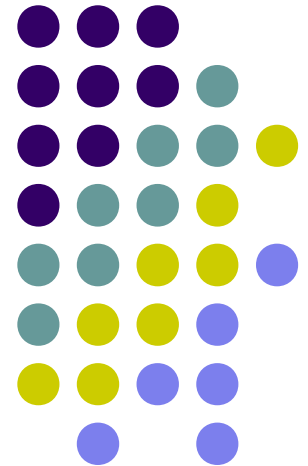
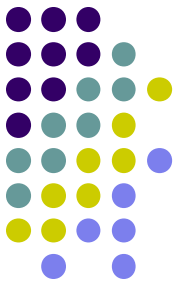


CSS: formatting webpages





Why CSS?

- separate content from formatting (style)
- style can be changed easily without rewriting webpages
- keep formatting consistent across website
- allows more advanced formatting than HTML
 - layout
 - menus
 - borders
 - and many more



Do this: Demo 1

... Student Examples

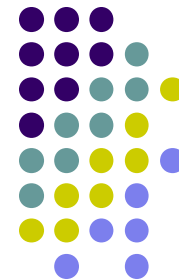


- Go to the folder “CSS Student Examples” and look at the examples that my students have done.
- This will illustrate some of the things that can be done with CSS.
- If you're interested, have a look at the criteria I gave them (after teaching them about CSS)
http://quarkphysics.ca/ICS3U1/unit0_CSS/CSS_project.html



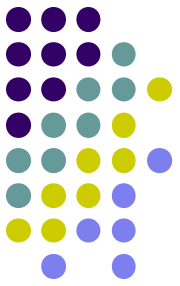
Do this: Demo2

Different CSS, Same Doc.



- Go to the folder “Demo2”
- Open a Browser and open Notepad++
 - In the browser, open **Demo2A.plain.txt**
(this is what a plain text file looks like).
 - In the browser, open **Demo2B.plain.html**
(this is what an HTML only page looks like)
 - Look at **Demo2c.html**
Now edit it and replace “**nofile.css**” in line 5 with “**file1.css**”. Save. View the html file in the browser.
 - Repeat with “**file2.css**” ... all the way to “**file6.css**”

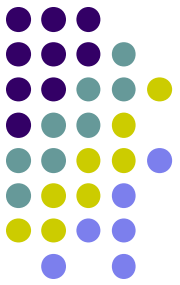
How to add CSS to HTML page



METHOD 1: separate CSS file

- 1) Make a separate CSS file
- 2) Add it to the HTML by putting the following the <HEAD> section of HTML
- 3)

```
<link rel="stylesheet" type="text/css" href="mystyle.css">
```
- 4) You can have multiple stylesheets attached ...



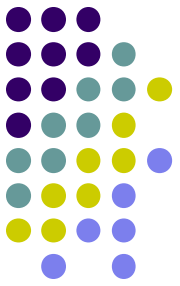
How to add CSS to HTML page

METHOD 2: internal styles in HEAD

- 1) In <HEAD> section of HTML, put <style>
- 2) Insert CSS in the style tag.
- 3)

```
<style>
h1 { color:blue;
border:5px solid red; }
</style>
```
- 4) This example will make all <h1> tags in this document blue with a red border.

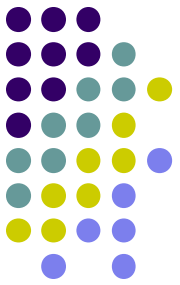
How to add CSS to HTML page



METHOD 3: inline styles in Body of HTML

- 1) In any HTML tag, add the style attribute
- 2)

```
<p style="color:blue;
border:5px solid red;">
Wallabies are cute</p>
```
- 3) This will only affect this one tag in this document.



Cascading Order

What style will be used when there is more than one style specified for an HTML element?

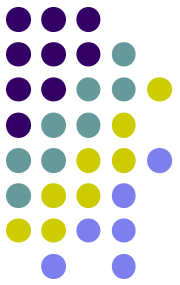
Generally speaking we can say that all the styles will "cascade" into a new "virtual" style sheet by the following rules, where number one has the highest priority:

The most restricted with the smallest range has the highest priority and the most general has the lowest priority.

- 1) inline style (inside an HTML tag in the body of the HTML)
- 2) styles in the <HEAD> section
(* this includes both internal and external style sheets)
- 3) browser default

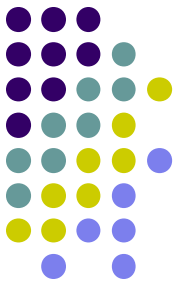
So, an inline style (inside a specific HTML element) has the highest priority, which means that it will override a style defined inside the <head> tag, or in an external style sheet, or a browser default value.

Cascading Order



In style sheets, if there is more than one style for the same element, the more recent one will override the earlier one.

- This means that if you have a special paragraph formatting in two external style sheets, the order in which they are placed in the HTML determines which takes effect.
- It also applies to the ordering of `<style>` vs `<link>`
- And if your CSS has two styles in the same sheet, the second will supercede the first.
- Normally, you would use a “reset.css” sheet first so that your page looks the same in all browsers. *You can find reset stylesheets online.*



Cascading Order - Example

```
<head>
```

```
<style>p {color:blue;}</style>
```

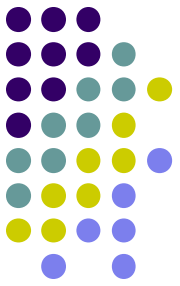
```
<link rel="stylesheet"  
type="text/css" href="mystyle.css">
```

```
<style>p {color:red;}</style>
```

```
</head>
```

```
<body>
```

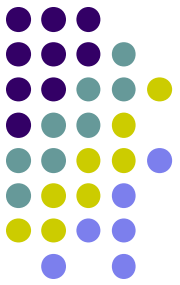
The paragraph will end up being red.



How to write CSS

- CSS always has a selector to indicate what the rules apply to.
- Format:

```
Selector {PropertyName : Value;}
```
- Multiple rules are separated by ;
- The property names and values are quite different from those in HTML.
- It is best to make a separate CSS file to put your CSS in (as opposed to putting it in <head>)



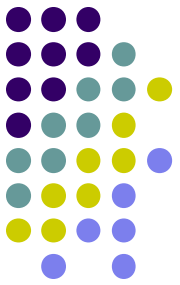
1. HTML Tag Selectors

- The selector is an HTML tag.
- The formatting applies to every occurrence of that HTML tag in the HTML document. (e.g the <h2> tag :)

```
h2 {  
    font-size: 1.6em;  
    border-bottom: 1px solid silver;  
}
```

- Special tags:
 - Body { ... } *for formatting the body of the page (default font, background, margin, ...)*
 - HTML { ... } *for formatting the margin outside of the body*
- Pseudo-elements can also be formatted:

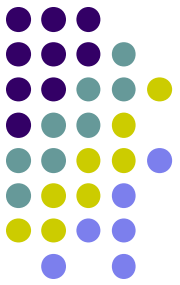
```
a:visited { color:purple; }
```



2. Class Selectors

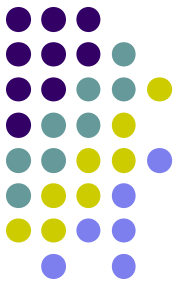
- Make up your own name for a selector
(NOT an existing HTML tag)
- It must start with a period .
- Examples (in the CSS file):

```
.centered{ text-align: center; }  
.ucase {text-transform: uppercase;}
```
- You decide where in the HTML this will be applied by using the “class” keyword.
- `<h1 class="centered">Heading</h1>`
- You can apply two classes in HTML by separating them with a space
`<h1 class="centered ucase">Heading</h1>`



3. ID Selectors

- ID selectors are very similar to class selectors.
- Differences:
 - It must start with a # (in the CSS file)
 - e.g. `#menu{ ... }`
 - In the HTML, you write `<div id="menu">` or `<p id="menu"> ... </p>`
 - You are only allowed to use each ID once on your webpage. This is important – especially for scripts.
Make sure that you follow this rule.



3. ID Selectors

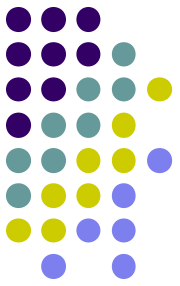
- Used for:
 - Layout
 - Columns
 - Menus
 - Headers and Footers
 - anything unique that you only want one of



Do this:

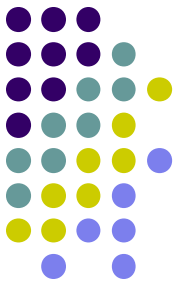
Go to the folder “**Menu**” and look at Menu3.html (in browser). It has examples of a header, footer, and menu.

Special Elements



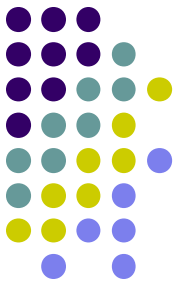
`div` and `span`

- `div` is for block-level formatting
- Most commonly used for page layout.
- `div` also provides locations in HTML for scripting languages
- `span` is for in-line formatting
- Do not write formatting for `div` and `span` in the CSS file.
- Both need to be closed too (`</div>`, ``)



CSS Visual Formatting: Fonts

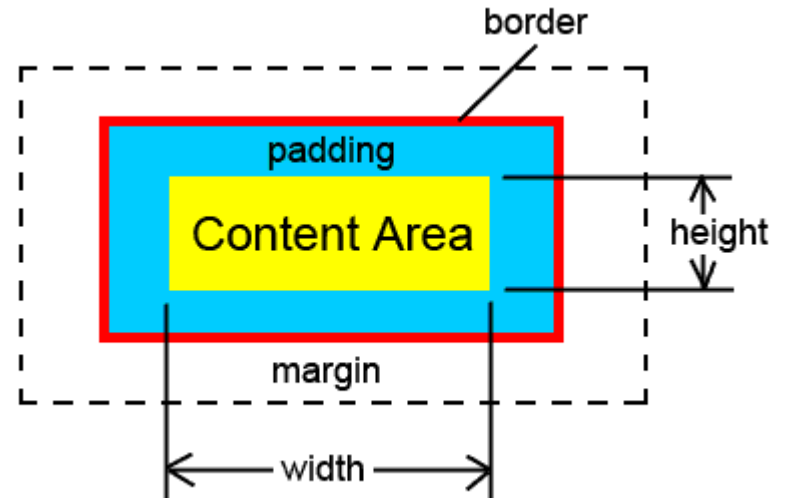
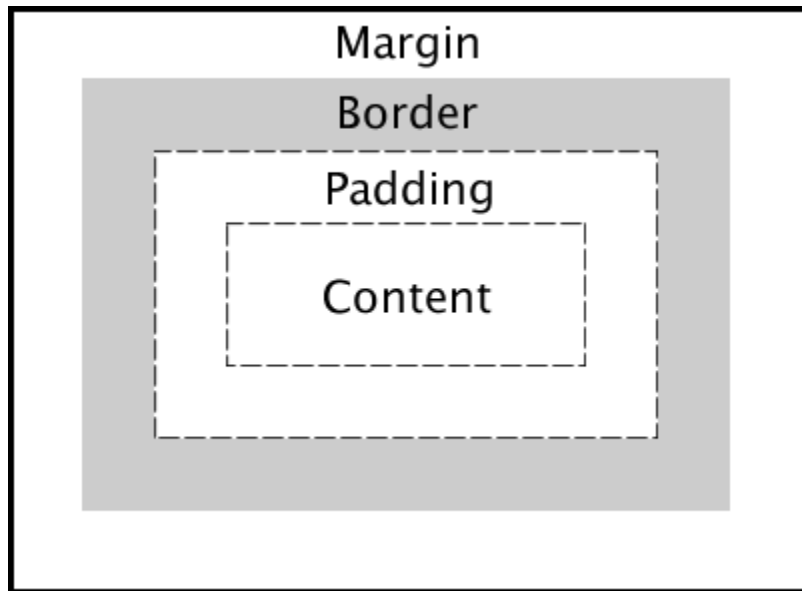
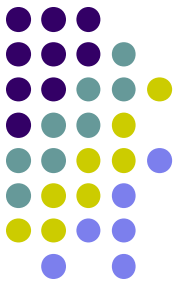
- `font-family:`
 - `body {font-family: Garamond, Times, serif}`
 - Serif fonts and sans-serif fonts
- `font-size:`
 - Length (em, px), percentage, relative size, absolute size
- `font-style:`
 - Normal, italic, oblique
- `font-weight:`
 - Lighter, normal, bold, bolder, 100, 200, ..., 800, 900
- Set all at once with `font:`



Visual Formatting: Colours

- How to specify
 - 16 Predefined names
 - RGB values (`%`, `#`, 0...255)
- Major properties
 - `background-color:`
 - `color:`
- `transparent` and `inherit` values

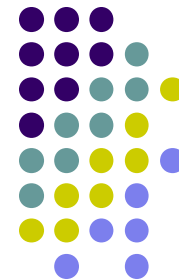
Visual Formatting: Box Model



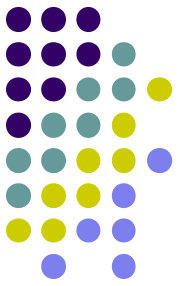
- Neither the border nor the padding inside it are included in the width.



Do this: CSS Practice

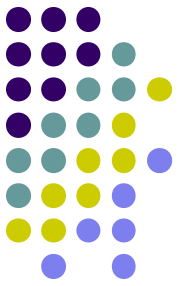


- Go to the folder “CSS Practice”
- Open the document “CSS Practice.doc”
- Follow the instructions to edit the two files:
 - TaiwanGhost.html
 - ghost.css
- This will illustrate most of the things we've discussed so far.



Some Selector Combinations

- `h1, h2 { color:green; }`
This applies to h1 AND h2
- `table li { color:green; }`
This applies ONLY to `` elements inside a `<table>`
- `p.vip { color:red; }`
This means that ONLY `<p>` can use `.vip` formatting,
ie. `<p class="vip">` is red.
So `<h1 class="vip">` does nothing.
- `h2 + p { color:green; }`
This ONLY applies to a `<p>` that immediately
follows after a `<h2>...</h2>`



Layout and Formatting:

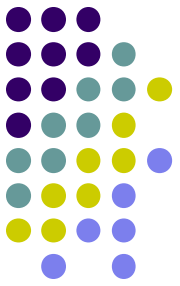
Important Topics for further reading:

position:

static, relative, absolute, fixed

- Static — normal elements
- Relative — translate from usual position
- Absolute — scroll with the page
- Fixed — like absolute, but don't scroll away
- Examples: [Jon Gunderson](#)

Layout and Formatting: (cont.)



z-index (depth)

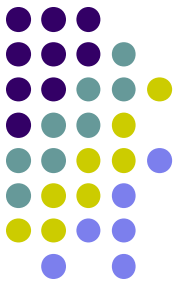
float (position relative to parent element)

```
float: left;   float:right;
```

```
or float: none;
```

clear (reset formatting)

```
<br style="clear:both">
```



Resources on the WWW

(not the best list. You can find better yourself)

- The CSS 2.2 Standard
 - At W3.org (<https://drafts.csswg.org/css2/>)
 - CSS 2.0 Standard (in frames)
(<http://www.meyerweb.com/eric/css/references/css2ref.html>)
- SelectORACLE
(<http://gallery.theopalgroupp.com/selectoracle/>)
- Lynda Weinman's examples