

MIS3690 - Web Technologies



Cascading Style Sheets (CSS)

An Introduction

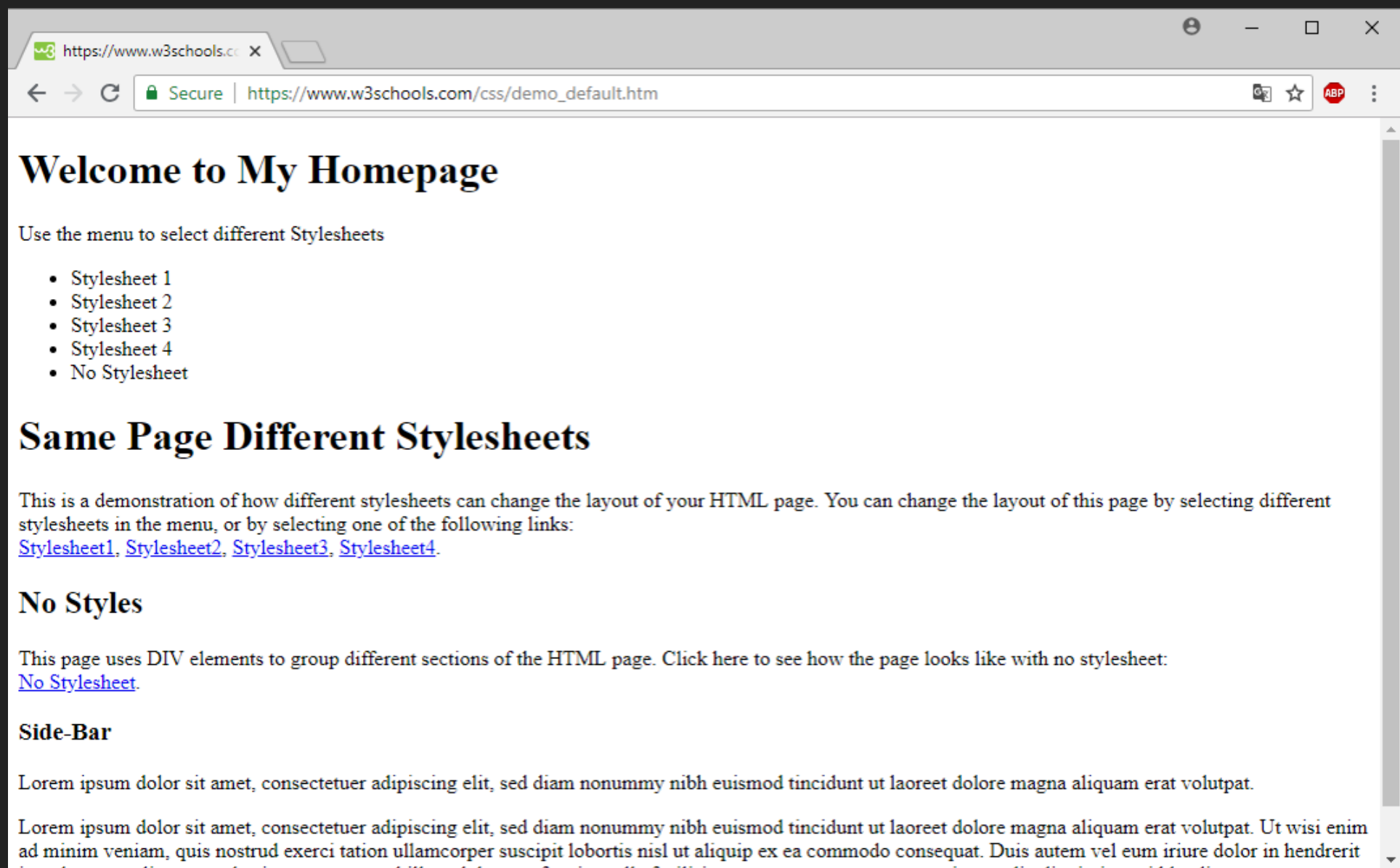
Why styles?

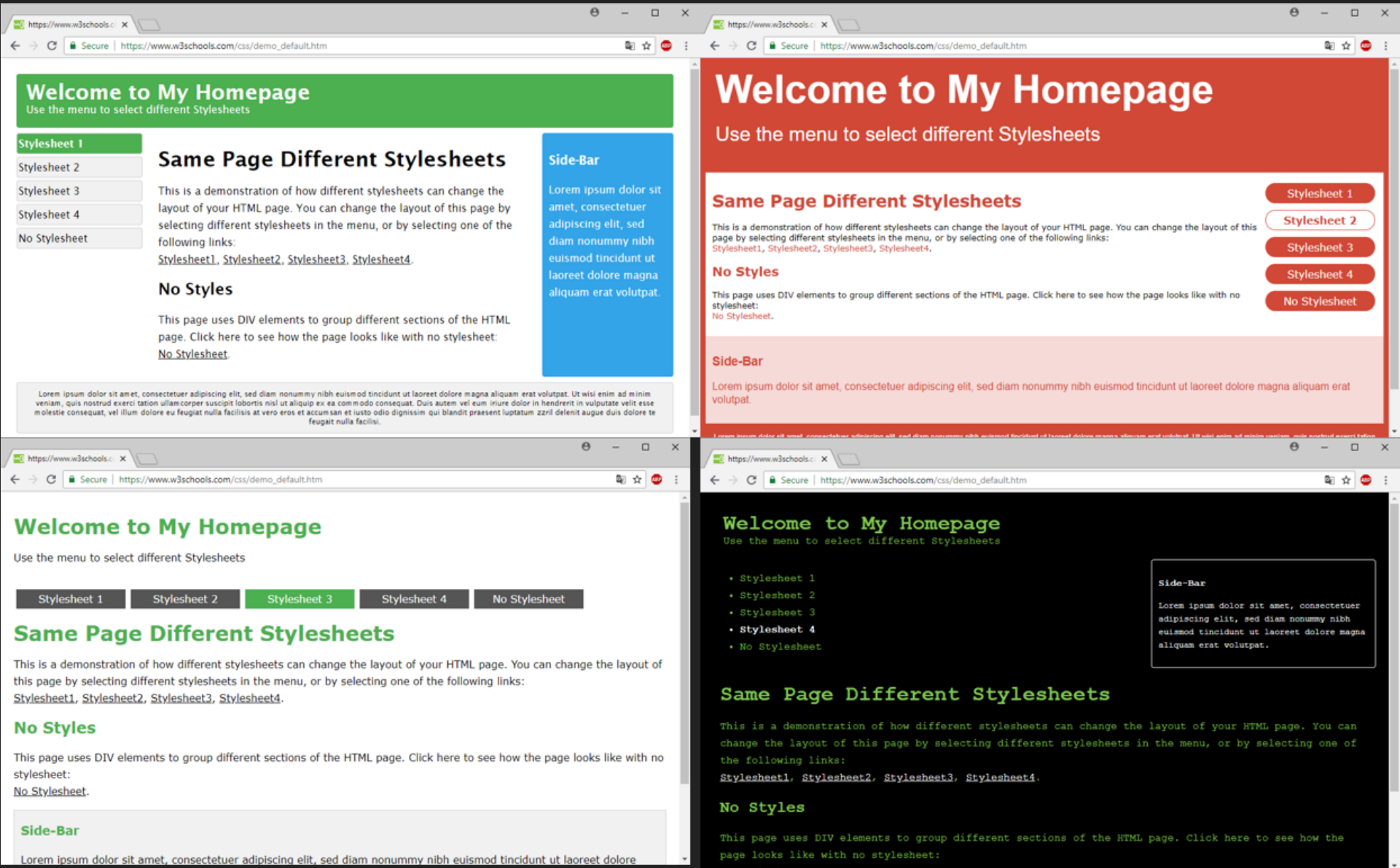
Styles define how to display HTML elements.

We can use CSS to

- easily change look of a page
- provide consistency in look among pages on a site
- do more than you can with HTML tags







Three ways to use styles

1. External styles

- place stylizing commands in a separate document
- you can use the same document to stylize multiple pages

2. Internal styles

- place stylizing commands in the same HTML document
- We will use this in class to learn CSS

3. Inline styles

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

Why call it cascading styles?

- You can use all three to stylize a document
 - Inline style is not recommended
- When there is a conflict...
 - i. **Inline** style (inside an HTML element)
 - ii. **External** and **internal** style (in the `head` section)
 - If some properties have been defined for the same selector (element) in different style sheets, the value from the *last* read style sheet will be used.
 - iii. Browser default
- Example: https://www.w3schools.com/css/tryit.asp?filename=trycss_howto_multiple

Creating an internal CSS

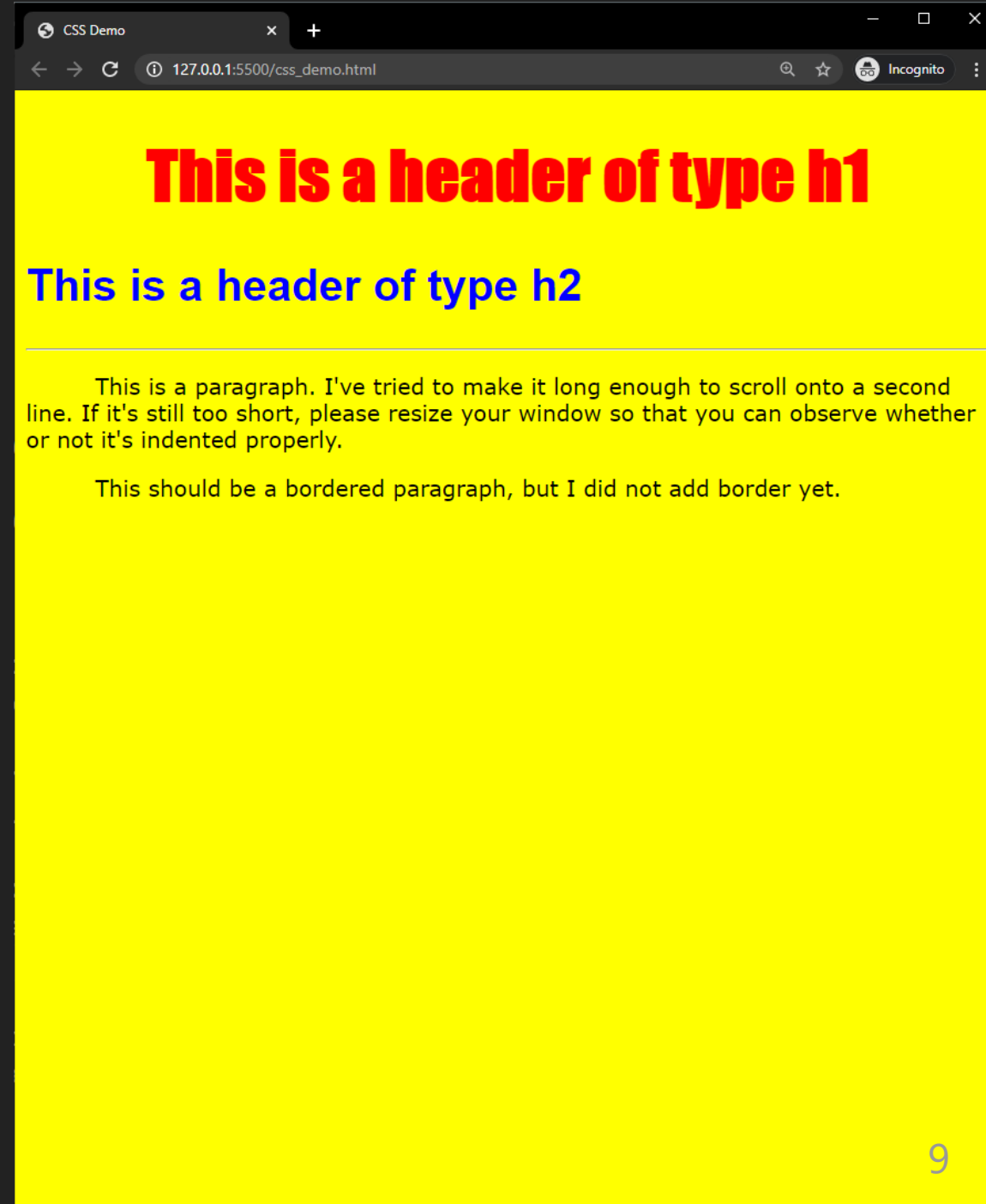
- Put styling rules in the `<head>` section
- Surround rules by `<style>` and `</style>` tags

Example:

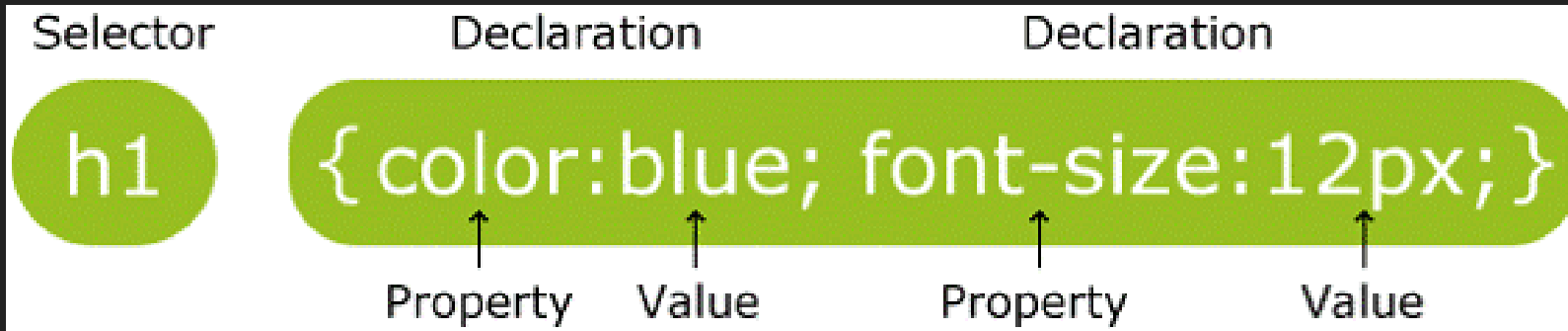
```
<style type="text/css">  
  Rules go here  
</style>
```


CSS Example

```
<html>
  <head>
    ...
    <style>
      body {
        background-color: yellow;
      }
      h1 {
        text-align: center;
        font-family: impact;
        font-size: 36pt;
        color: red;
      }
      h2 {
        font-family: arial;
        font-size: 24pt;
        color: blue;
      }
      p {
        font-family: verdana;
        text-indent: 50px;
      }
    </style>
  </head>
  <body>
    ...
  </body>
</html>
```



CSS Syntax



Example:

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

Let's explore CSS

Take 10 minutes to play with ...

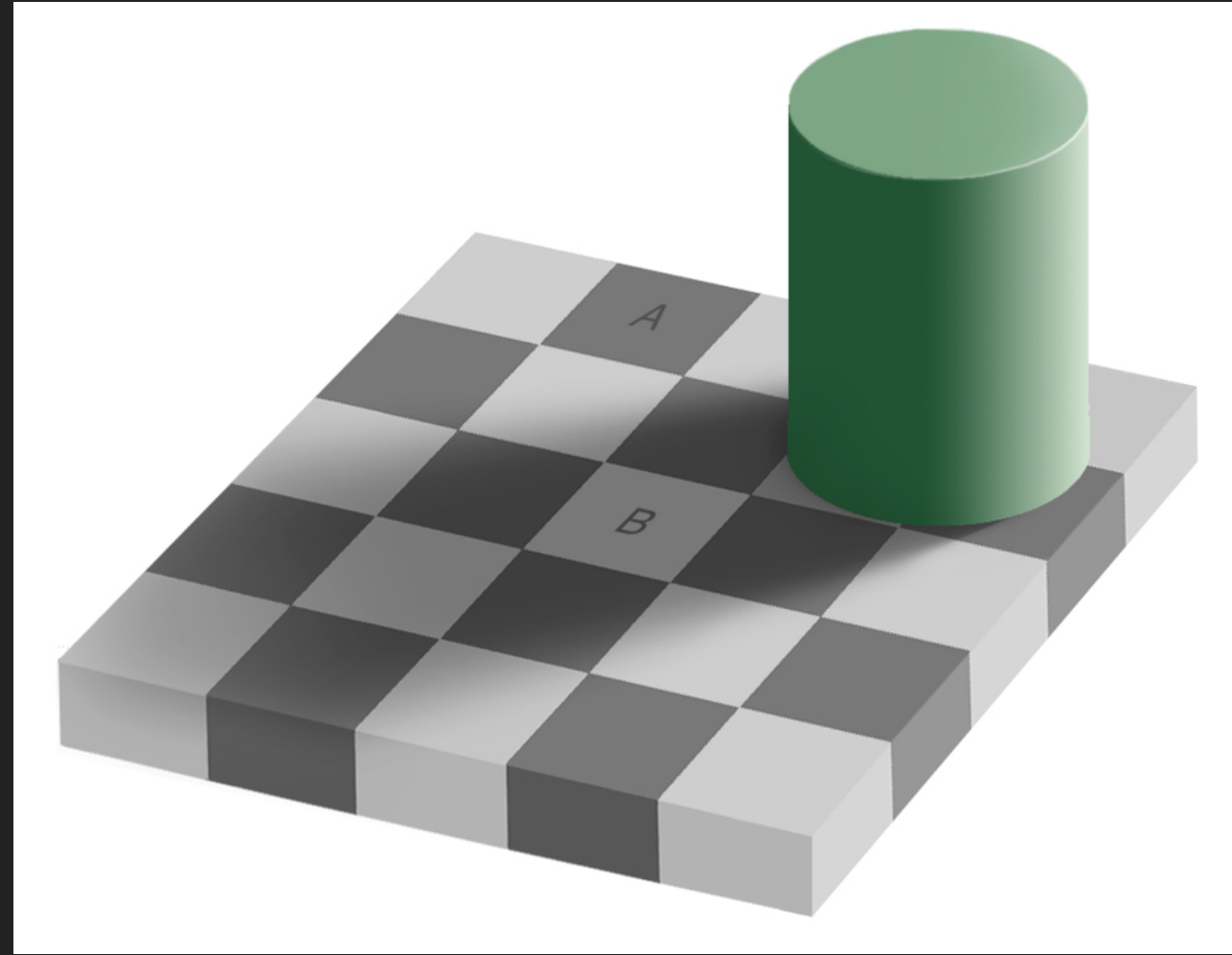
- CSS [Text](#)
- CSS [Fonts](#)
- CSS [Colors](#)
- CSS [Backgrounds](#)

Questions: How to ...?

1. ... center text?
2. ... set font type to `Arial` ?
3. ... use non-standard fonts?
 - more about [fonts](#)
4. ... change color of text?
 - What is RGB? How does it work?
 - [HTML color names](#)? in [Japanese](#)?
5. ... change background color?
6. ... create [Apple Watch activity dials animation](#)? (via [CSS Animation Tutorials](#))

Checker Shadow Illusion

Are Square A and square B the *same* color?



CSS reference

- CSS examples
 - <https://www.w3schools.com/cssref>
 - <https://www.30secondsofcode.org/css/p/1>
- CSS Cheat Sheets
 - <https://makeawebsitehub.com/css-cheat-sheet>
 - <https://websitesetup.org/css3-cheat-sheet>
- CSS Generator:
 - <https://webcode.tools/css-generator>
 - <http://css3generator.com>

In-class exercise: add CSS

- Download *ex04.html* from GitHub (*mis3690/resources/templates*)
- Make the following style changes:
 - For all `h1` tags, set font-family to `'Gill Sans'`, color to `navy` and center the text on the page.
 - For all `h2` tags, set font to `Arial`, color to any color using *RGB values*, set size to `22pt` and left align the text.
 - For all `h3` tags, set font to any font, color to any color using *hex values*, size to any font size and right align the text.
 - For all `p` tags, set font to any *handwriting* font.

Styling images

- Positioning an image
 - Typically, images are not centered
 - An image may be "floated" left or right:

```
img {float:left;}
```

- To center an image:

```
img {display:block; margin-left:auto; margin-right:auto;}
```

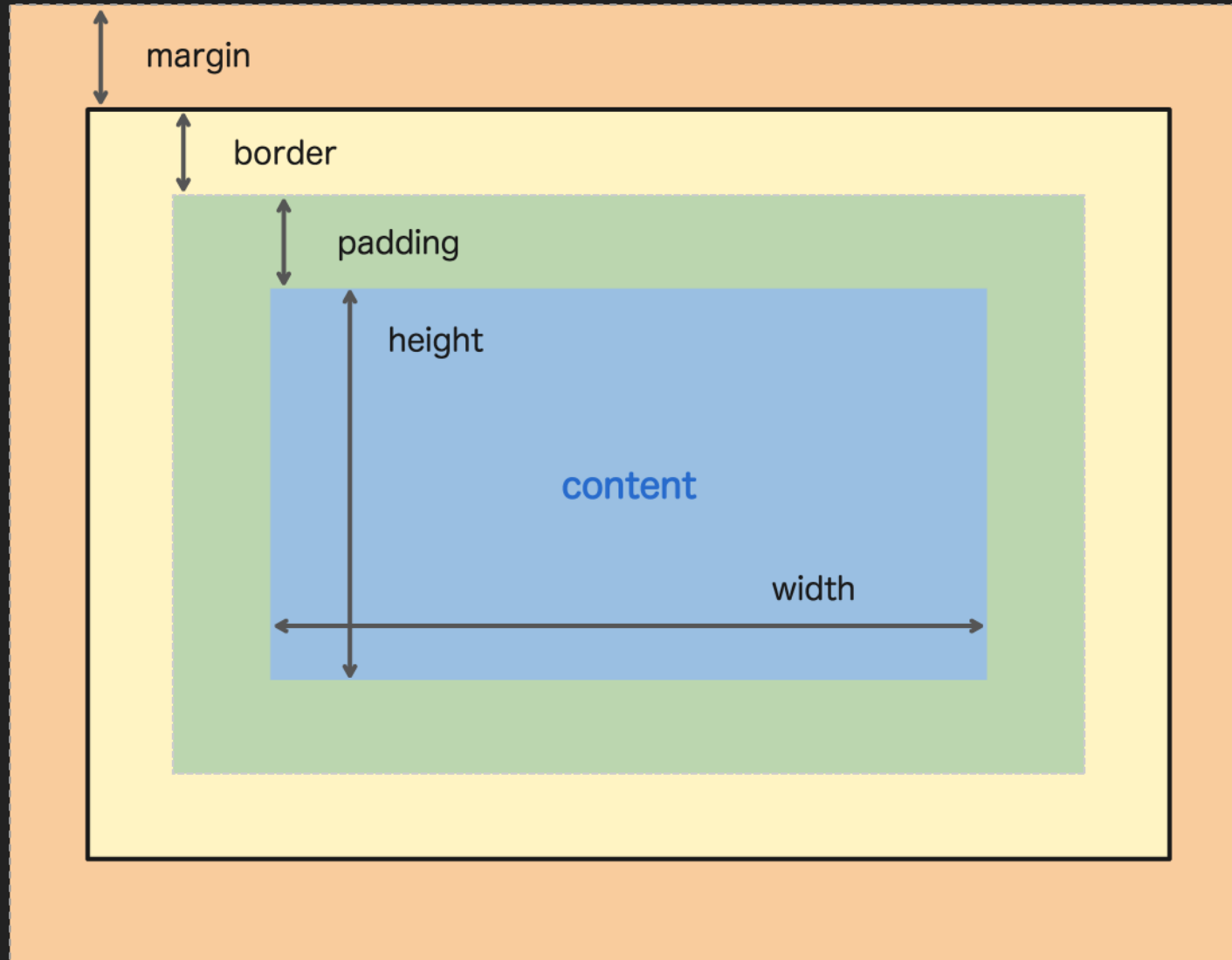
- Add a border to an image

```
img {border-width:4px; border-color:green; border-style:solid;}  
/* or */  
img {border:4px solid green;}
```


In-class exercise: styling an image

- Download *tiger1.jpg* from GitHub (*[mis3690/resources/templates/images](#)*) and save it to *WebTech/images* folder
- Add the image to *ex04.html*, just before the line "In zoos, tigers live for 20 to 26 years..."
- Save the file and see how it looks
- In `<style>` section, add a rule to float the image to the left
- Add a `border` to the image, with `5px` border width, `solid` style and `red` color
- Save again and check

CSS basic box model



In-class exercise: adding paddings and margins

- Understand *paddings* and *margins* using the tiger image.
 - Please search how to set paddings and margins.
- 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`.
- Check what changes and what does not
- Update *sitemap.html*
- *Commit and push* to GitHub

Questions?

