

CSS



Cascading
Style
Sheets

SOEN 287 WEB PROGRAMMING

1

TOPICS

- What is CSS?
- Levels of CSS
- Selectors
- Property Values
 - Fonts/Colors
 - Links
 - Lists
 - **Alignment of text**
 - Box Model
 - `` vs `<div>`
- Bootstrap



ALIGNMENT: TEXT-INDENT

- Specifies the indentation of the first line in a text-block
- Possible values: a length or a % value

```
<style type = "text/css" >  
    p.indent1 {text-indent:0.5in;}  
    p.indent2 {text-indent:5.5cm;}  
    p.indent3 {text-indent:5em;}  
    p.indent4 {text-indent:50px;}  
    p.indent5 {text-indent:20%;}  
</style>
```



ALIGNMENT: TEXT-ALIGN

- Horizontal alignment of text
- Possible values: `left` (the default), `center`, `right`, **or** `justify`

```
<style type="text/css">
  h1 {text-align:center;}
  h2 {text-align:left;}
  h3 {text-align:right;}
</style>
```

[textAlign_textIndent.html](#)



ALIGNMENT: FLOAT

```
<style type="text/css">
    img {float: right;}
</style>
```

- Text flow around another element (usually image or table)
- Possible values: `left`, `right`, and `none` (the default)

`float: clear;`

- To turn float off once it has been turned on.

[images.html](#)



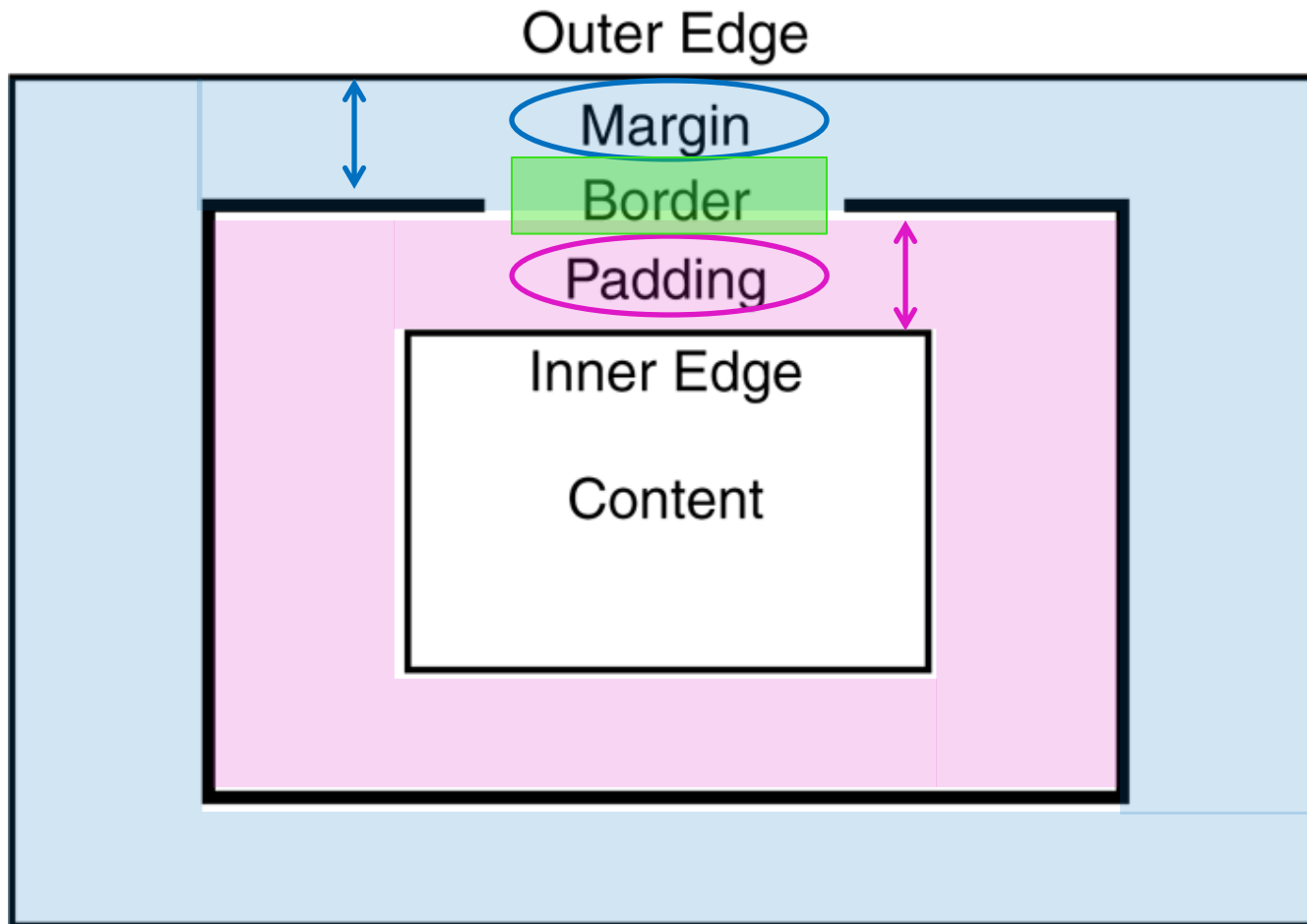
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THE BOX MODEL

For borders and outlines



THE BOX MODEL (CONT)

- **Content** - The content of the box, where text and images appear
- **Padding** - Clears an area around the content. The padding is transparent
- **Border** - A border that goes around the padding and content
- **Margin** - Clears an area outside the border. The margin is transparent

BORDER: STYLE/COLOR/WIDTH

- When providing values the order is clockwise from top.
- If provide
 - 4 values refers to top, right, bottom, and left
 - 3 values refers to top, left-right, and bottom
 - 2 values refers to top-bottom and left-right
 - one value refers to all sides

■



BORDER: STYLE/COLOR/WIDTH/COLLAPSE

- **border-style values:** none, dotted, dashed, double and ...
http://www.w3schools.com/cssref/tryit.asp?filename=trycss_border-style

- border-top-style
- border-bottom-style
- border-left-style
- border-right-style

Can write

```
p
{
border-top-style:dotted;
border-right-style:solid;
border-bottom-style:dotted;
border-left-style:solid;
}
```

Or

```
p
{
border-style:dotted solid;
}
```



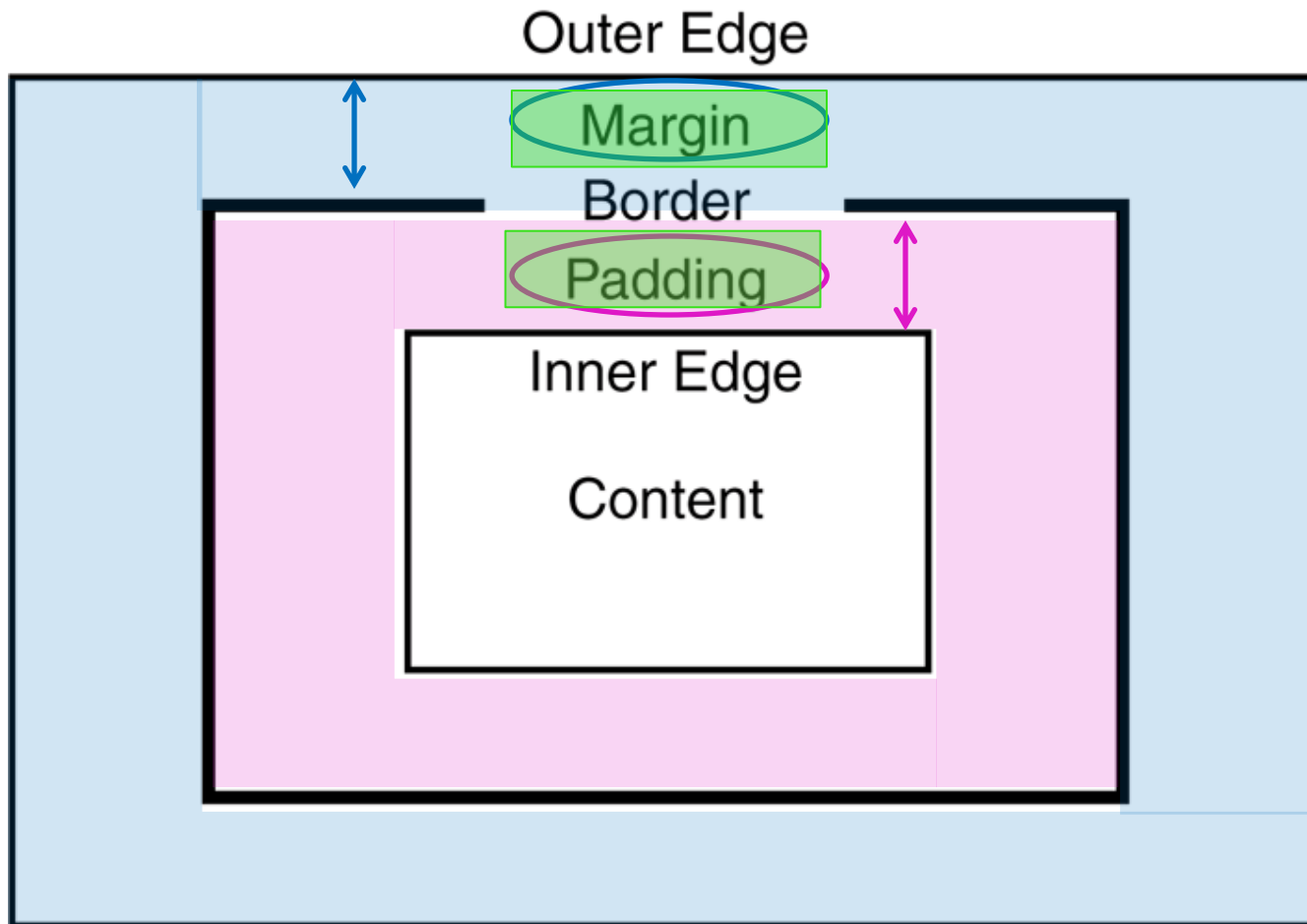
BORDER: STYLE/COLOR/WIDTH/COLLAPSE

- **border-width** values: thin, medium (default), thick, or a length value in pixels
 - border-top-width, border-bottom-width, border-left-width, border-right-width **or** border-width
- **border-color** values: any color
 - border-top-color, border-bottom-color, border-left-color, border-right-color **or** border-color
- **border-collapse** values: separate (default) or collapse

borders.html



THE BOX MODEL



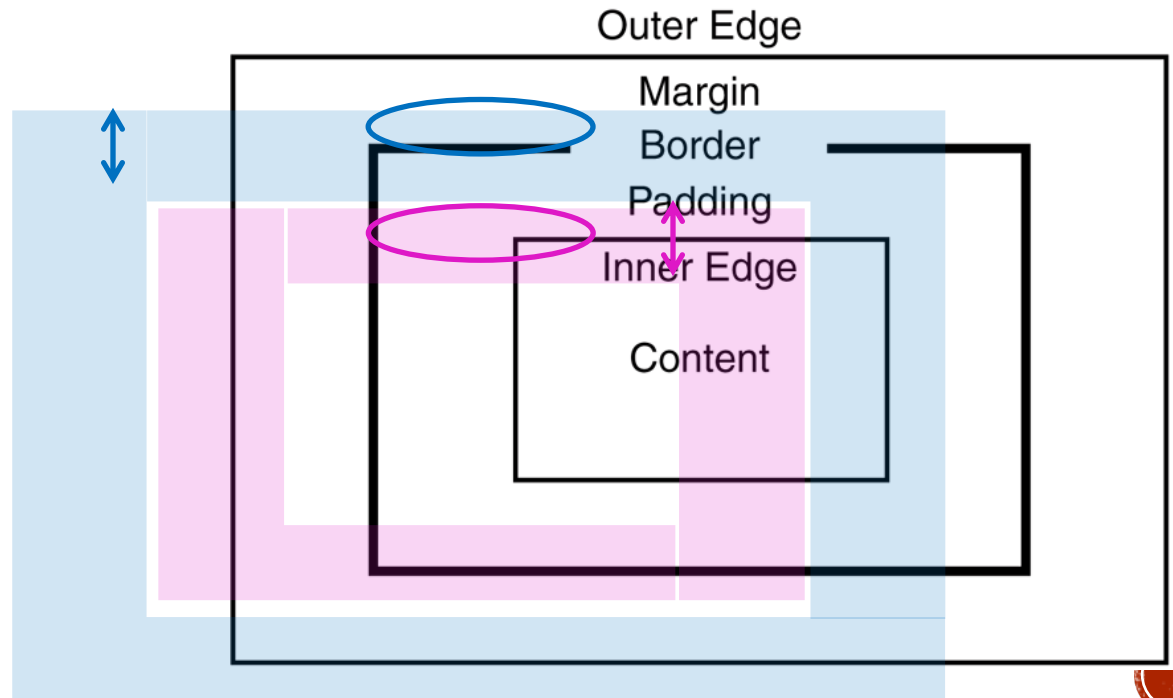
THE BOX MODEL

What is total height if have the following specifications?

height: 200px;
width: 100px;
padding: 10px;
border: 5px solid gray;
margin: 20;



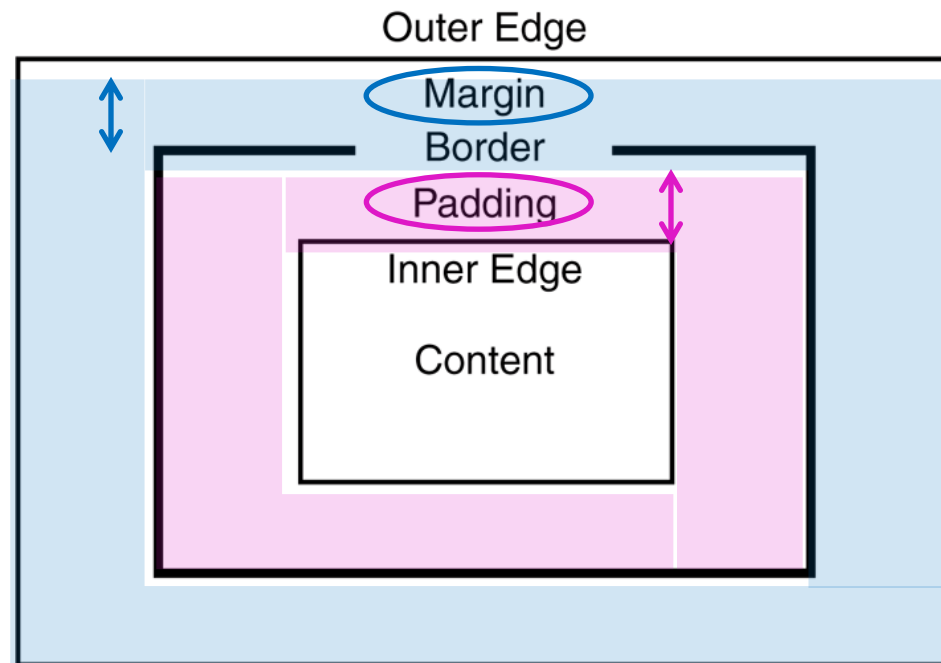
Important: When you set the width and height properties of an element with CSS, you just set the width and height of the **content area**. To calculate the full size of an element, you must also add padding, borders and margins.



THE BOX MODEL

What is total width if have the following specifications?

height: 320px;
width: 100px;
padding: 10px;
border: 5px solid gray;
margin: 20;



MARGIN: {MARGIN: VALUE}

- margin **values: number values**
 - margin-top
 - margin-bottom
 - margin-left
 - margin-right

PADDING: {PADDING: VALUE}

- padding **values: number values**
 - padding-top
 - padding-bottom
 - padding-left
 - padding-right

[images2.html](#)



BACKGROUND IMAGE

```
body
{
    background-image:url("image.gif") ;
    background-color:#cccccc;
}
```

Can specify:

- background-**repeat** values: repeat (default), no-repeat, repeat-x, **or** repeat-y
- background-**position** values: top, center, bottom, left, **or** right

Background.html



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<DIV>

[HTTP://WWW.W3SCHOOLS.COM/HTML/HTML_BLOCKS.ASP](http://www.w3schools.com/html/html_blocks.asp)

- The <div> element is a block-level element, often used as a container for other HTML elements
- Always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
- Useful for style specifications - Used to create document sections (or divisions) for which style can be specified
- A few other examples of block-level elements:
<h1> - <h6>, <p>

<DIV> EXAMPLE (DIV.HTML)

```
<head>
  <style>
    .divFormat {
      background-color:black;
      color:white;
      padding:20px; }
  </style>
</head>
<body>
  <h2> An example of div</h2>
  <div class="divFormat">
    <h3>This is in a div</h3>
    <p>This is a paragraph within a div. .... </p>
    <p>This is a 2nd paragraph ....</p>
  </div>
</body>
```

An example of div

This is in a div

This is a paragraph within a div. This is a paragraph within a div. This is a paragraph within a div.

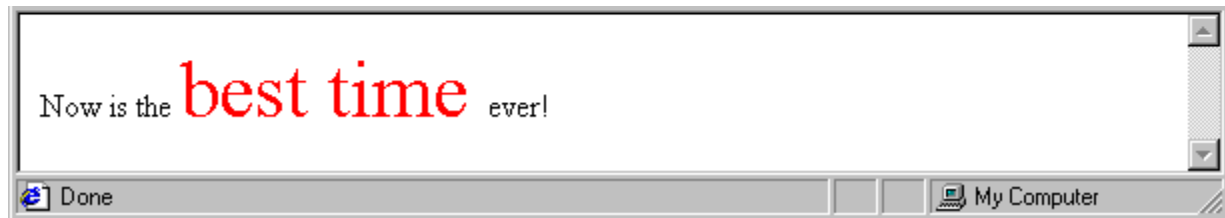
This is a 2nd paragraph within a div. This is a 2nd paragraph within a div. This is a 2nd paragraph within a div. This is a 2nd paragraph within a div.

[HTTP://WWW.W3SCHOOLS.COM/HTML/HTML_BLOCKS.ASP](http://www.w3schools.com/html/html_blocks.asp)

- The element is an inline element that is often used as a container for some text.
- Has no required attributes, but **style** and **class** are common.

: A SMALL SPAN OF STYLE

```
<style type = "text/css">
    .bigred {font-size: 24pt;
              font-family: Ariel; color: red}
</style>
...
<p>
    Now is the <span class = "bigred">
        best time </span> ever!
</p>
```



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WHAT IS BOOTSTRAP?

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

WHAT IS RESPONSIVE WEB DESIGN?

- Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

WHY USE BOOTSTRAP ?

Advantages of Bootstrap:

- **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- **Mobile-first approach:** In Bootstrap, mobile-first styles are part of the core framework
- **Browser compatibility:** Bootstrap 4 is compatible with all modern browsers (Chrome, Firefox, Internet Explorer 10+, Edge, Safari, and Opera)

HOW TO CREATE A PAGE USING BOOTSTRAP

- Create an HTML5 document
- Include the proper CSS and JavaScript files
- Use <div>s with the proper Bootstrap CSS classes to structure your page
- Use other HTML elements with Bootstrap CSS classes for the web page contents
- **Notes:**
 - In this course, Bootstrap is very important for assignments 2 and 3, but much less important for the exams
 - We will cover only the basics in class, and you will have to "*play*" with it for assignments 2 and 3

BOOTSTRAP 4 GRID SYSTEM

- Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page.
- If you do not want to use all 12 columns individually, you can group the columns together to create wider columns
- The grid system is responsive, and the columns will re-arrange automatically depending on the screen size.
- Make sure that the sum adds up to 12 or fewer (it is not required that you use all 12 available columns).
- [bootstrap Ex1.html](#)

BOOTSTRAP TABLE EXAMPLE

- A Bootstrap can be specified the same way as a basic HTML table, except that some CSS classes are added to the table element
- At least the table class has to be specified, plus some other classes to modify the colors
- CSS classes can also be added to tr and td elements to modify specific rows or cells
- To make a table responsive, put the table inside a `<div class="table-responsive">` element
 - it will add scrollbars automatically if necessary instead of shrinking the table to fit the screen
 - `table-responsive-sm`, `table-responsive-md`, `table-responsive-lg` and `table-responsive-xl` can also be used
- [bootstrap Ex2.html](#)

NAVIGATION BARS

- The following example shows a basic template for a course web site with a navigation bars at the top
- This example is based on the examples given on W3Schools
- This navigation bar (navbar) is collapsible, so that on medium and smaller screens, the navbar items will collapse into a button.
- The navbar is also fixed at the top, so that in a page with lots of contents, when the user scrolls down the page, the navbar will always be at the top
 - In order for the fixed navbar to not overlap any of the contents following it in the document, a padding-top: 50px declaration is added to the body element
- The navbar items are specified inside a , as s containing links (<a>elements)
- [bootstrap_Ex3.html](#)

NAVIGATION BARS

- bootstrap Ex4.html
- Same navbar as the previous example, but with a `<dl>` as the contents below the navbar
- In general, the same (or almost the same) navbar will be in many different pages, if not all pages, of a website
- It will not be practical to copy and paste the common code for every file
- Later (when covering Flask), we will see how to create HTML template files and use template inheritance to avoid having to copy and paste the same code in many HTML files

THE END

- ReadingsW3Schools CSS

Tutorial: https://www.w3schools.com/css/css_colors.asp

- *Introduction to Navigation Bar*
- **Optional:** *Outline, Icons, Overflow, Inline-block, Align, Position, Opacity*