MIS3690 WEB TECHNOLOGIES

BABSON COLLEGE

TOIM DIVISION
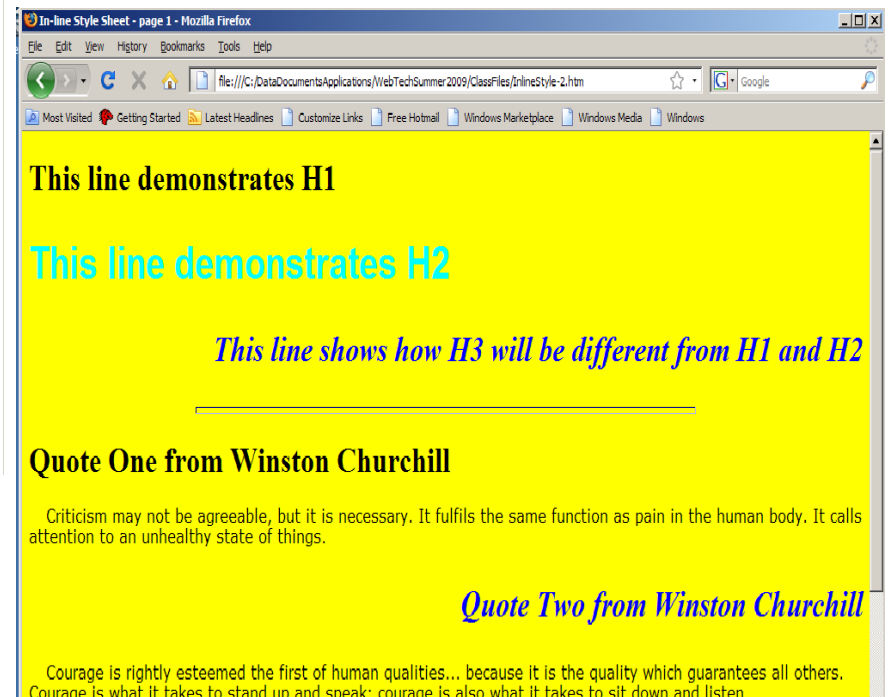
CASCADING STYLE SHEETS (CSS)
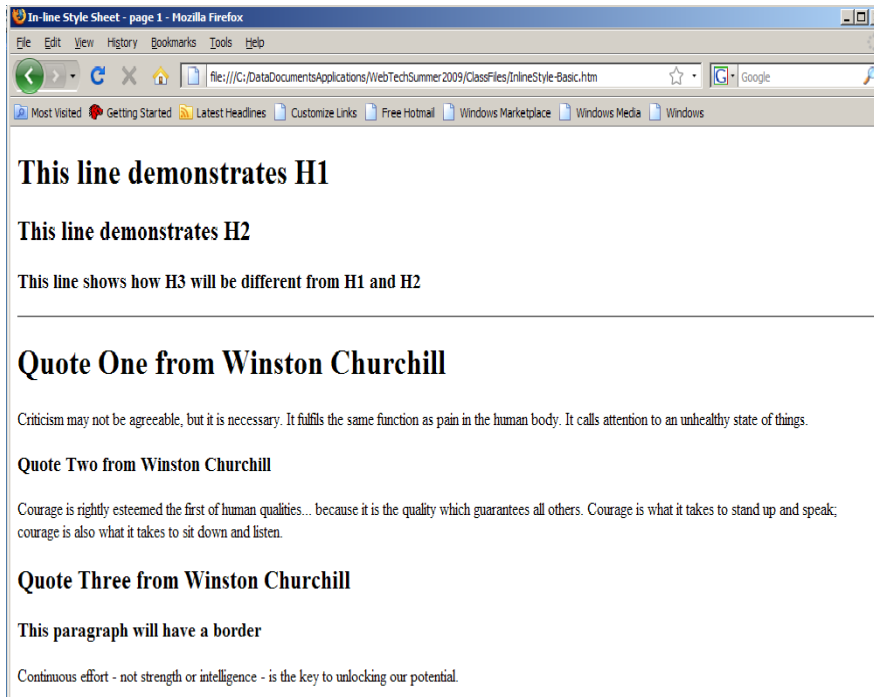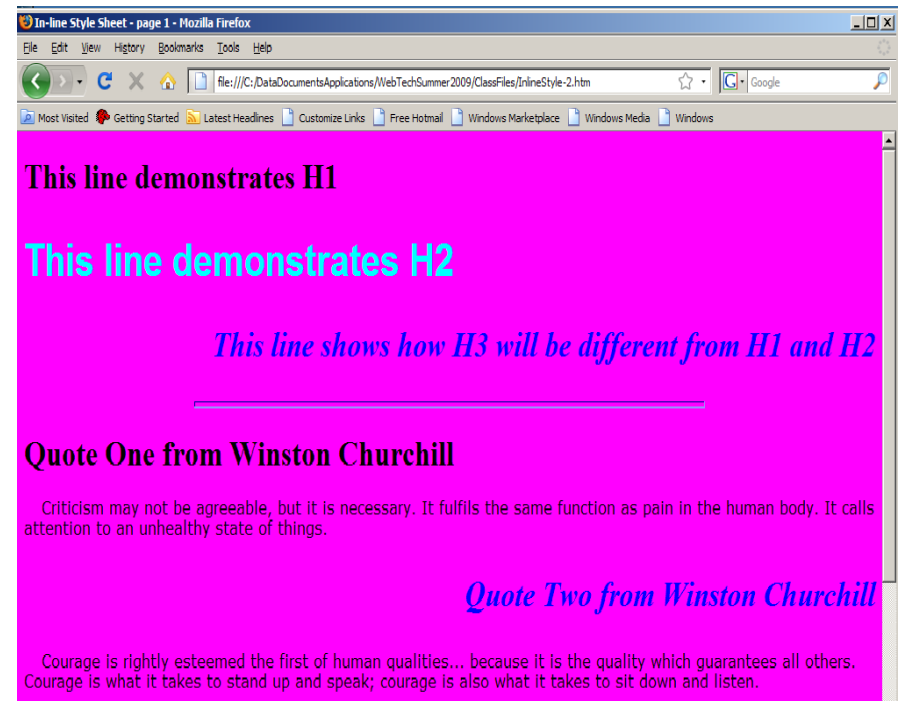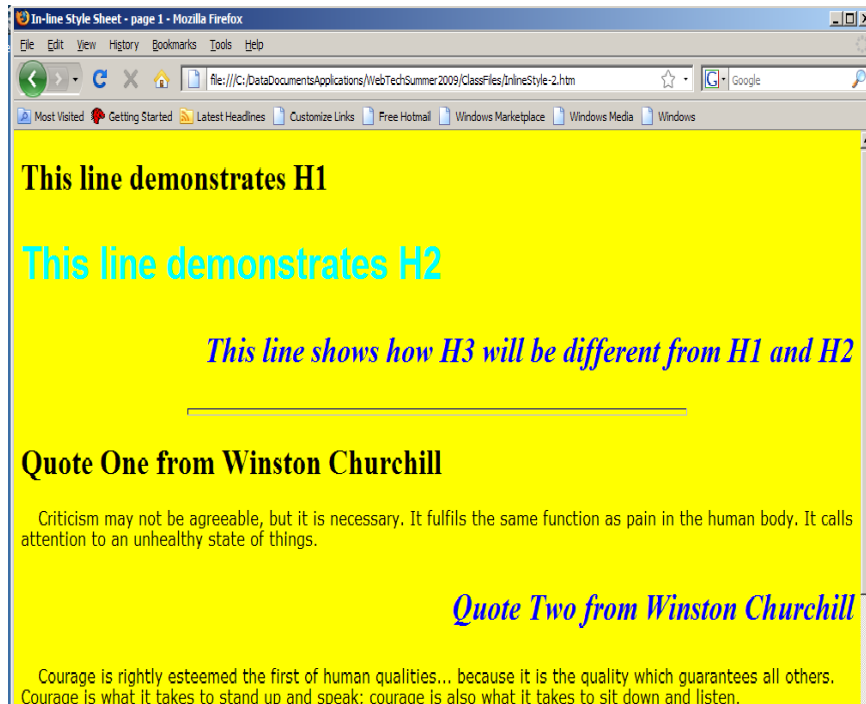
AN INTRODUCTION

WHY STYLES?

Picture: GETTY/ PA/ REUTERS

- Styles define how to display HTML elements

    - Easily change look of a page

    - Provide consistency in look among pages on a site

    - Do more than you can with HTML tags
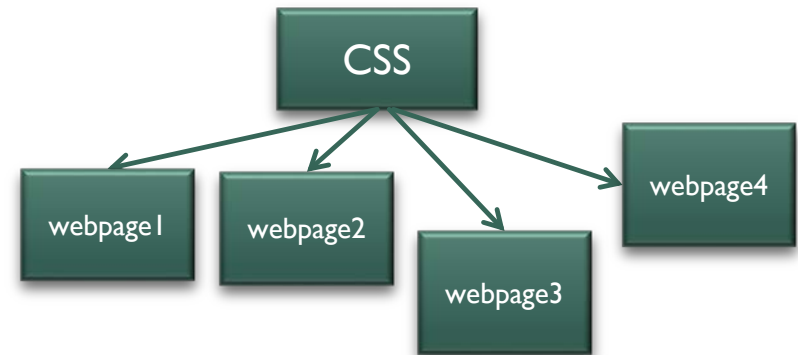
SAME PAGE, DIFFERENT STYLES

SAME PAGE, DIFFERENT STYLES

THREE WAYS TO USE CSS

- **External Styles**
  - Place stylizing commands in a separate document – you can use the same document to stylize multiple pages.

- **Internal Styles**
  - Place stylizing commands in the same HTML document that defines your web page.
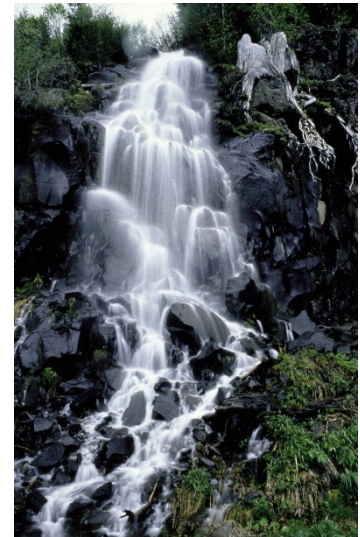 - We will use this in class to learn CSS

- **In-Line Styles**
  - Place stylizing commands within the specific HTML tag in the document. Will apply only to that specific line/tag.

CSS

webpage1   webpage2   webpage3   webpage4

CSS
↓
HTML

One web page CSS in <head> affects HTML in <body>

HTML with CSS embedded within tag definitions

The CSS affects ONLY THAT tag and the contents defined within that page.

WHY CALL IT CASCADING STYLES?

- You can use all three to stylize a document.

- When there is a conflict…

  - Internal will over-ride external style definition

  - In-line will over-ride both internal and external definitions

- What is a conflict?

  - When the same tag is styled by more than one definition

  - For example:

    - <h1> is defined to have a red font color in external

    - And… a blue font color in internal

    - In the document it will be…..?

CREATING AN INTERNAL STYLESHEET

- Put styling rules in the `<head>` section
- Surround rules by `<style>` `</style>` tags
- Example:

```
<style type="text/css">
      Rules go here
</style>
```

EXAMPLE

```
<head>

…

    <style type="text/css">
        body{background-color:yellow;}
        h1{text-align:center; font-family:lucida console;
        font-size:36pt; color:red}
        h2{font-family:arial; font-size:24pt; color:blue}
        p{font-family:verdana; font-size:12pt; text-
        indent:20px;}
        hr{width: 60%; color:fuchsia; height:6px;}
    </style>
</head>
```

STYLE EXAMPLE


```
<!DOCTYPE html>

<html>
<head>
    <title>CSS Exercise 1</title>
    <style type="text/css">
            body {background-color:yellow;}
            h1 {text-align:center; font-family:impact; font-size:36pt}
            h2 {font-family:verdana; font-size:24pt; color:blue;}
            p {font-family:verdana; font-size:12pt; text-indent:20px;}
            hr {width:70%; color:red; height: 6px; background-color:red; border:red}
            span {font-weight:800; font-style:italic}
    </style>
</head>
<body>
    <h1>This is a header of type h1</h1>
    <h2>This is a header of type h2</h2>
    <hr />
    <p>This is a <span>paragraph</span>.  I've tried to make it long enough to scroll onto a second line.
            If it's still two short, please resize your window so that you can observe whether or not it's
            indented properly.</p>
    <p>This is a bordered paragraph</p>
</body>
</html>
```
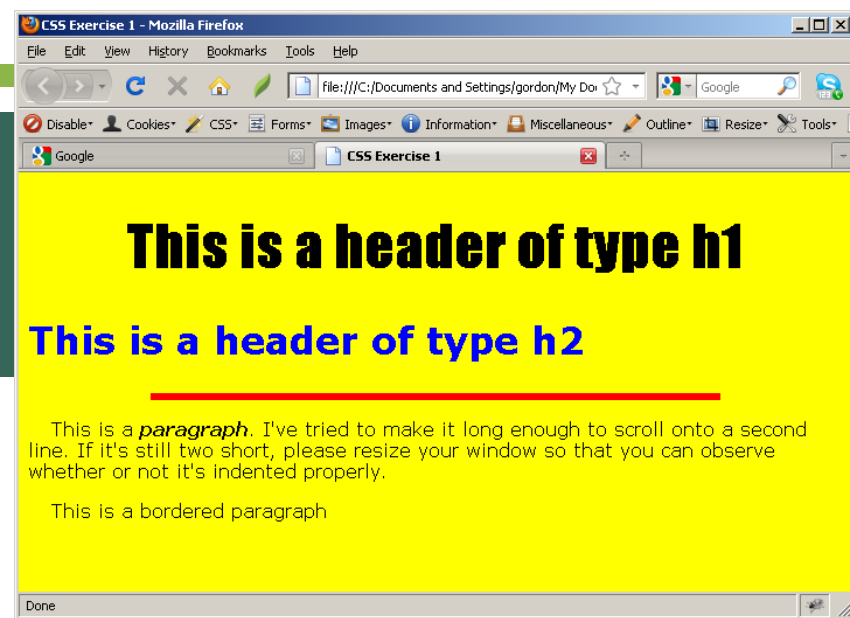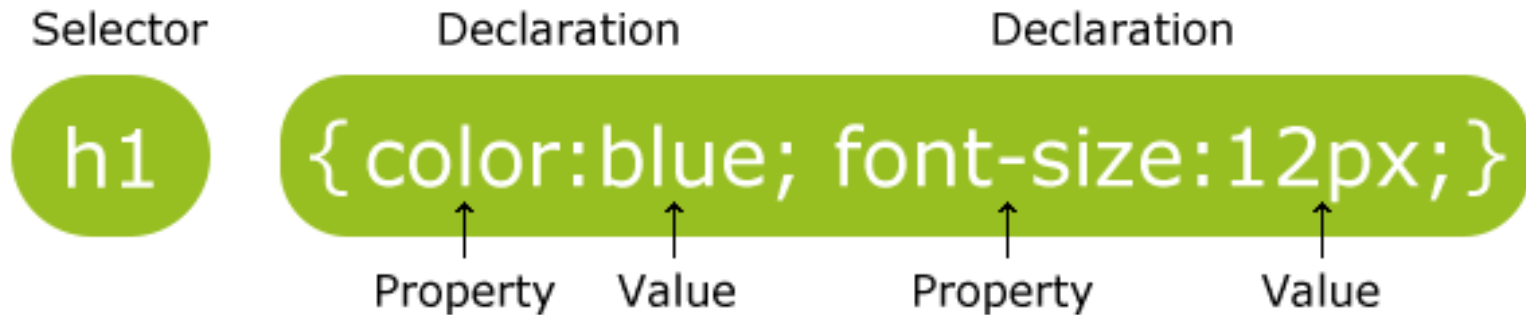
CSS SYNTAX

Selector — h1

Declaration — { color:blue; font-size:12px;}

Property → color Value → blue Property → font-size Value → 12px

- Example:

```
p {
    color: red;   /* This is a single-line comment */
    text-align: center;
}
/* This is
a multi-line
comment */
```

FONT STYLES

- **font-family**: name (e.g., arial)

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_font-family

- **font-style**: normal, oblique, italic

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_font-style

- **font-weight**: normal, bold, bolder, lighter, or multiple of 100 (400 is normal)

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_font-weight

- **font-size**: size*

  - * Number followed by px, pt, em, or %

  - Generally, **1em = 12pt = 16px = 100%**.

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_font-size

- **font-variant**: small-caps, normal, or initial

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_font-variant

MORE STYLES FOR FONT

- `text-transform`: capitalize, uppercase, lowercase, none
  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_text-transform
- `text-decoration`: underline, overline, line-through, or none
  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_text-decoration
- `text-align`: left, right, center, justify
  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_text-align
- `text-indent`: size*
  - * Number followed by px, pt, em, or %
  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_text-indent

TEXT SPACING

- `letter-spacing`: normal, or size*

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_letter-spacing

- `word-spacing`: normal, or size*

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_word-spacing

- `white-space`: pre, nowrap, normal

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_white-space

- `line-height`: size*

  - * Number followed by px, pt, em, or %

  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_line-height

TEXT/IMAGE ALIGNMENT

- For aligning text

    - `text-align: center` (or left or right or justify)

- For centering an image: (a question that is always asked)

    - Place the image tag inside `<p>` `</p>` tags and then center it like it were text.

        `<p> <img src="" alt="" title=""> </p>`

    - You can also place the image inside a `<div>` `</div>` tag – we will discuss this tag later.

SPECIFYING COLORS

- Using named colors
  - color:yellow

- Using Hexadecimal (or Hex) format
  - color:#FFFF00

- Using RGB format
  - color:rgb(255,255,0)

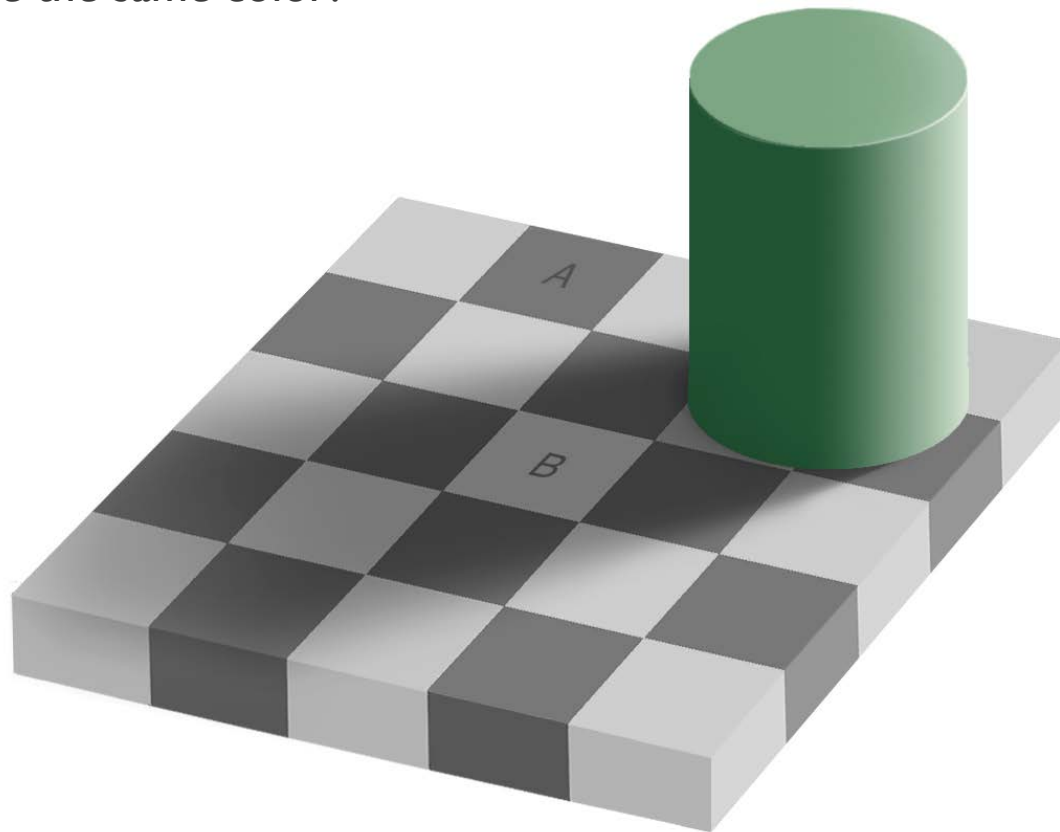- For colors by name and by HEX or RGB :
  https://www.w3schools.com/colors/colors_names.asp

- Let's play!
  - https://www.w3schools.com/cssref/playit.asp?filename=playcss_color

CHECKER SHADOW ILLUSION

■ Square A and B are the same color?

EXAMPLES…

- Setting the color of text:

      h1 {color: blue;}

    - All text formatted with `<h1>` and `</h1>` will be blue.

- Setting the background color of a web page:

      body {background-color:yellow;}

    - Sets the background color of the web page to yellow

- Setting the font type and font-size:

      h3 {font-family:arial; font-size:26pt;}

STYLE RULE REFERENCE

- CSS examples

  - https://www.w3schools.com/cssref/

- CSS Cheat Sheet – for your reference

  - https://makeawebsitehub.com/css-cheat-sheet/

- CSS Generator:

  - http://css3generator.com/

CS03-INCLASS

- Download and save CS03-InClass.htm from GitHub

  - https://raw.githubusercontent.com/mis3690-2017summer/MIS3690/master/templates/CS03-InClass.htm

- Make the following style-changes:

  - For all h1 tags, set font-family to **Lucida Handwriting**, color to Navy and center the text on the page.

  - For all h2 tags, set font to Arial, color to red, set the size of the font to 22pt and left align the text.

  - For all h3 tags, set font to Calibri, color to olive, size to 1.5em and right align the text.

  - Set the horizontal rule to 75% width and color it Maroon.

  - Set paragraphs to Olive color and font to Cursive

STYLING IMAGES

- Positioning an image

  - To center an image, enclose the image within `<p>` and `</p>` tags and use "`text-align:center`" for the paragraph!

  - Typically, images are not centered.

  - An image may be "`floated`" left or right.

  - Floating allows the text to "`flow`" around the image.
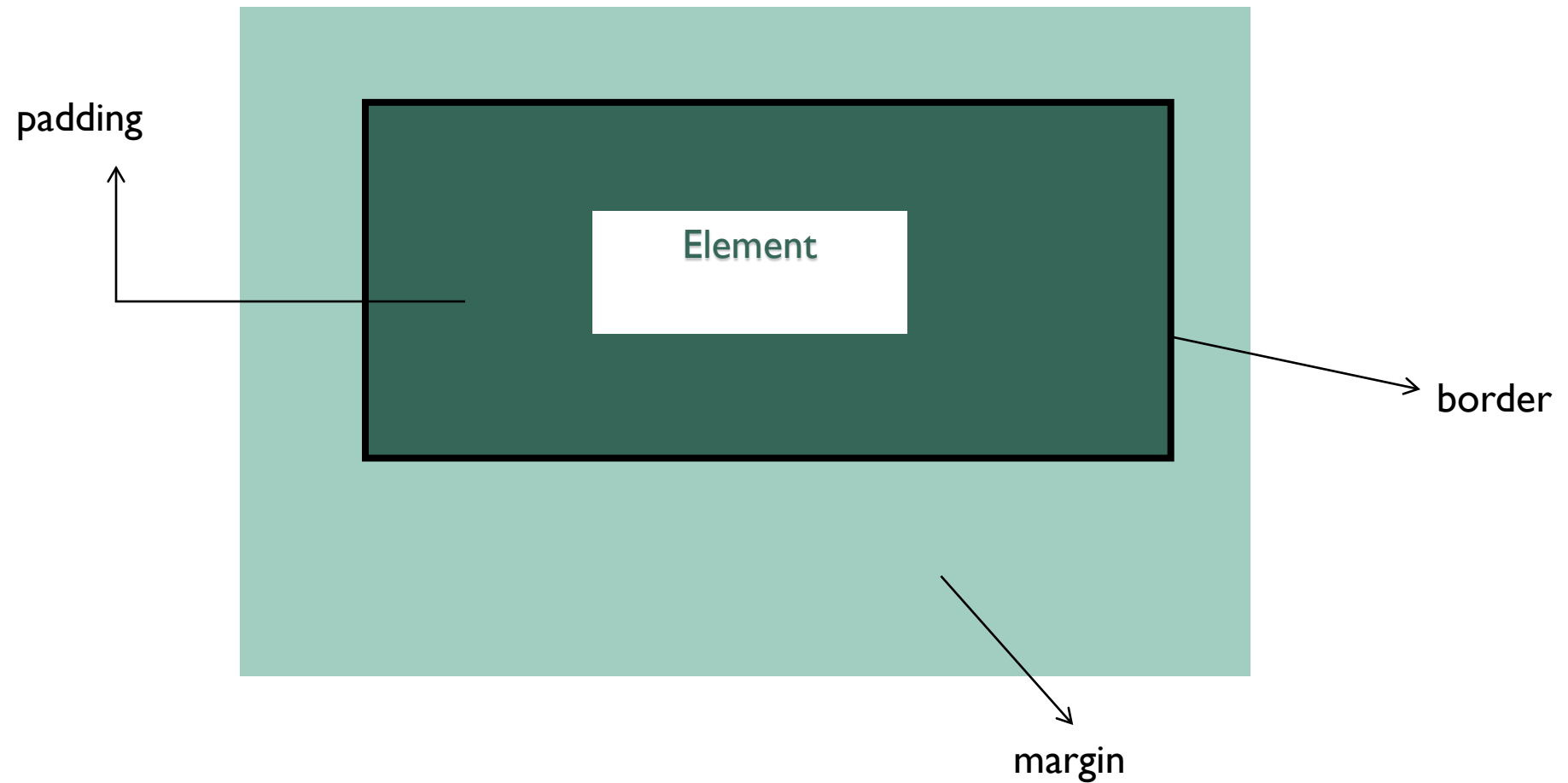
  - `img {float:left;}` or `img {float:right;}`

- Adding a border to an image

  - `img {border-width:4px; border-color:red; border-style:solid;}`

  - `img {border:4px solid red}`

  - Both above rules do the same thing!!

CS03-INCLASS (CONTINUED)

- Download the image of a tiger (tiger1.jpg) from <u>GitHub</u> and save it.

- Add the image to the html file, just before the line "In zoos, tigers live for 20 to 26 years…"

- Save the file and see how it looks.

- In the CSS section add a rule to float the image to the left.

- Add a border to the image – 5px thick, solid and red.

- Save the file and check to see how it looks.

MARGIN, BORDER AND PADDING

padding

Element

border

margin

CS03-INCLASS (CONTINUED)

- Understanding Padding and Margins using the tiger image.

    - Please go to www.w3schools.com to find out how to set paddings and margins.

- Let us set the padding for the image to 10px on top, right, bottom and left.

- Let us set the margin at the top and right to 30px and the margin at the bottom and left to 10px.

- See what moves and what does not!!!

- Update low.htm

- Commit and push to GitHub