

OIM3690 - Web Technologies



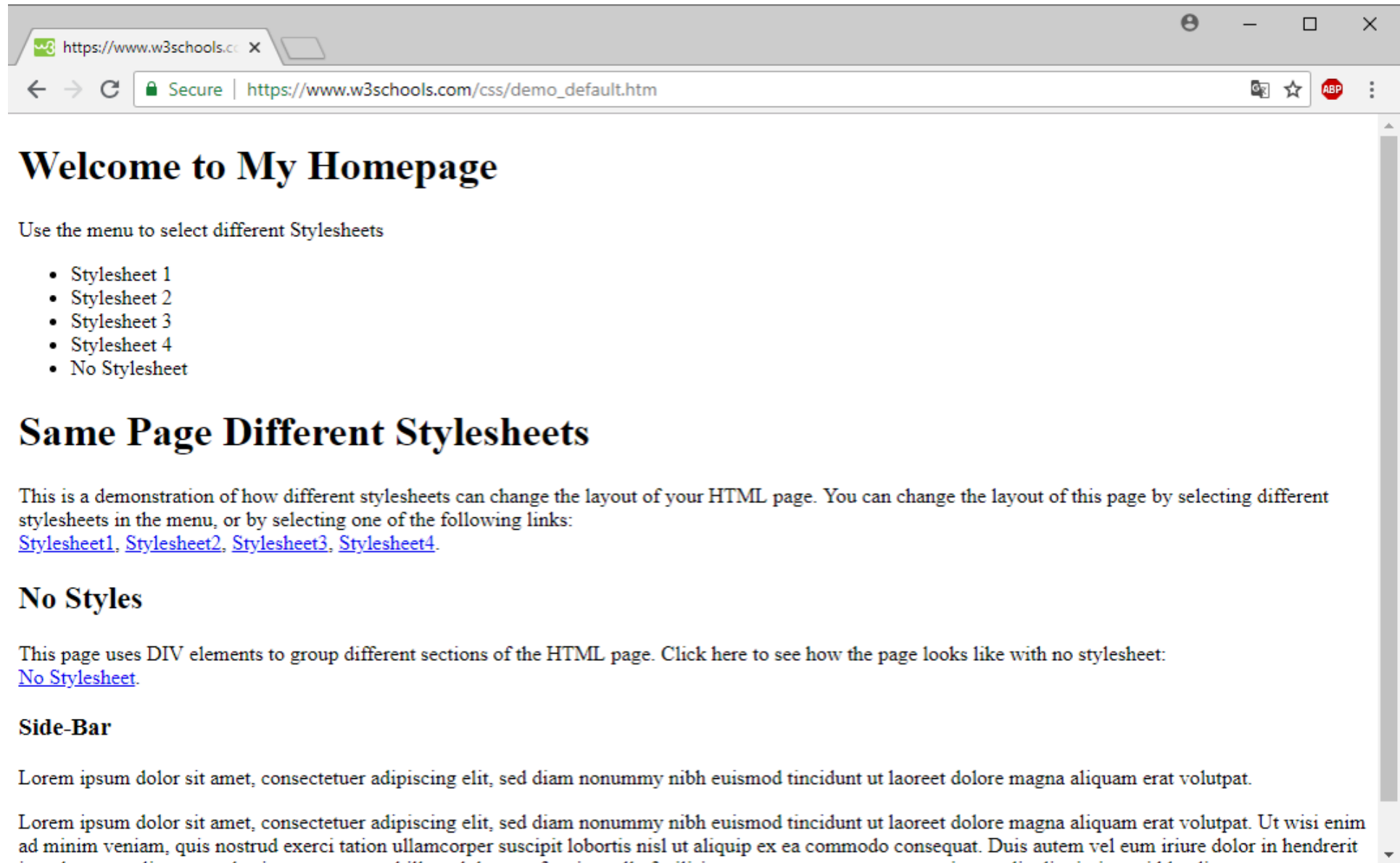
Introduction to Cascading Style Sheets (CSS)

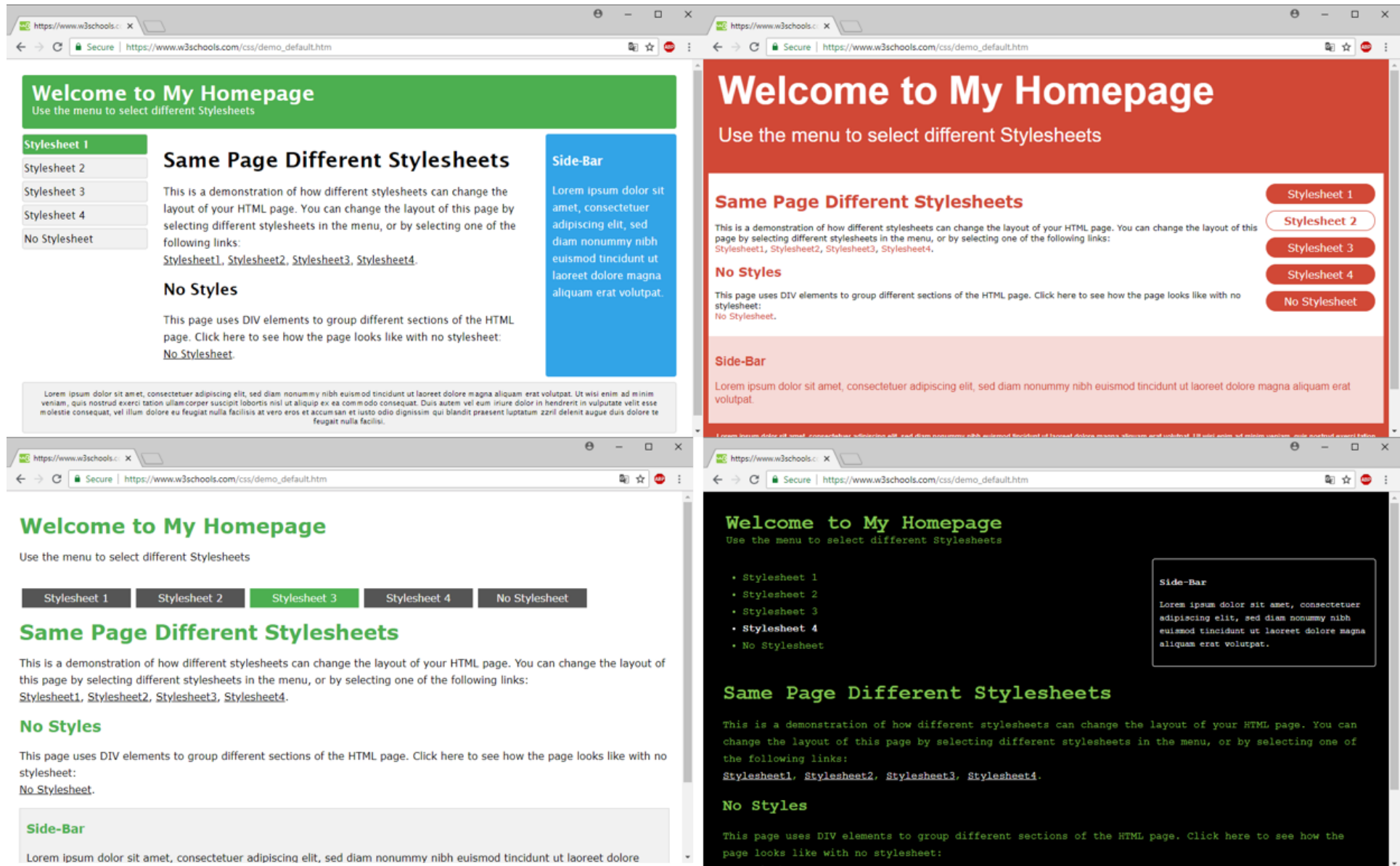
Why CSS?

CSS is used to define the visual presentation of HTML elements on a webpage. With CSS, we can:

- Easily modify the appearance of the page, such as the layout, color, and font.
- Ensure a consistent design across all pages on a website.
- Achieve a level of visual design and formatting that is not possible with just HTML tags alone.







Three ways to use styles

1. **External** styles

- Stylizing commands are placed in a separate document.
- This allows you to use the same document to stylize multiple pages.

2. **Internal** styles

- Stylizing commands are placed within the same HTML document.
- This is often used for learning and experimenting. We will use this today.

3. **Inline** styles

- Stylizing commands are applied directly to specific HTML tags within the document.
- This method only affects the specific element it is applied to and will not affect any other elements on the page.

Why "Cascading"?

- Multiple styles can be applied to a single element on a webpage.
 - **Inline** style is **NOT** recommended as it can be difficult to maintain and update.
- When there is a conflict, the cascading nature of CSS determines the priority of the styles:
 - i. **Inline** styles have the highest priority and will *override* any conflicting styles from external or internal stylesheets.
 - ii. **External** and **internal** styles are applied next and if there is a conflict, the value from the **last read** stylesheet will be used.
 - iii. **Browser default** styles if no matching styles are found.
- Example: [w3schools](https://www.w3schools.com)

Creating an internal CSS

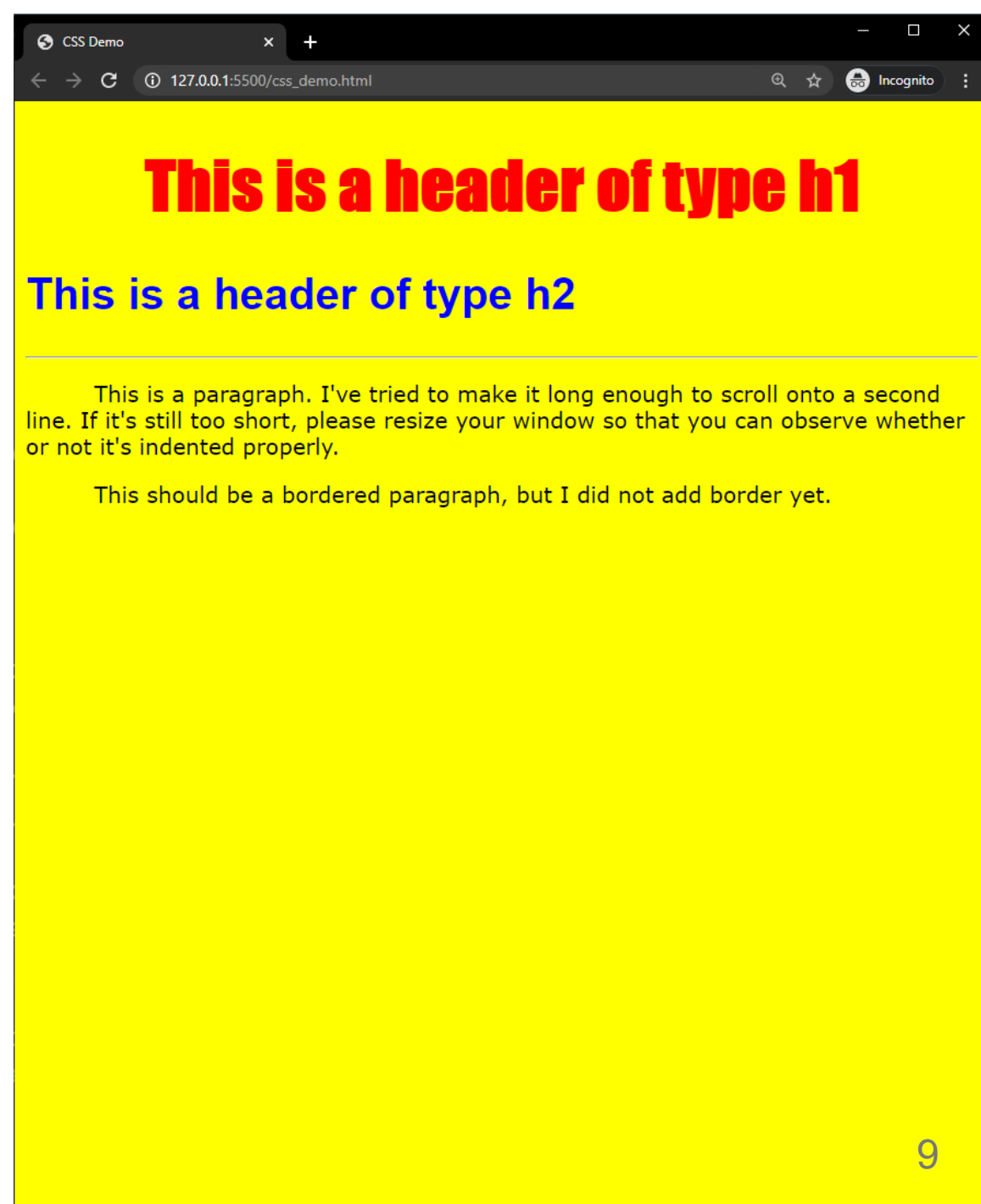
- Put styling rules in the `<head>` section
- Surround rules by `<style>` and `</style>` tags

Example:

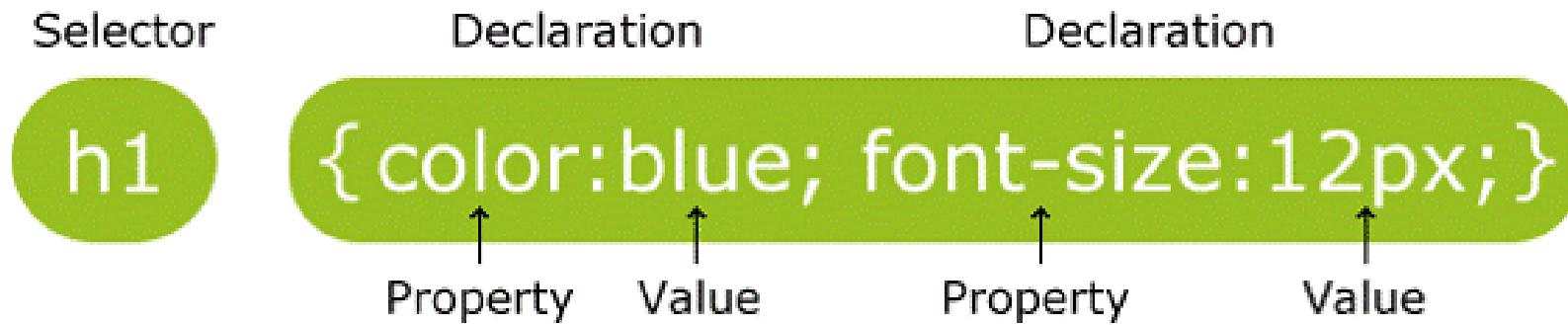
```
<style>
/* rules go here*/
h1 {
    color: red;
    /* ... */
}
/* ... */
</style>
```


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 examples in the following pages:

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

[Try it Yourself »](#)

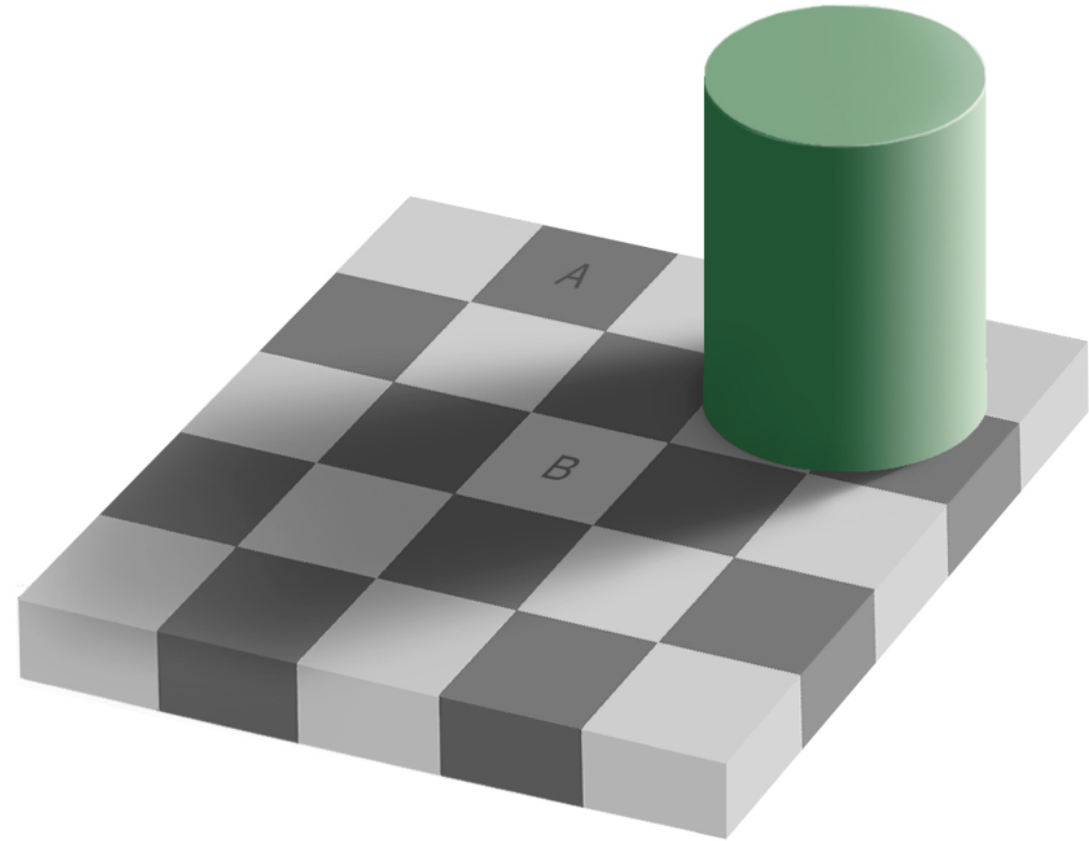
Questions: How do we ...?

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](#)? in [Chinese](#)? [CSS color conversion](#)
5. ... change background color?
6. ... create [Apple Watch activity dials animation](#)? (via [CSS Animation Tutorials](#))

Checker Shadow Illusion

Q: Are Square A and B the same color?

- You can use **color picker** in Chrome DevTools to verify



CSS Reference

- Best CSS Website:
 - [CSS-Tricks](#)
- CSS Examples
 - [CSS Reference](#)
 - [CSS Snippets](#)
- CSS Cheat Sheets: [1](#), [2](#), [3](#)
- CSS Generators: [1](#), [2](#)

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;}
```

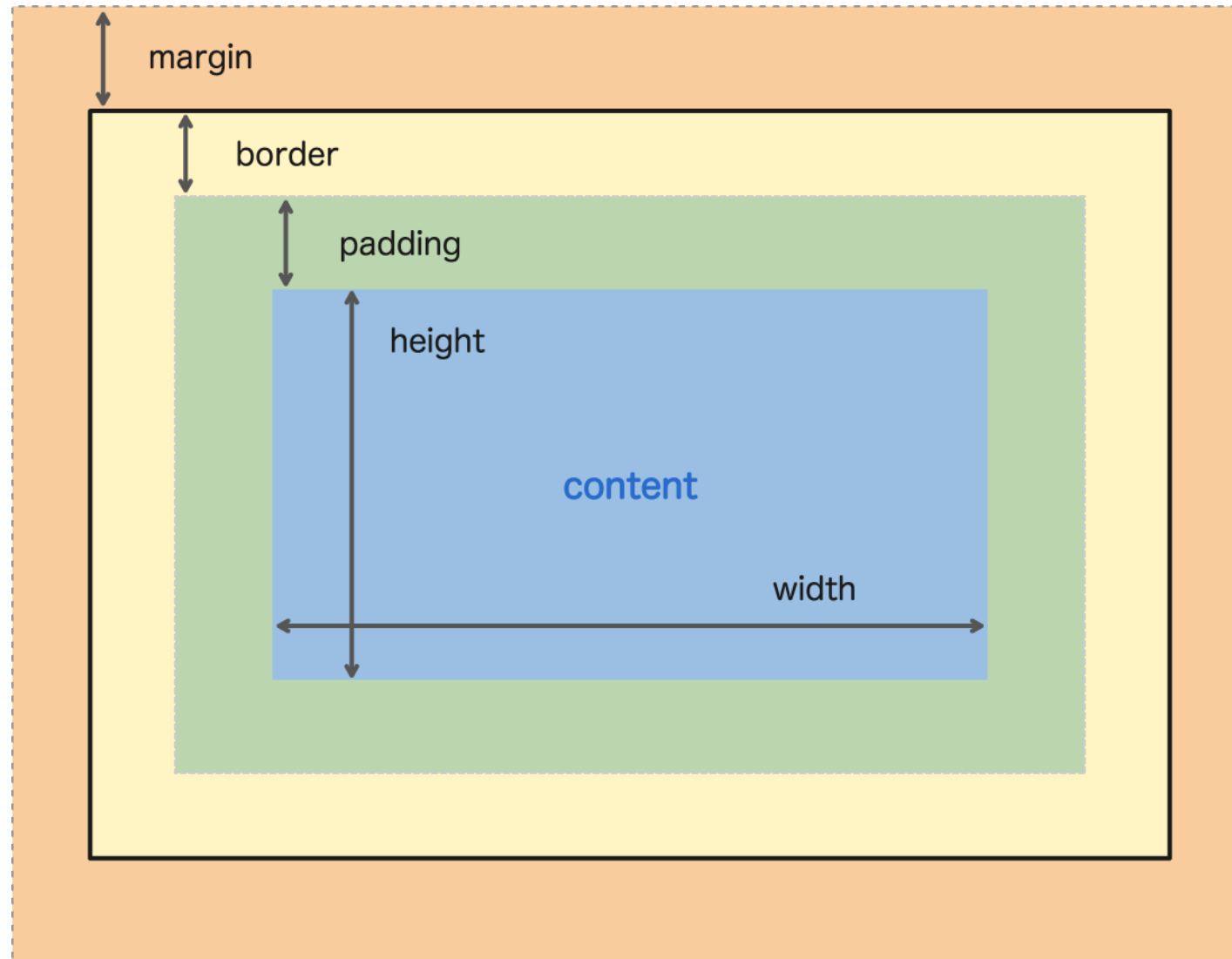
- Add a border to an image

```
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?

