uses that class
- IDs begin with a hash sign
- Unlike classes, IDs can be used only once in an HTML page

HTML 's

- HTML divisions are used to group several HTML elements together
- Useful to apply the same CSS to several elements at once
- Also useful to group elements structure-wise
- Commonly used to create divisions for navigation and content in the CSS layout

The CSS Layout: History

- HTML page layout evolved substantially over the years
  - plain pages
  - frames
  - tables
  - ...and finally, CSS!
- Tables are ok but inadequate
  - no logical relation between cells
  - bloat page with presentation details
  - maintenance nightmare

The CSS Layout: 's

```
<div id=”navigation”>
  <!-- navigation goes here -->
</div>

<div id=”content”>
  <!-- content goes here -->
</div>
```

CSS Positioning

- position:absolute;
  - puts element in top-right corner regardless of other elements declared before or after it
- positioning properties:
  - top:5px;
  - left:10px;
  - right:15px;
  - bottom:20px;

The CSS Layout: How-To

- Using 's and CSS positioning properties, 's can be placed anywhere on the page
- This works great, and is used worldwide
- But... there is a better way!
  - HTML lists can be used for navigation... even if it is horizontal (with display:inline)
  - The HTML <body> itself can be used for content

The Meaning of CSS

- CSS = Cascading Style Sheets
- Why Cascading?
  1. style attribute
  2. id attribute
  3. class attribute
  4. internal style sheet
  5. external style sheet
  6. default browser style setting

CSS may be defined in various locations. Each of these has a priority. If a property is not defined in the highest priority location, the browser tries to find it in the next location.

CSS Media

- Different CSS can be applied to different CSS media
- Useful especially to make your website printer-friendly!
- Default media type is screen
- Support for media types is browser-dependent although CSS defines them

CSS Media Types

- screen
- print
- all
- aural
- braille
- embossed
- handheld
- projection
- tty
- tv

Reference:
http://www.w3schools.com/css/css_mediatypes.asp

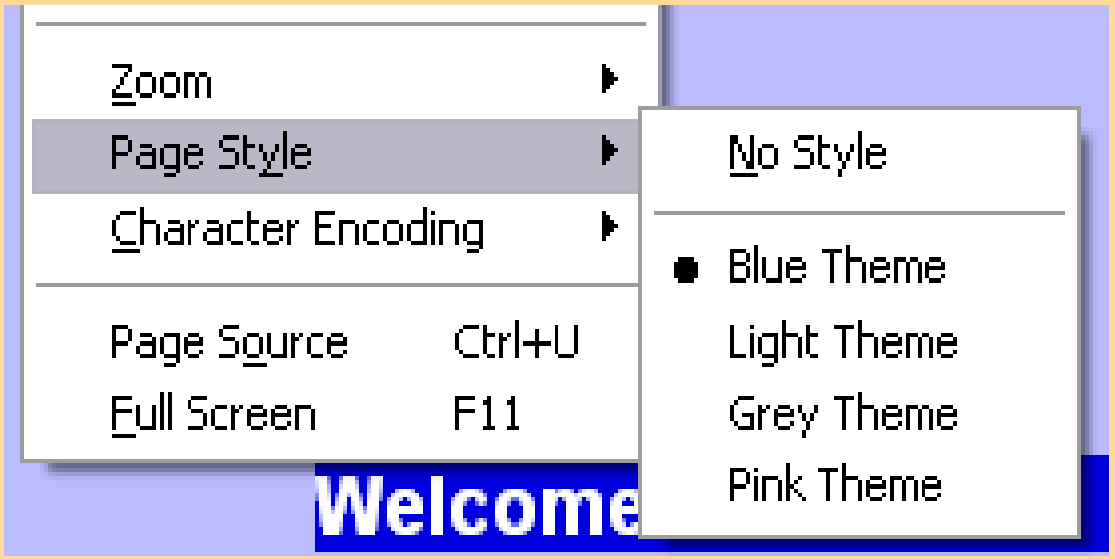
Example with Print Media

```
@media print
{
   #navigation
   {
     display:none;
   }

   #content
   {
     margin-left:0px;
   }
}
```

Multiple Style Sheets

```
<link rel=”stylesheet” type=”text/css”
  href=”blue.css” title=”Blue Theme”>

<link rel=”alternate stylesheet” type=”text/css”
  href=”green.css” title=”Green Theme”>
```

- Use several <link>'s to use multiple CSS files
- Use the title attribute to name them (for user selection)



Importing Style Sheets

- A style sheet can import properties from another style sheet
- @import statements must occur before any other property declarations

@import url(”another.css”);

Reference:

http://www.w3.org/TR/CSS2/cascade.html#at-import