



MIS3690 WEB TECHNOLOGIES

BABSON COLLEGE
TOIM DIVISION



CASCADING STYLE SHEETS (CSS)

AN INTRODUCTION

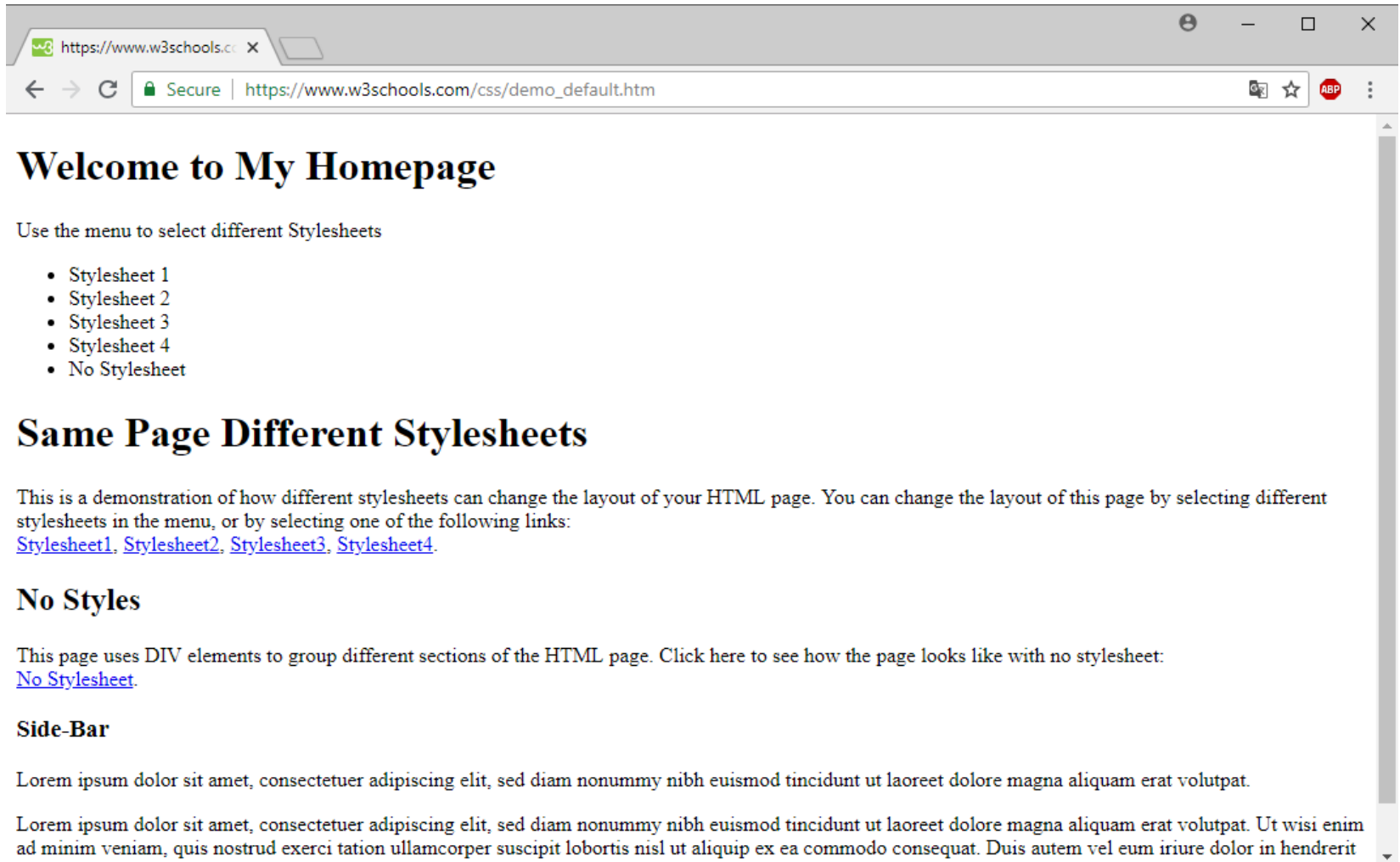
WHY STYLES?



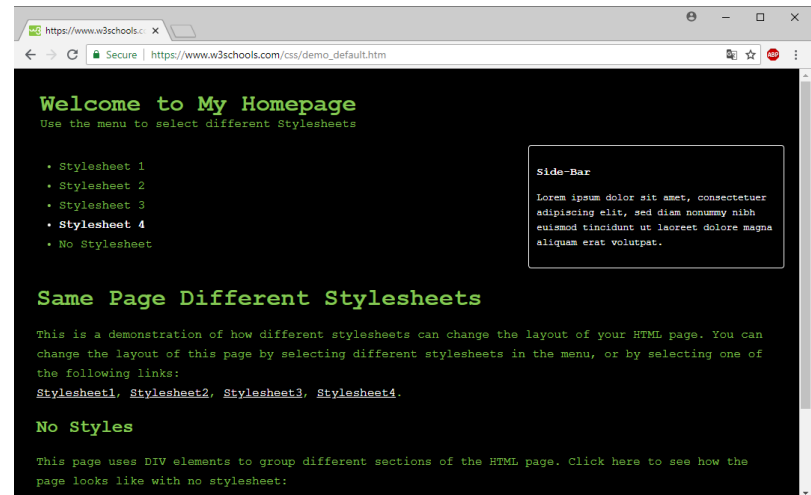
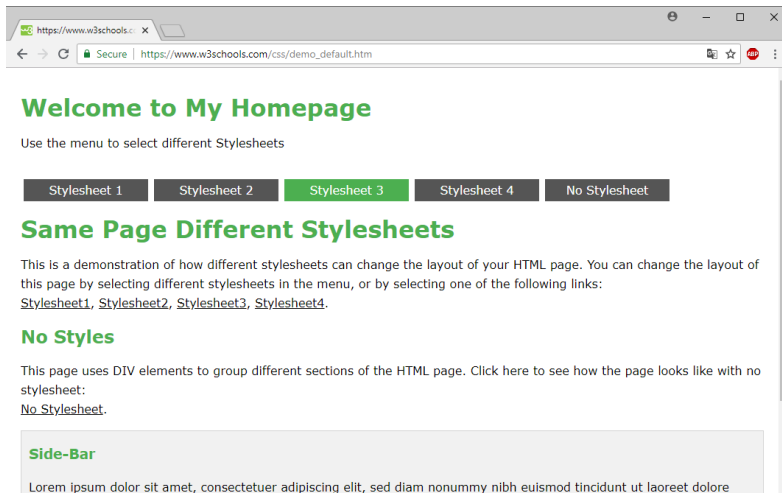
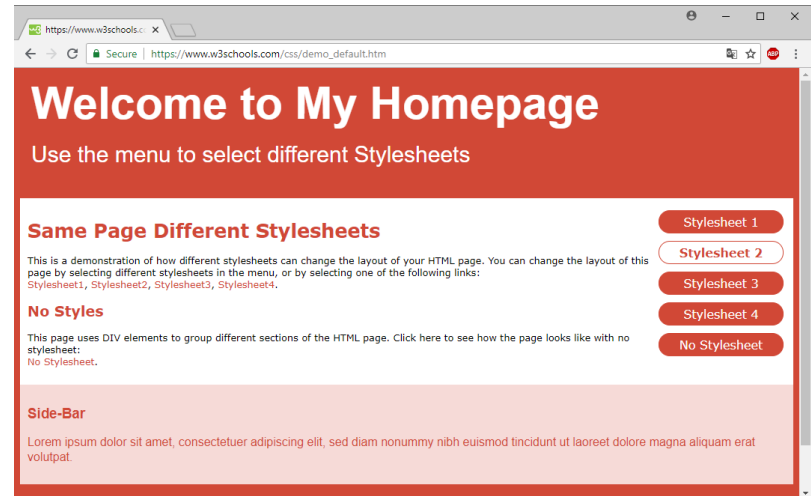
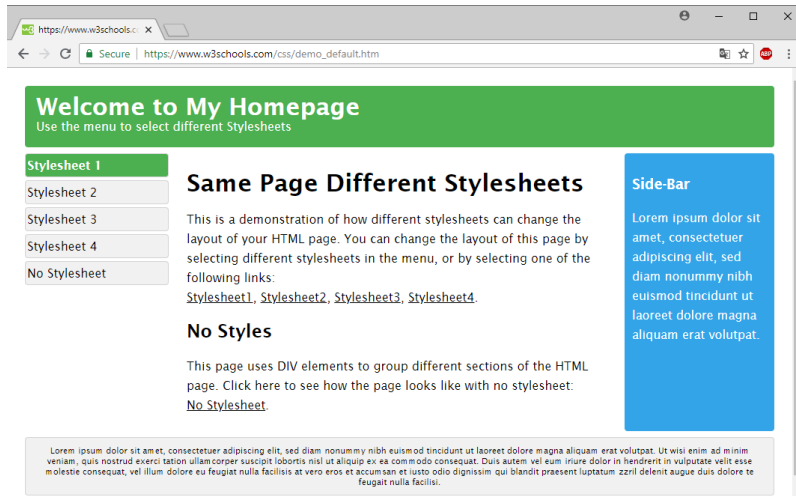
Picture: GETTY/ PA/ REUTERS

- 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



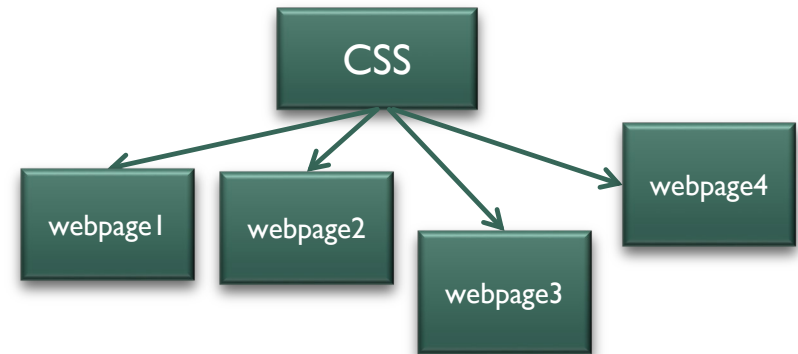
SAME PAGE, DIFFERENT STYLES



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



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

■ In-Line Styles

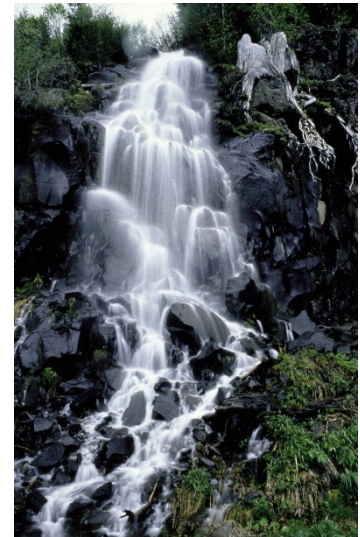
- Place stylizing commands within the specific HTML tag in the document. Will apply only to that specific line/tag.



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;}

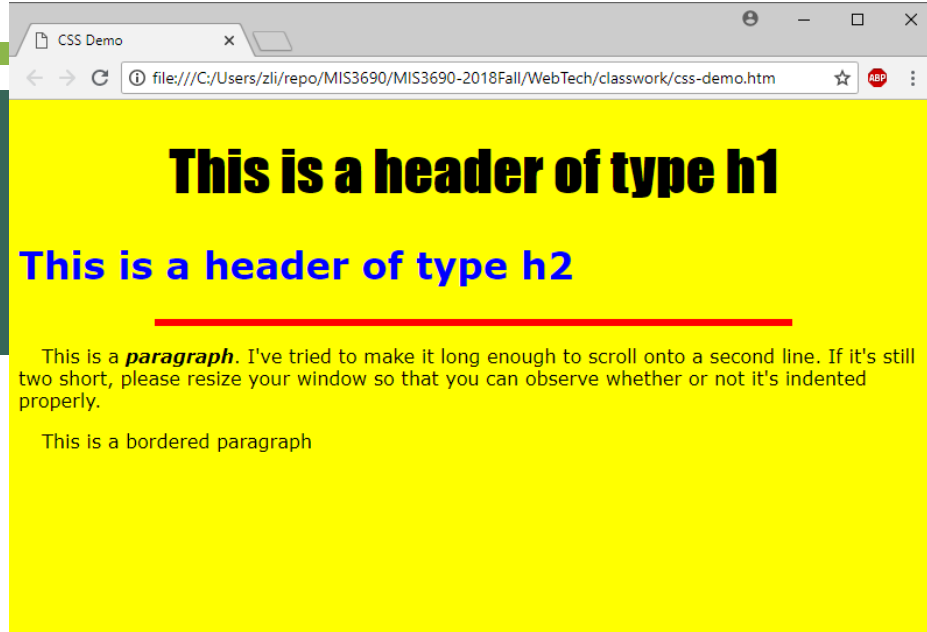
hr{width: 60%; color:fuchsia; height:6px;}

</style>

</head>



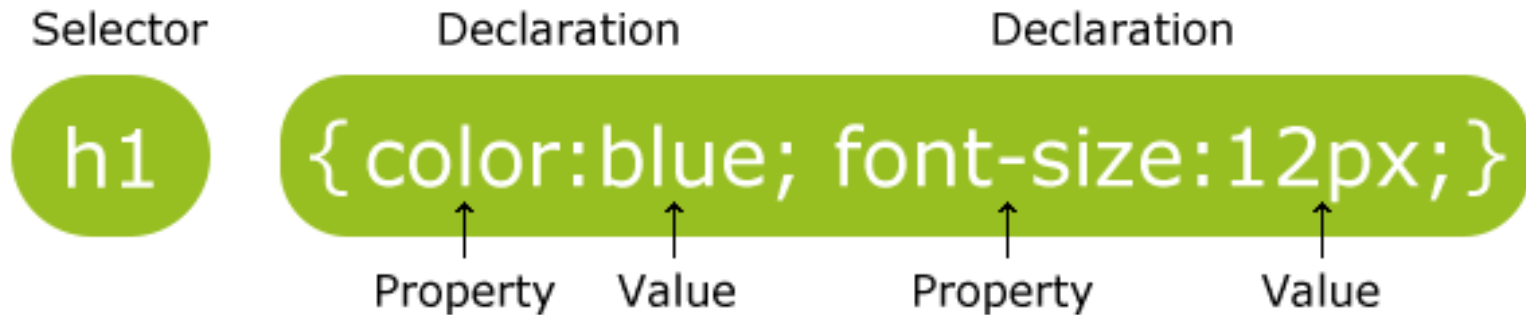
STYLE EXAMPLE



```
<!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



■ 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 :

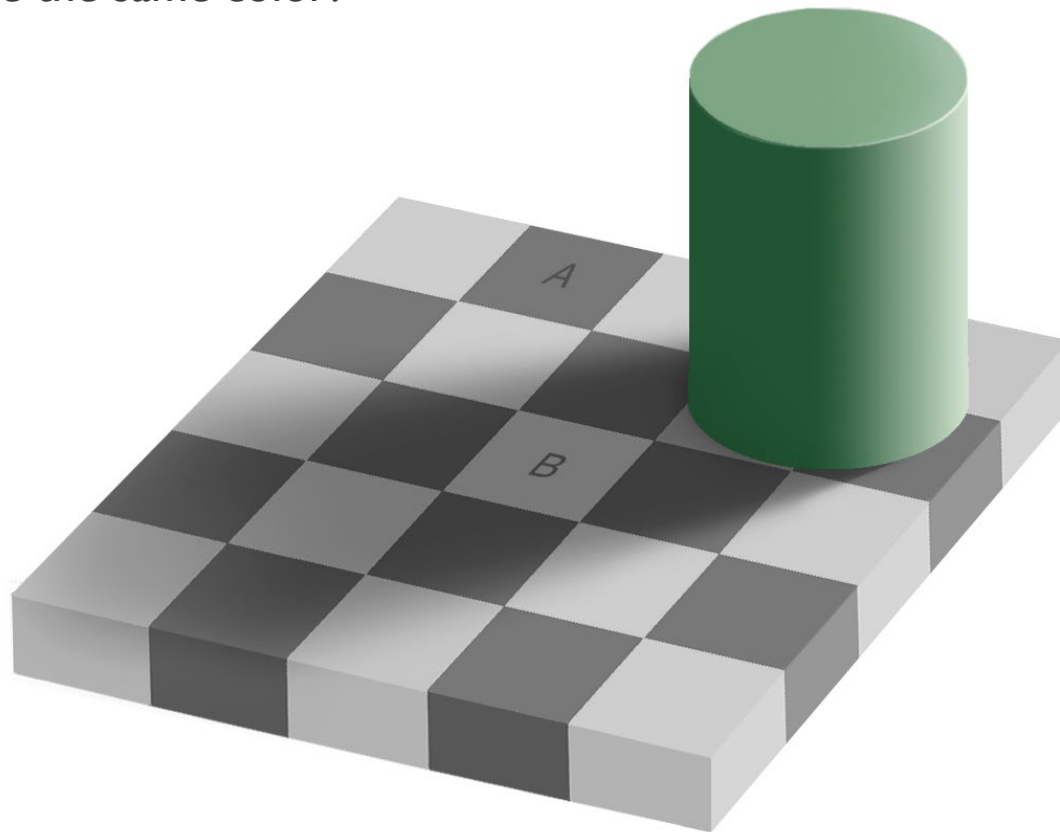
- https://www.w3schools.com/colors/colors_names.asp

- 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/2019summer-mis3690/Resources/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**. (might not be straightforward, you need to google how to do that)
 - 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;}`

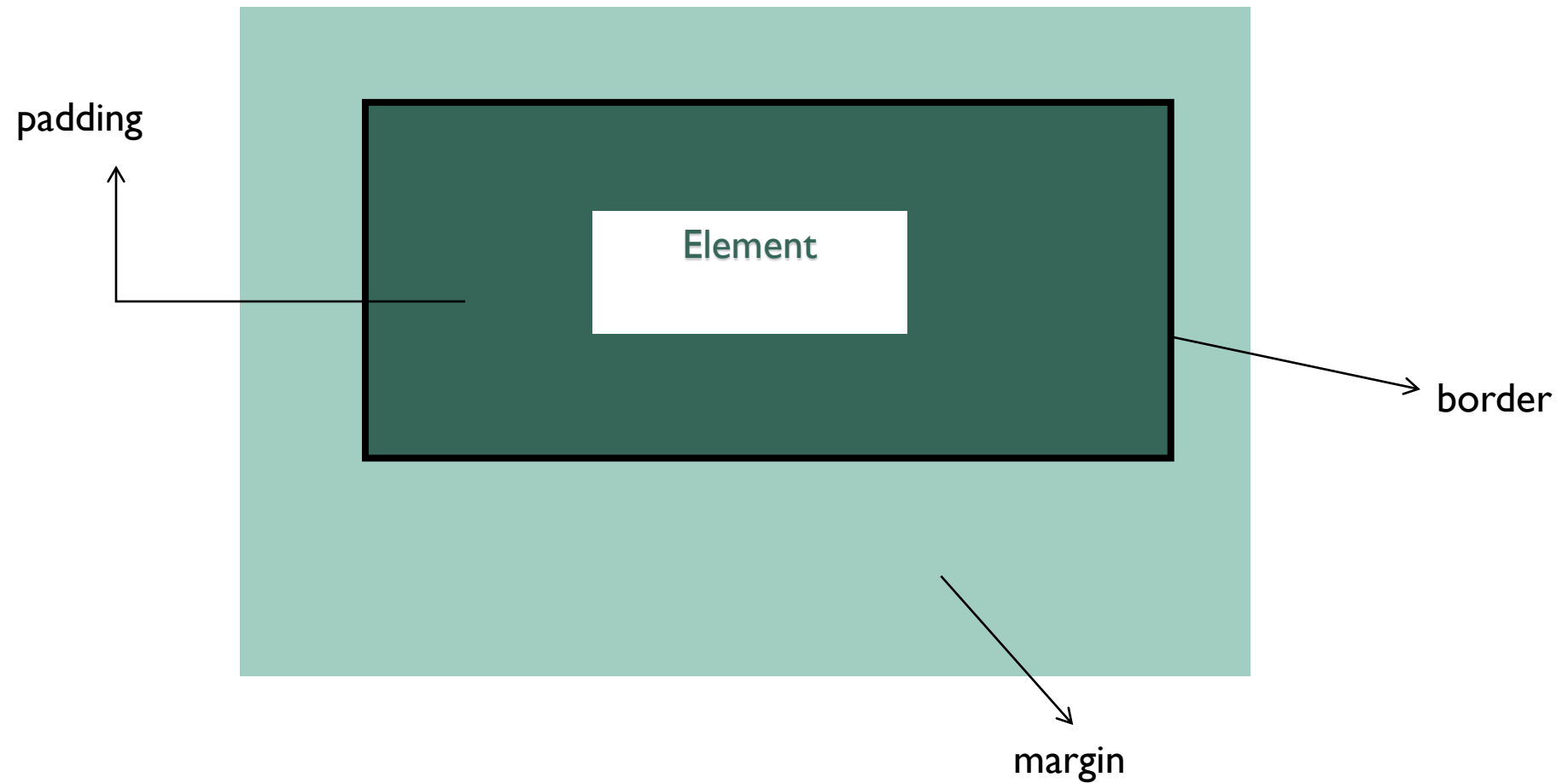
■ Adding a border to an image

- `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 [GitHub](#) 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



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