OIM3690 - Web Technologies

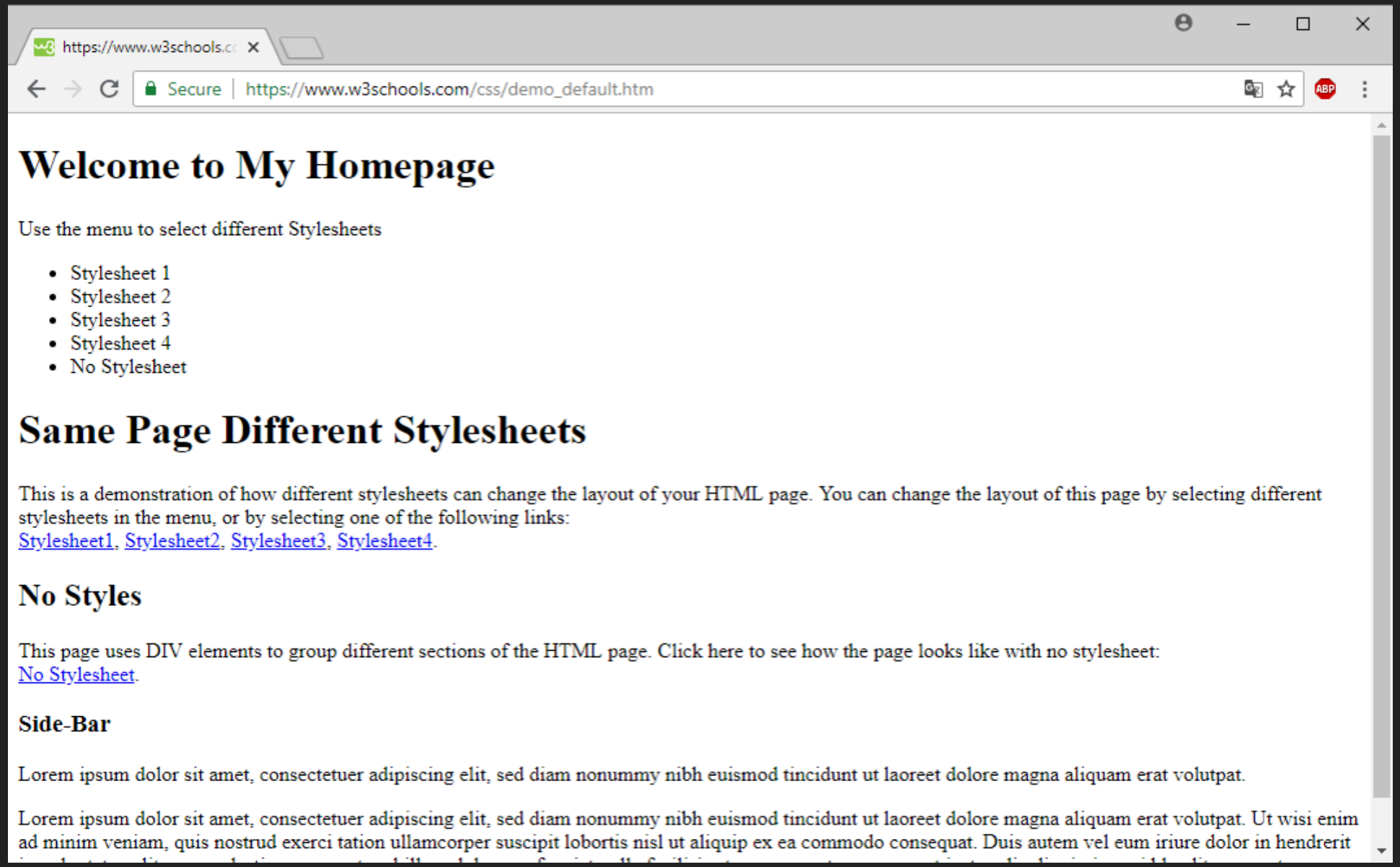
Cascading Style Sheets (CSS)

An Introduction

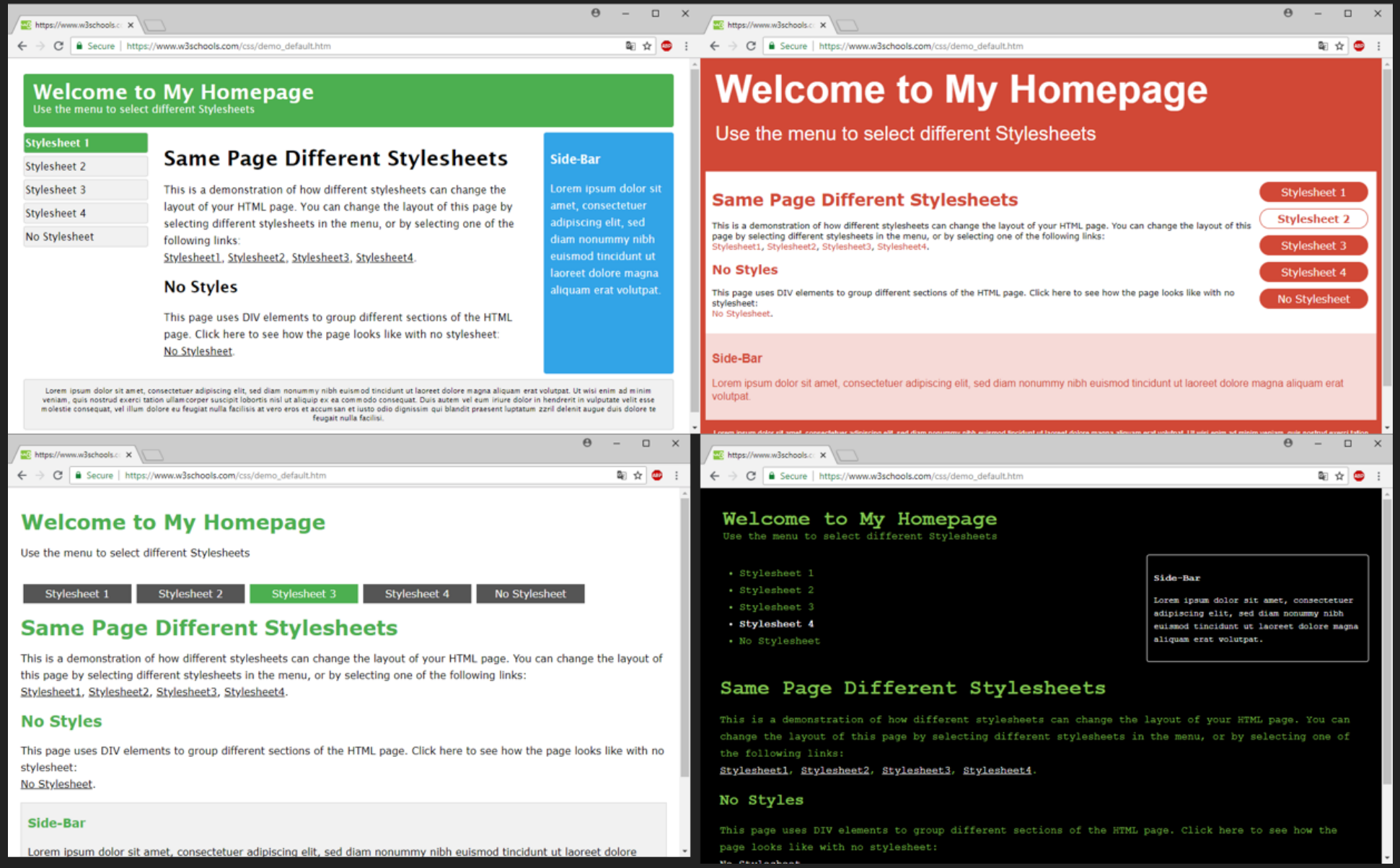
Why styles?

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



reference: https://www.w3schools.com/css/demo_default.htm



reference: https://www.w3schools.com/css/demo_default.htm

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 today's 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

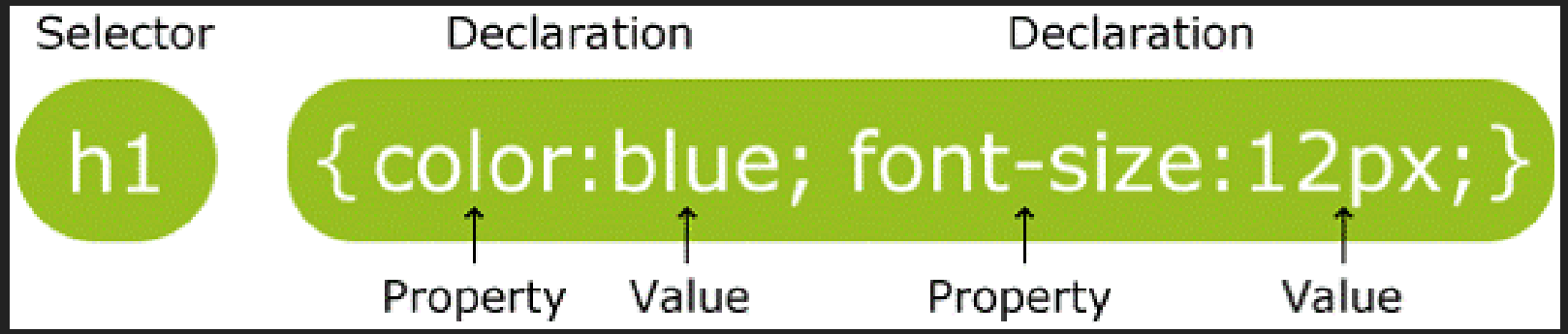
Example:

```
<style>
  /* rules go here*/
  h1 {
    color: red;
    /* ... */
  }
  /* ... */
</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 ...

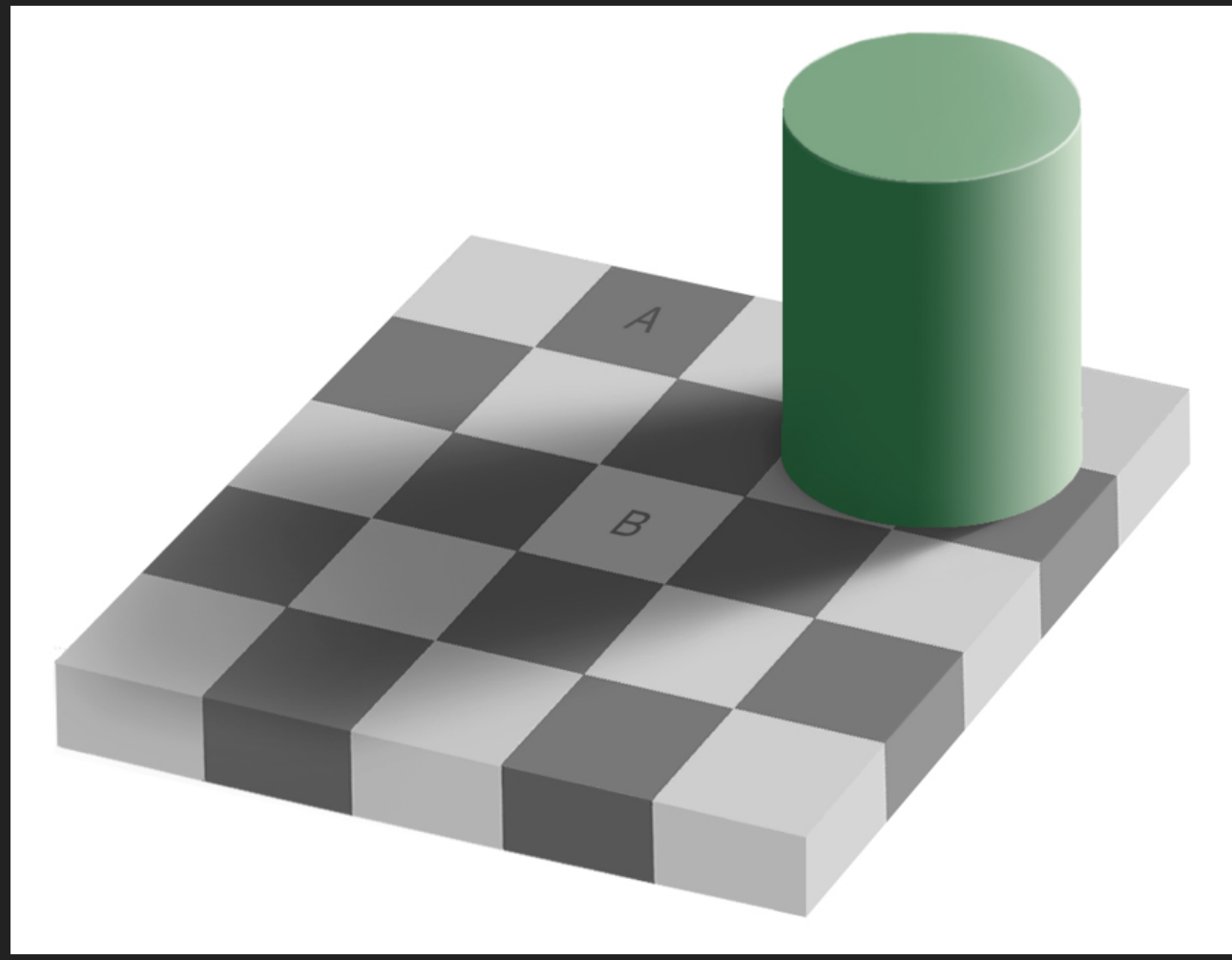
- CSS Text
- CSS Fonts
- CSS Colors
- CSS Backgrounds

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

Exercise: adding CSS

- Download *ex04.html* from GitHub (*OIM3690/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;}
```

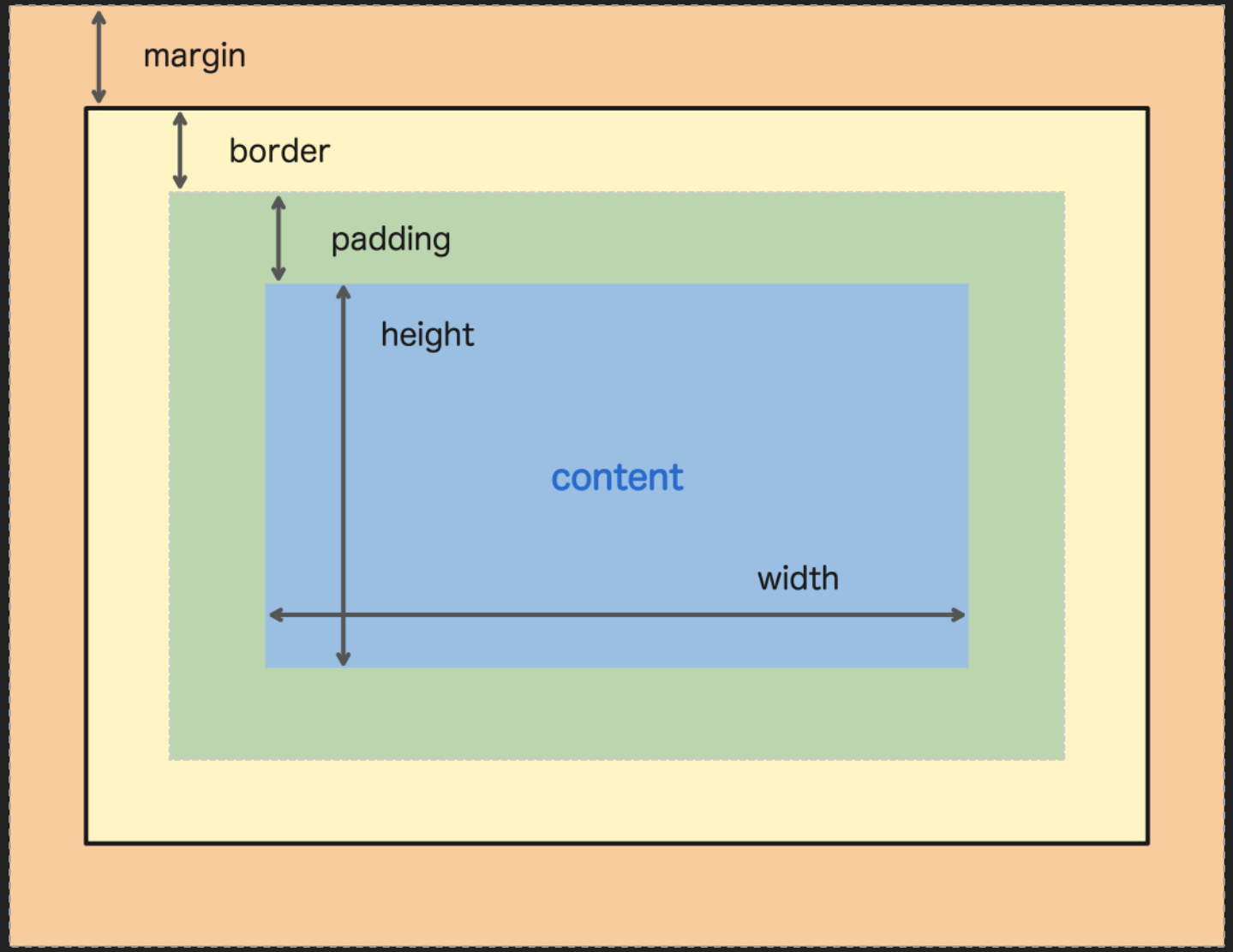
- Add a border to an image

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

Exercise: styling an image

- Download *tiger1.jpg* from GitHub (*OIM3690/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



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*** and ***commit/push*** to GitHub.

Questions?